

The End of Reconciliation - Feed Manager

Client: Large Merchant Trading Organization

Exchange Trades per Day: 4,000

Reconciliations eliminated: 4

The Business Problem

Our client is a large merchant trading organization. Approximately 4,000 exchange cleared trades are executed daily between ICE and NYMEX (CME). The client has several operational challenges it faces on a daily basis. These include:

- **Trading System to Multiple FCM Reconciliation:** Trades are executed on exchanges, but cleared by at least two Futures Clearing Merchants (FCM). This requires a daily reconciliation with each of the FCMs prior to the daily margining process to ensure that the merchant is in sync with each FCM at the end of day.
- **Exchange to Risk Warehouse Reconciliation:** During the end of day process, trades are sent in a batch process to an internal Risk Warehouse for risk calculations. After the feed to the risk system is complete reconciliation must be conducted to ensure that all trades captured in the trading system are successfully booked in the Risk Warehouse.
- **Exchange to Trading System:** Operations conducts an end of day reconciliation between the exchange execution report and the trading system. This is designed to ensure that all trades executed on the exchange are booked in the trading system of record.

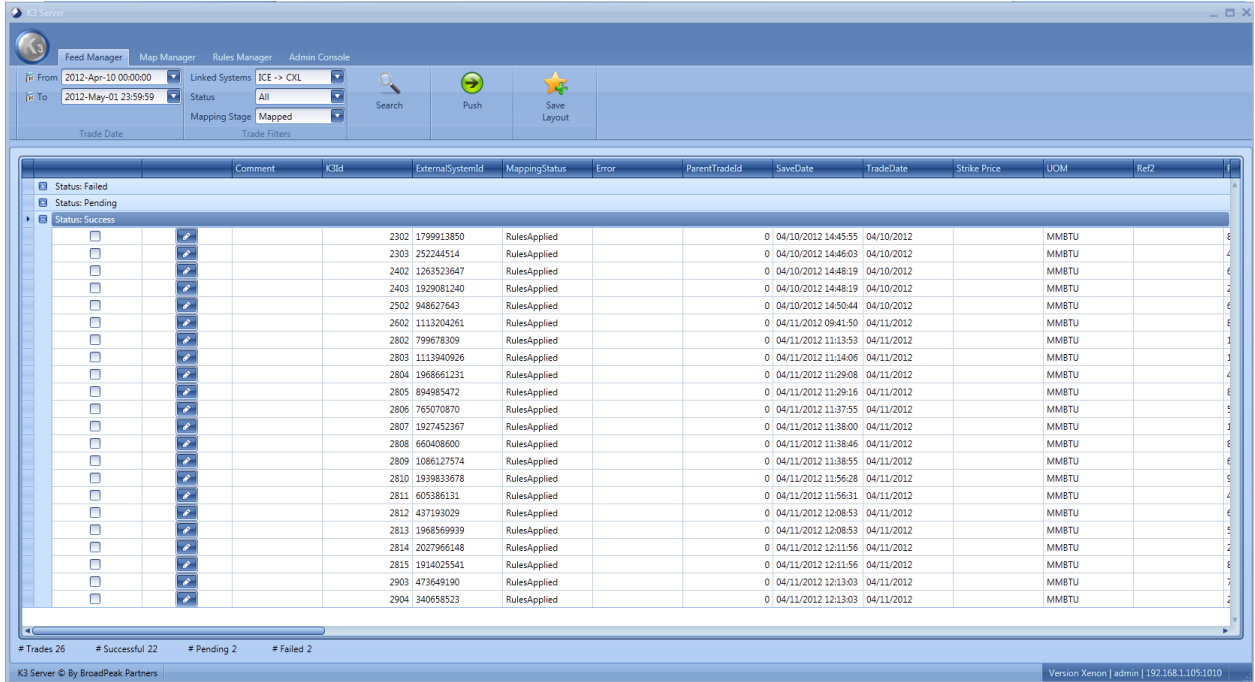
The reconciliations are started at 5PM and are executed on a series of Excel worksheets designed to upload a drop file from each respective system to highlight breaks. The Excel process is time consuming and allows little time to correct breaks before the end of day calculation. Reconciliation is distributed across Operations and takes approximately 2 person hours to complete when there are no breaks. However, the identification and pursuit of breaks can add hours to the end of day process.

Use of K3 - Feed Manager to Auto Reconcile

K3 was implemented at the client. Through Feed Manager, the client is able to see every trade executed on the exchanges in real time. Likewise, Feed Manager is designed to receive a message upon successful booking in the downstream systems.

Through Feed Manager, Operations is presented a real time report with respect to whether or not trades have been successfully booked. The user is able to sort by the “Status” column where he/she can see the real time status of data that has flowed:

- Successful:** Successful indicates that K3 has received a positive message from the downstream system that the trade has been booked. Reference data from the target system is brought back to K3. For example, in this case K3 brings back the unique Trade ID from both the Trading System and Risk Warehouse systems.

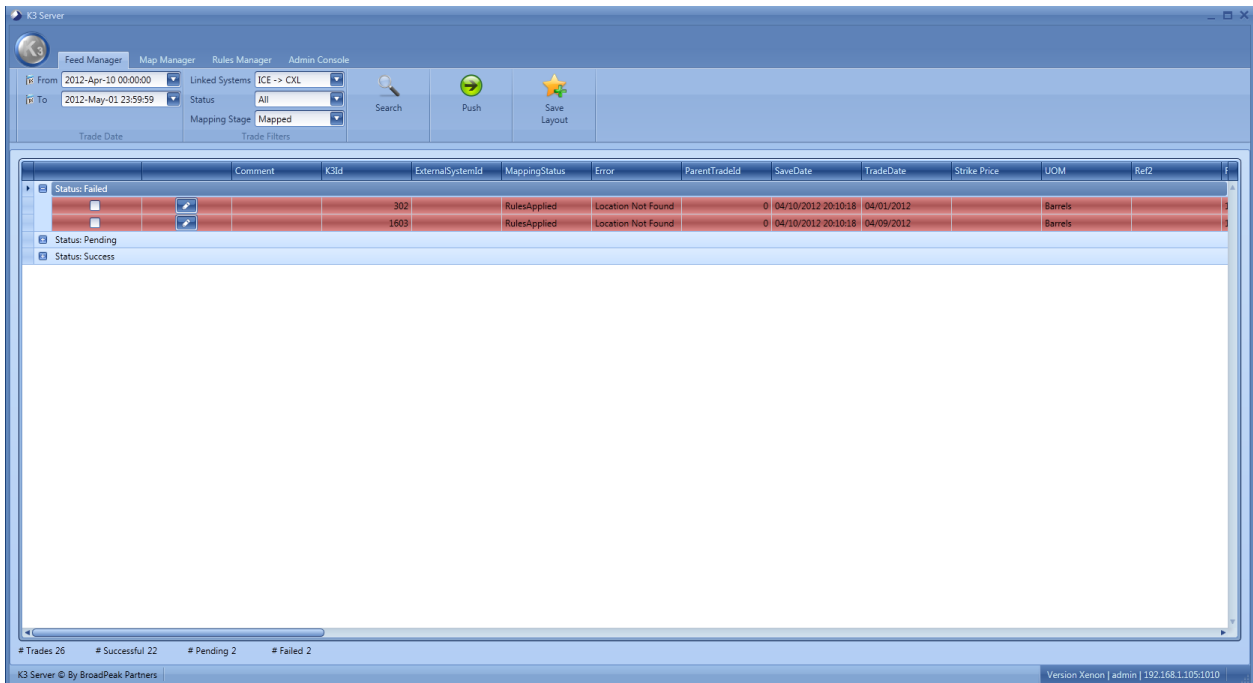


Status	Comment	K3Id	ExternalSystemId	MappingStatus	Error	ParentTradeId	SaveDate	TradeDate	Strike Price	UOM	RefZ
Success			2302	1799913850	RulesApplied		0	04/10/2012 14:45:55	04/10/2012	MMBTU	
Success			2303	252244514	RulesApplied		0	04/10/2012 14:46:03	04/10/2012	MMBTU	
Success			2402	1263523647	RulesApplied		0	04/10/2012 14:48:19	04/10/2012	MMBTU	
Success			2403	1929081240	RulesApplied		0	04/10/2012 14:48:19	04/10/2012	MMBTU	
Success			2502	948627643	RulesApplied		0	04/10/2012 14:50:44	04/10/2012	MMBTU	
Success			2602	1113204261	RulesApplied		0	04/11/2012 09:41:50	04/11/2012	MMBTU	
Success			2802	799678309	RulesApplied		0	04/11/2012 11:13:53	04/11/2012	MMBTU	
Success			2803	1113940926	RulesApplied		0	04/11/2012 11:14:06	04/11/2012	MMBTU	
Success			2804	1968661231	RulesApplied		0	04/11/2012 11:29:08	04/11/2012	MMBTU	
Success			2805	894985472	RulesApplied		0	04/11/2012 11:29:16	04/11/2012	MMBTU	
Success			2806	765070870	RulesApplied		0	04/11/2012 11:37:55	04/11/2012	MMBTU	
Success			2807	1927452367	RulesApplied		0	04/11/2012 11:38:00	04/11/2012	MMBTU	
Success			2808	660408600	RulesApplied		0	04/11/2012 11:38:46	04/11/2012	MMBTU	
Success			2809	1086127574	RulesApplied		0	04/11/2012 11:38:55	04/11/2012	MMBTU	
Success			2810	1939833678	RulesApplied		0	04/11/2012 11:56:28	04/11/2012	MMBTU	
Success			2811	605386131	RulesApplied		0	04/11/2012 11:56:31	04/11/2012	MMBTU	
Success			2812	437193029	RulesApplied		0	04/11/2012 12:08:53	04/11/2012	MMBTU	
Success			2813	1968569939	RulesApplied		0	04/11/2012 12:08:53	04/11/2012	MMBTU	
Success			2814	2027966148	RulesApplied		0	04/11/2012 12:11:56	04/11/2012	MMBTU	
Success			2815	1914025541	RulesApplied		0	04/11/2012 12:11:56	04/11/2012	MMBTU	
Success			2903	473649190	RulesApplied		0	04/11/2012 12:13:03	04/11/2012	MMBTU	
Success			2904	340658523	RulesApplied		0	04/11/2012 12:13:03	04/11/2012	MMBTU	

Trades 26 # Successful 22 # Pending 2 # Failed 2

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- Failed:** Failed indicates a break. That is K3 sent information to the target system, but for one reason or another it was not able to be booked. Often this is the result of a mis-configuration of the target system. For example, if a trader executed a trade type that was not configured in the trading system, when K3 tries to book the trade it will fail. K3 captures the error message received from the downstream system, which populates the “error” column. This cues Operations into the reason why the trade fails and allows them to configure the target system to feed the data point.



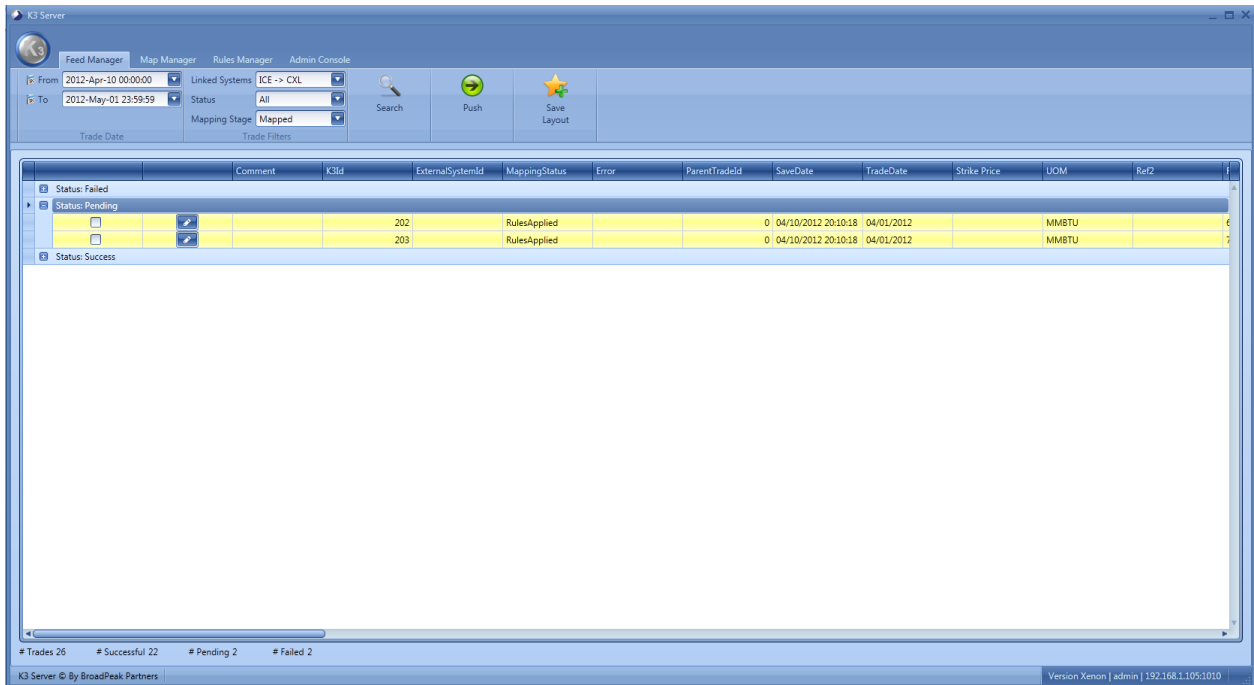
Status	Comment	K3Id	ExternalSystemId	MappingStatus	Error	ParentTradeId	SaveDate	TradeDate	Strike Price	UOM	Ref2
Failed			302	RulesApplied	Location Not Found	0	04/10/2012 20:10:18	04/01/2012		Barrels	
Failed			1603	RulesApplied	Location Not Found	0	04/10/2012 20:10:18	04/09/2012		Barrels	
Pending											
Success											

Trades 26 # Successful 22 # Pending 2 # Failed 2

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Once the user has corrected the configuration, the user simply clicks the “select” checkbox for the failed data and presses the “Push” button to feed the information to the downstream system.

- Pending:** For certain systems the user may want to control when and how the data is fed to the downstream system. For example, OTC (non-cleared) trades can be uploaded into K3 via an Excel spreadsheet. However, Operations may want to check these trades for correctness against the confirmation prior to booking in downstream systems. Once the user has checked the trades he/she simply selects them and presses “push” to move the information downstream.



	Comment	KSid	ExternalSystemId	MappingStatus	Error	ParentTradeId	SaveDate	TradeDate	Strike Price	UOM	Ref2
Status: Pending			202	RulesApplied			0 04/10/2012 20:10:18	04/01/2012		MMBTU	
			203	RulesApplied			0 04/10/2012 20:10:18	04/01/2012		MMBTU	

Trades 26 # Successful 22 # Pending 2 # Failed 2

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Application of K3 - Feed Manager

Trading and Risk Warehouse

BroadPeak installed K3 and first established a connection between exchanges and the Trading System and Risk Warehouse. For trades from the exchanges to the trading system, Operations can now see every trade flowing through K3 in real time. This eliminated one of the greatest problems, which is that breaks were typically not discovered until early evening. With K3, if a break was to happen it is caught in real time allowing Operations plenty of time during the workday to troubleshoot errors.

Likewise, the connection to the Risk Warehouse eliminated an end of day population. Trades are now booked into the Risk Warehouse in real time such that intra-day risk valuations can be executed. Typically, intraday valuations were only performed when there are significant market movements. With K3 all of the trades are populated in real time. Likewise, Operations are now able to troubleshoot any breaks during the course of the day.

- Reconciliation is replaced by real time event messages as to successful booking in downstream systems
- Operations no longer has to wait until the end of the day to track and correct data breaks.

Reconciliation with the FCMs

Reconciliation with the FCMs is executed in two formats that are both supported by K3.

The first FCM uses its own reconciliation system where trades are manually uploaded into their web client and reconciled. This requires trades to be exported into an Excel format and uploaded into the FCM system. To support this for K3 is very simple. K3 keeps all associated data received. Thus the user simply right clicks and exports the feed manager view to Excel. No additional formatting is required. This file is uploaded into the system. The ease with which files can be exported to Excel enables the user to reconcile with the FCM multiple times during the day.

The other FCM utilizes a “drop copy” that is sent to the trading firm at the end of the day. This file is fed into K3 to execute a reconciliation within K3. All the user needs to do is upload the file and reconciliation is performed automatically, showing the reconciliation results directly in the Feed Manager.

Similarly the client can upload an Exchange Report at any time during the day. This file can be uploaded to K3 without any additional formatting and an automatic reconciliation is executed.

Conclusion

K3's Feed Manager is a godsend for Operations. The challenge with most system to system interfaces is that it is impossible to monitor data traversing the interface. This forces Operations into time consuming reconciliations and push break corrections into the late day if not the evening. K3 can automatically reconcile any two connected applications eliminating this time consuming process entirely.