NASTEL

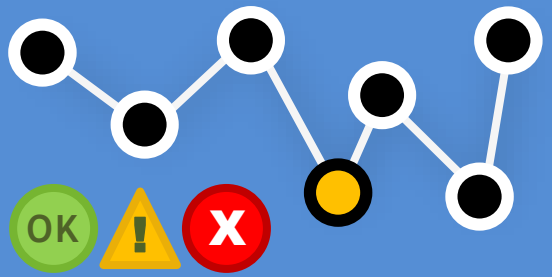
Driving Business Transaction Performance ®

Get Out From Under the Tangle of Middleware Applications

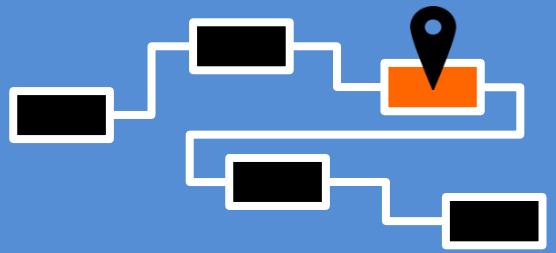
NASTEL.COM

Nastel Technologies – What We Do

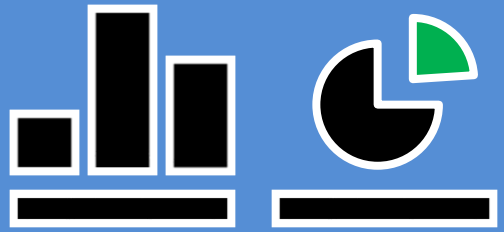
Monitoring



Tracking



Analytics



BUSINESS APPLICATIONS

- Banking Finance
- Transport Logistics
- Claims Processing
- Order Handling
- Payments Processing

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The Nastel Difference: Making the Complex Simple

1

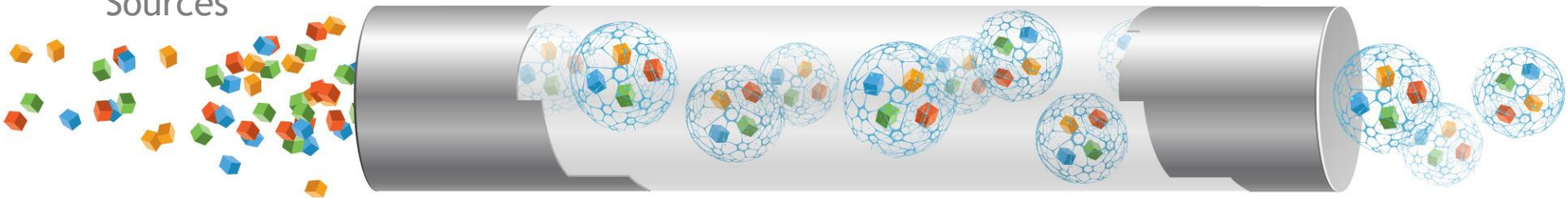
Logs, Metrics & Transactions From Multiple Sources

2

Event/Transaction Synthesis with Alerts and Notifications

3

Intuitive, Actionable Business Insights



Chaotic Complexity
Low-value Data

Data Enrichment &
Business Milestones

Simplicity
High-value Data

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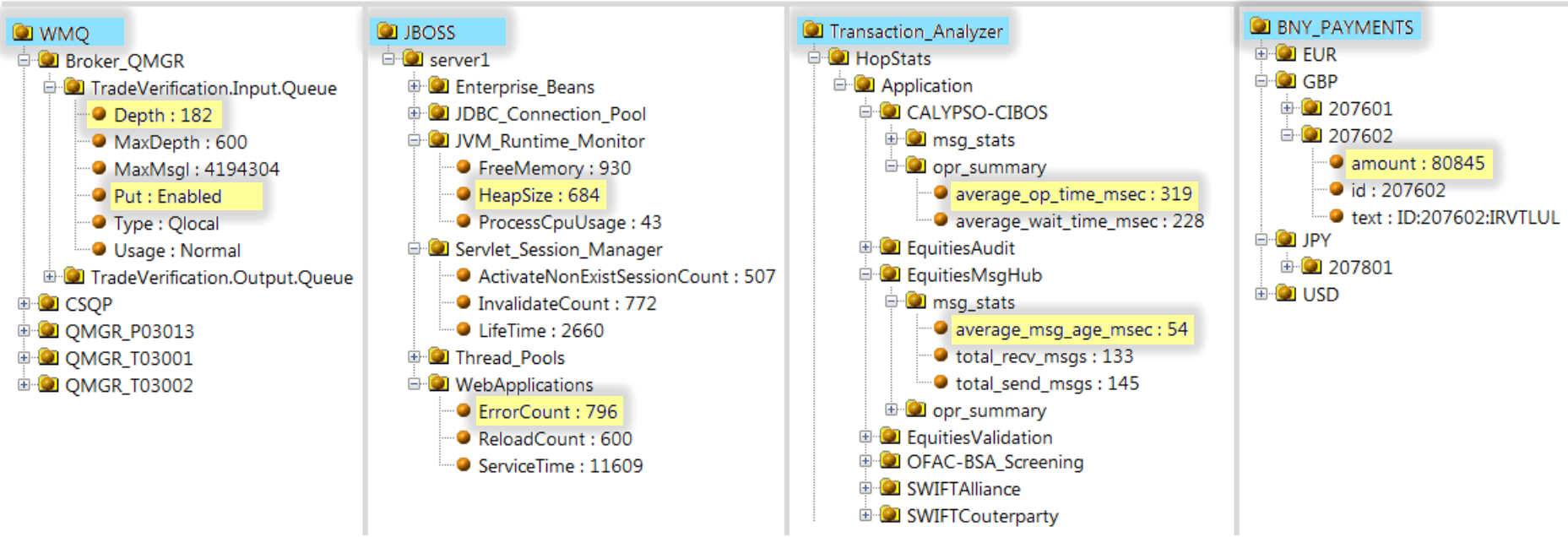
Metrics and Events from Multiple Sources

Application Infrastructure Metrics & Events (Messaging Middleware, ESB, Java, …)

Transaction Metrics & Events

Application Metrics & Events



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Nastel's AutoPilot®

Automatic Transaction Tracking & Auditing

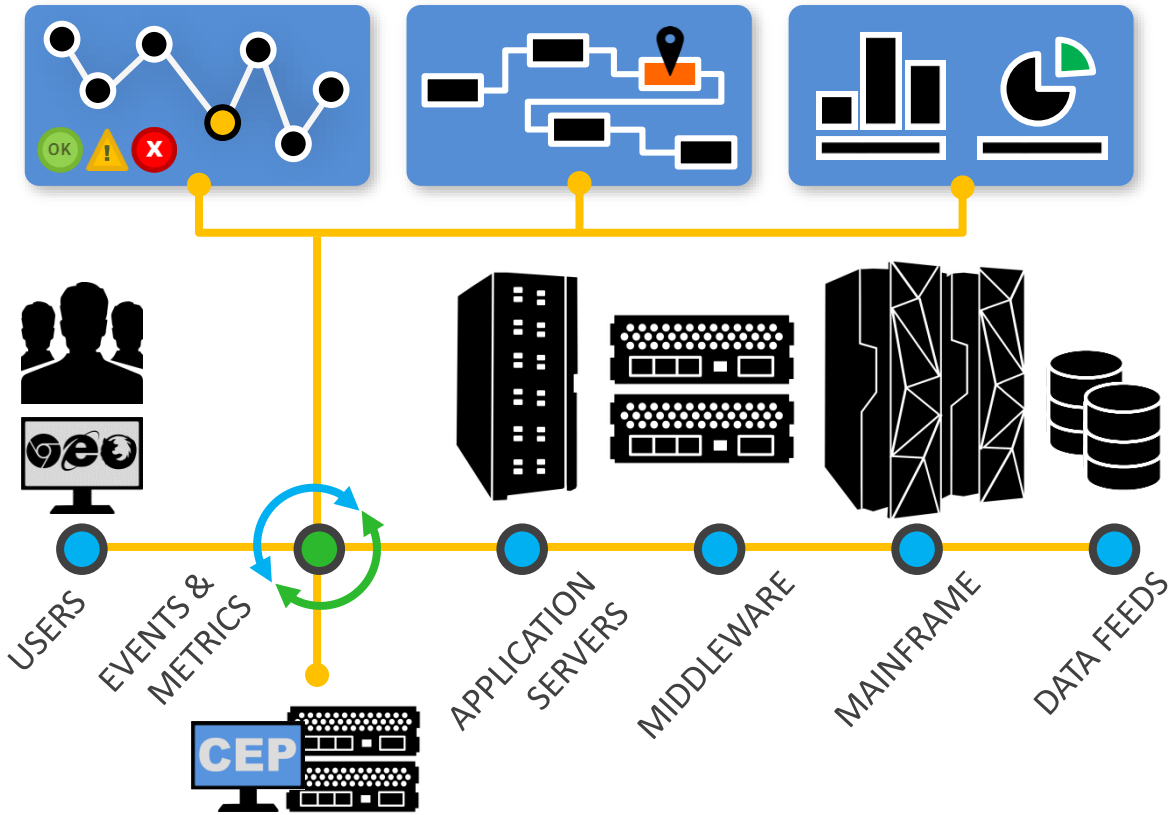
Complex Event Processing (CEP: Situational Awareness)

Unified Application Analytics and Log Analytics

End-User Monitoring, Performance Analytics

Middleware Management and Monitoring

Built on a Big-Data Platform for Extreme Scalability



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NASTEL
Driving Business Transaction Performance ®
AutoPilot® for IBM MQ
Overview:
- Management
- Monitoring
- Message Tracking
- Log Analytics
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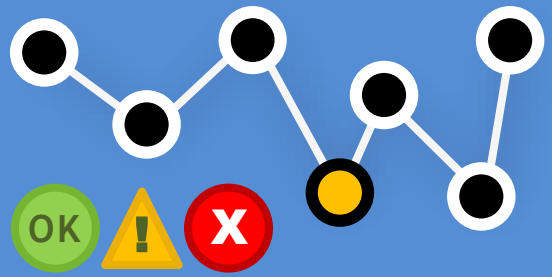
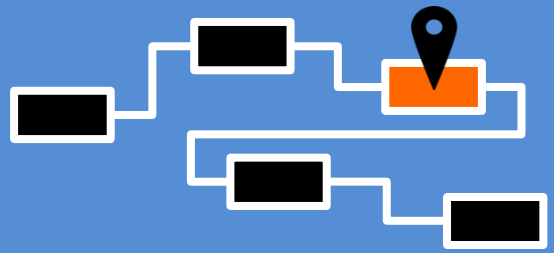
Nastel's AutoPilot® for IBM MQ

Management

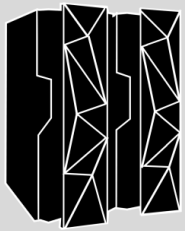
Monitoring



Message Tracking

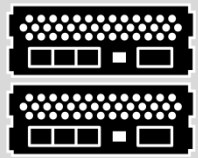


AutoPilot® for IBM MQ



- IBM z/OS
- IBM iSeries
- IBM AIX

- Unix
- Linux
- Windows



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NASTEL
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AutoPilot® Insight
Transaction Tracking
& Advanced Analytics
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Tracing versus Tracking

- Tracing
  - Capturing the calls to explain exactly what the application did
- Tracking
  - Where's my order?

Middleware Team

Application Support

Application Developers

Application Owners

Business Users

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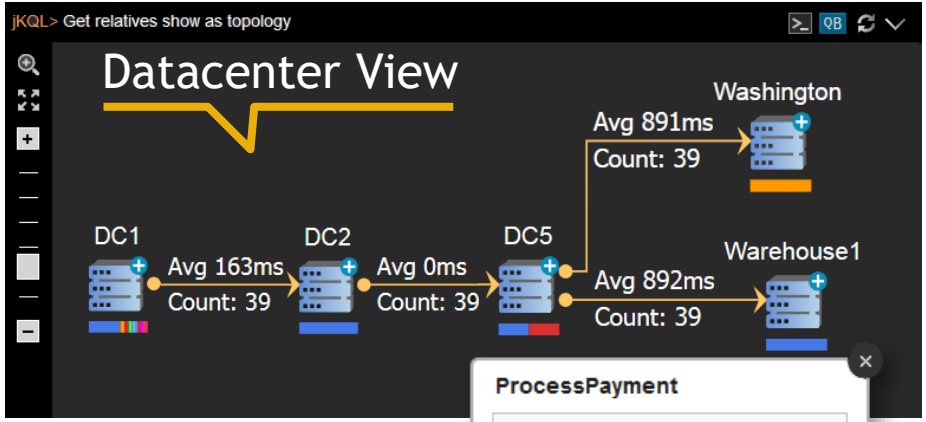
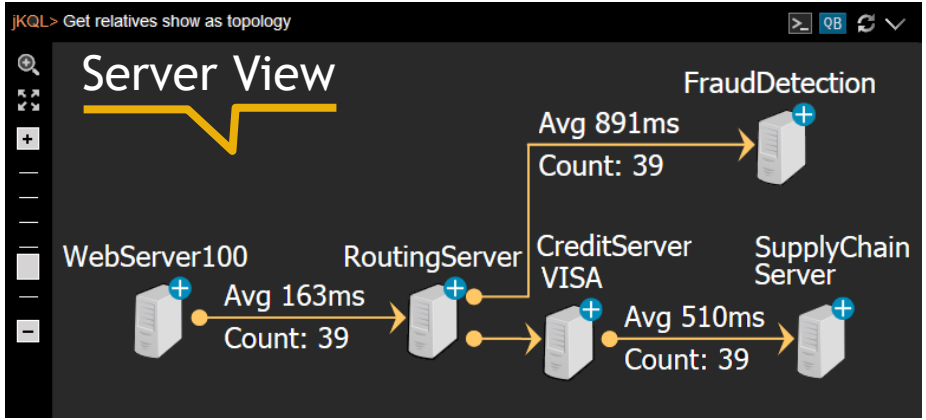
Transaction Topology Views

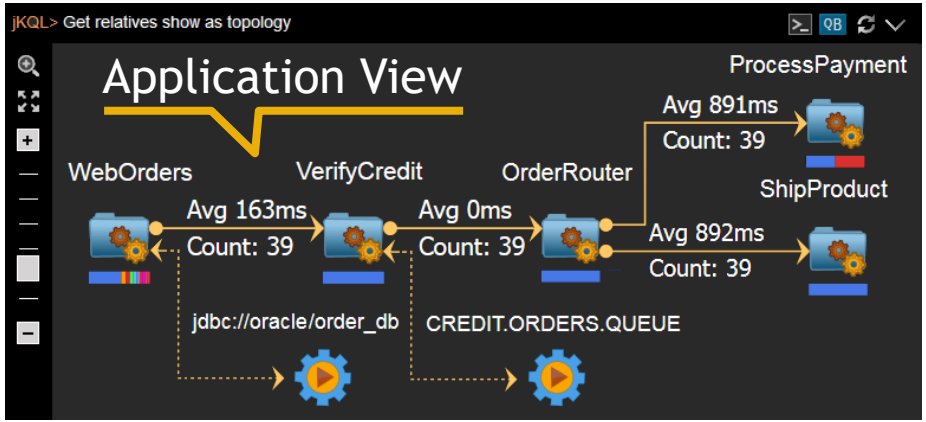




ProcessPayment

Activities	(20)
Activity Status	Count (20)
Exception	0
Others	20

Events	(110)
Severity	Count (110)
Error	10
Failure	20
Critical	20
Others	60



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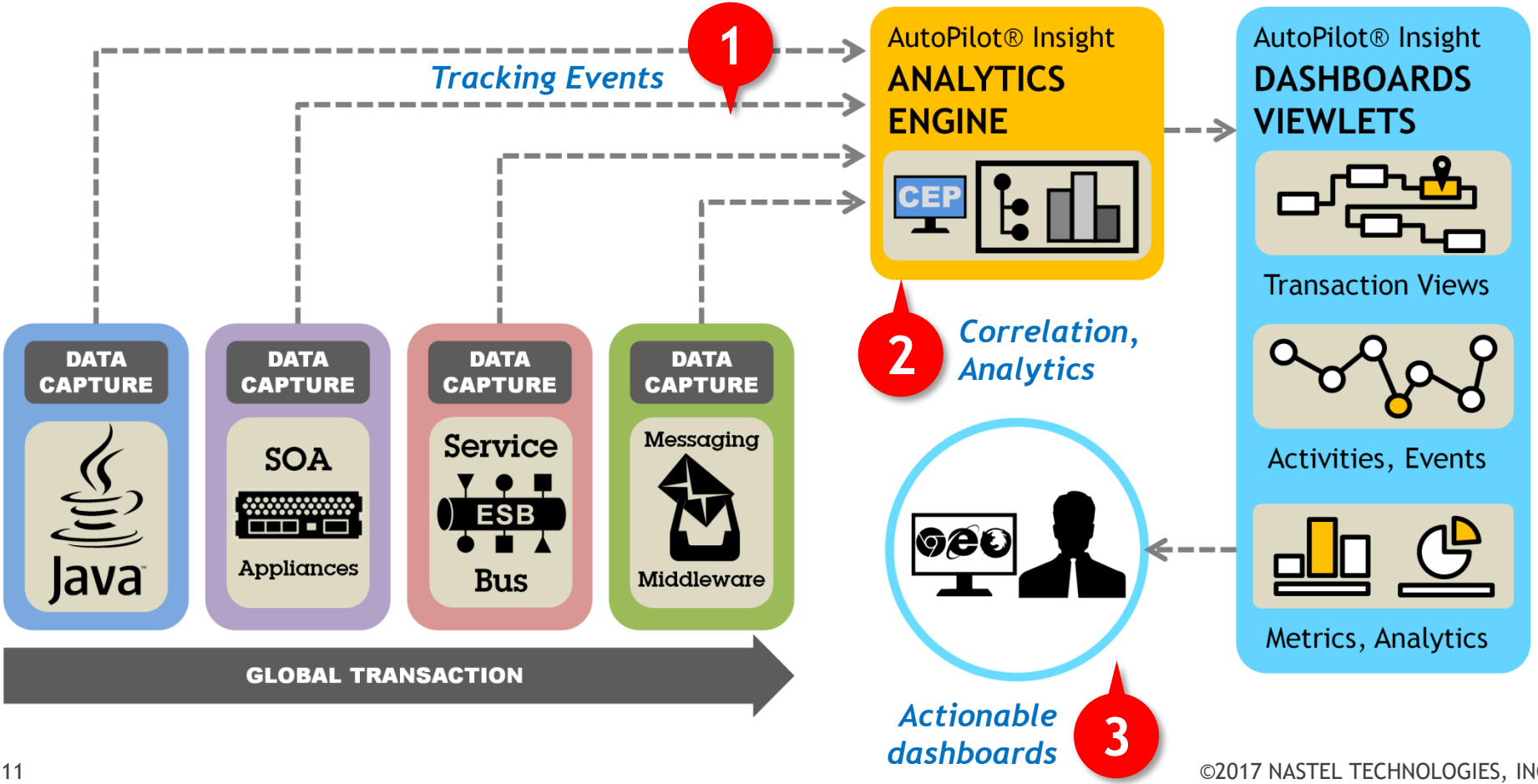
Track & Trace Digital Transactions



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Analytics with Integrated, Natural Query Language

- *NoSQL* Analytical Platform
- *Streaming analytics* for time-series data
- *Intuitive* "English-like" *query language*

  Get number of events for last hour group by AppIname, Severity show as [scorecard | linechart |…]

- *Viewlets*: web dashboards
- Samples provided for *quick start*

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Insight through Capture, Analytics & Visualization

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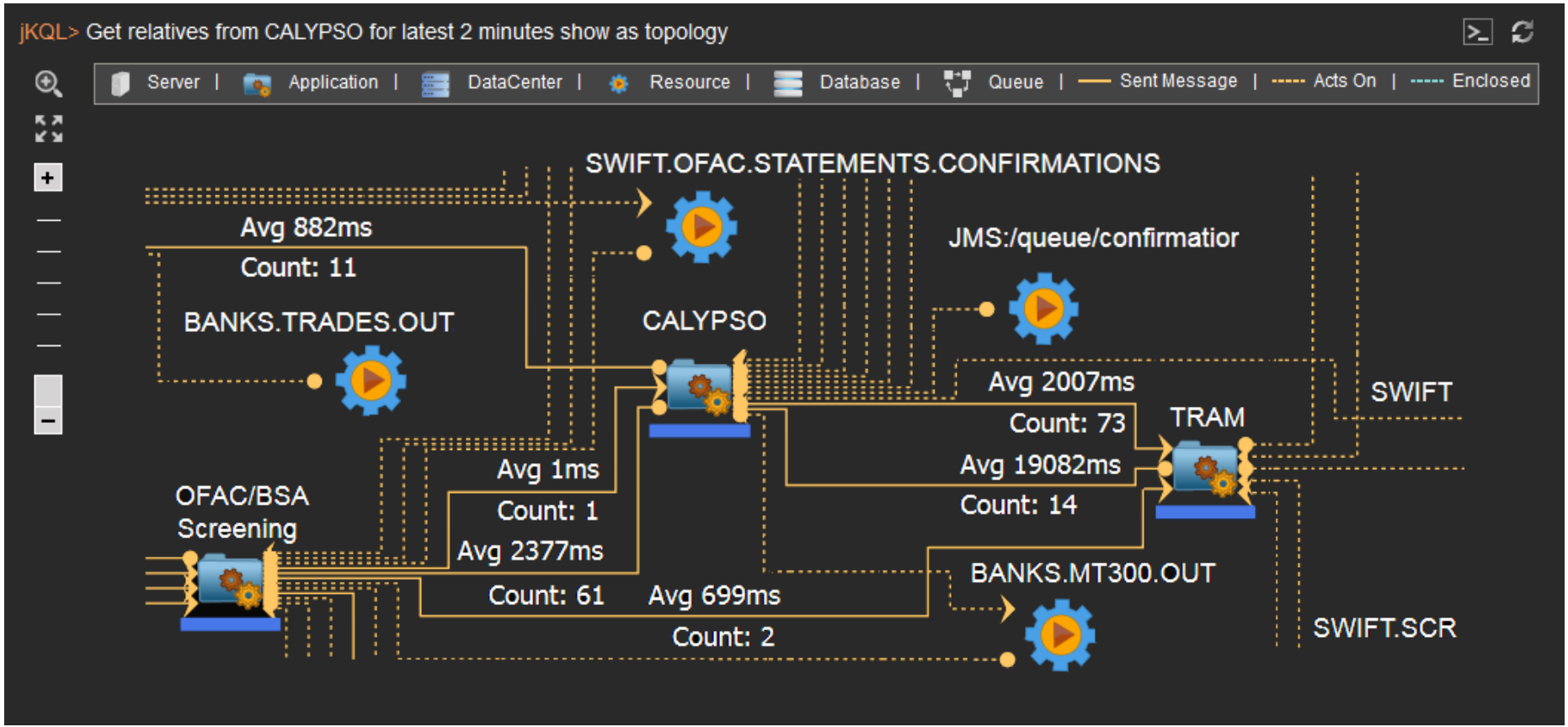
Example Transaction: Financial Services



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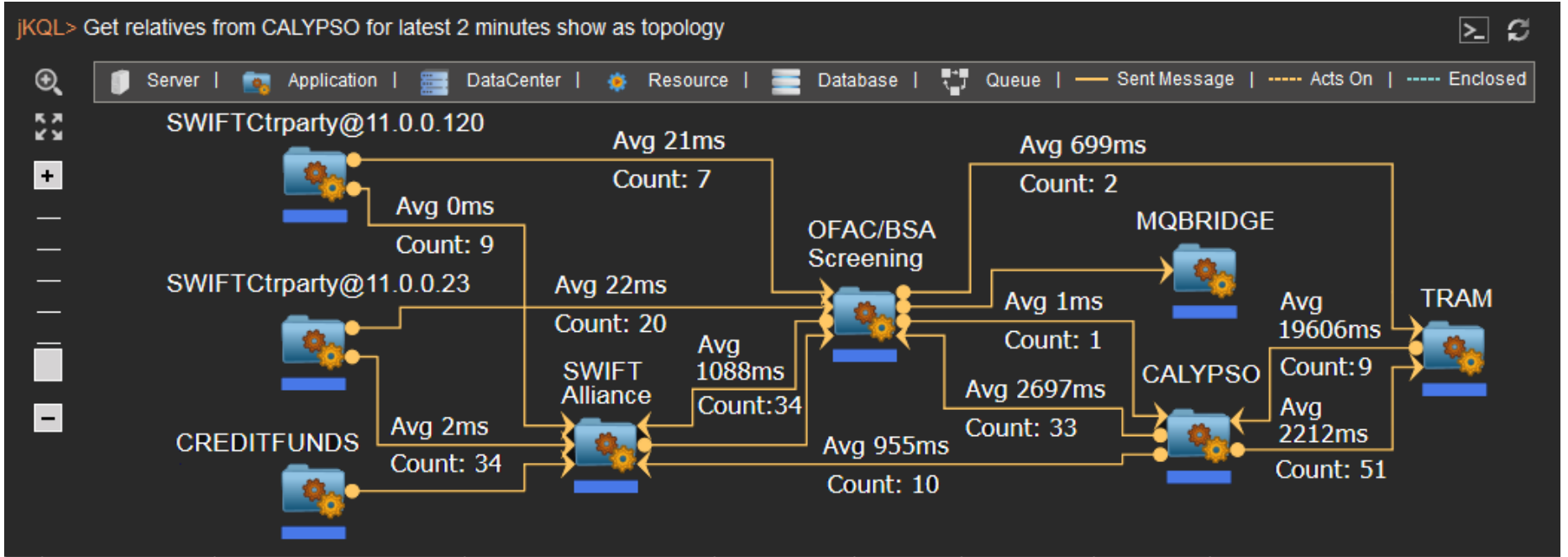
Transaction Trace Details



ActivityName	StartTime	EndTime	ElapsedTime	Severity	EventCount	SnapShot	SourceFQN
CALYPSO-CIBOS	2016-09-17 11:14:57.873000	2016-09-17 11:14:58.906568	1.033s	INFO	1	0	APPL=CALYPSO-CIBOS#SERVER=CALYP
CALYPSO-CIBOS	2016-09-17 11:15:01.415631	2016-09-17 11:15:01.415798	776ms	INFO	2	0	APPL=CALYPSO-CIBOS#SERVER=CALYP
CALYPSO-CIBOS	2016-09-17 11:14:58.849000	2016-09-17 11:15:03.048384	4.199s	INFO	1	0	APPL=CALYPSO-CIBOS#SERVER=CALYP

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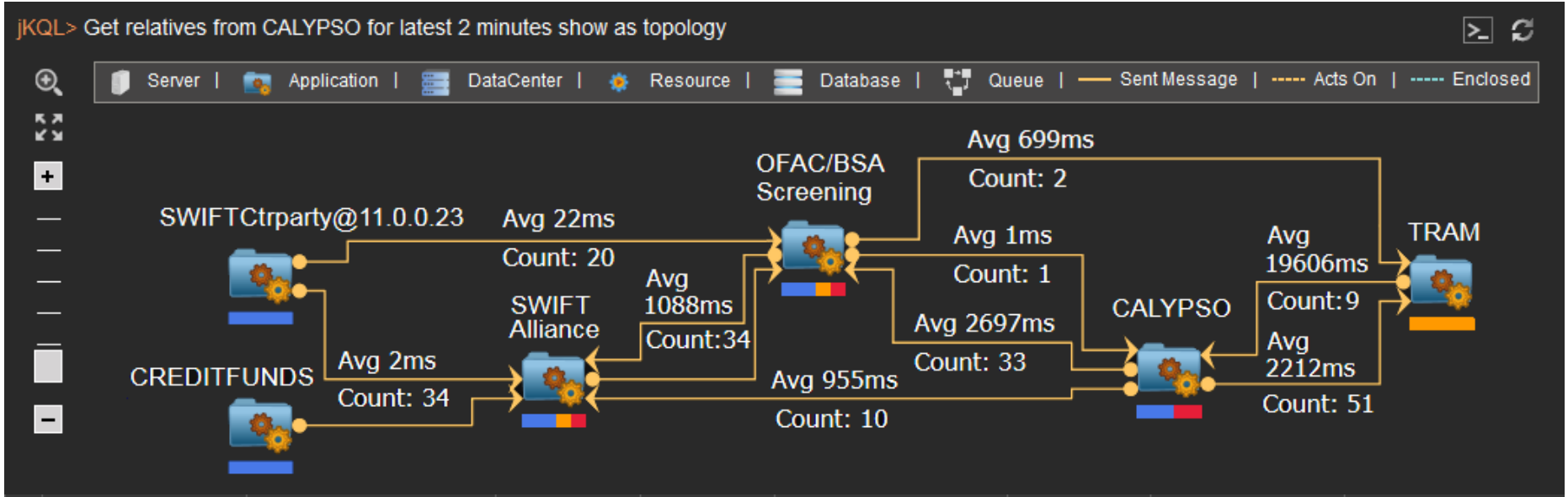
Transaction Analytics, Notifications and Alerts



EventName	StartTime	ElapsedTime	EventType	Message	Severity	Exception	ResourceName
/book-trade	2016-09-23 17:42:57.382000	0ms	OTHER		INFO		book-trade
HTTP/POST/book-trade	2016-09-23 17:42:57.382460	0ms	OTHER	{:15A: :20:LD0006...	INFO		book-trade
QueueSender.send	2016-09-23 17:42:57.382938	13ms	SEND	{:15A: :20:LD0006...	INFO		JMS:/queue/tradein
MQPUT	2016-09-23 17:42:57.396887	2.162s	SEND	{:15A: :20:LD0006...	FAILURE	2010: MQRC_DATA...	BANKS.TRADES.IN.QUEU

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Transaction Activity Trace, Event and Message Details

StartTime	EndTime	ElapsedTime	EventCount	ApplName	ResourceName
2016-09-17 11:14:57.873000	2016-09-17 11:14:59.150676	1.277s	3	CALYPSO-CIBOS,TRAM	BANKS.MT300.DUPS.TO.TRAM.QUEUE,BAN
[illegible]	2016-09-17 11:14:59.154368	1.231s	23	OFAC/BSA Screening,CALYPSO-CIBOS,M	ATP001.QMGR,BANKS.MT300.DUPS.TO.TRA
[illegible]	2016-09-17 11:15:00.676586	2.582s	3	CALYPSO-CIBOS,TRAM	BANKS.MT300.DUPS.TO.TRAM.QUEUE,BAN
[illegible]	2016-09-17 11:15:01.116293	2.978s	23	OFAC/BSA Screening,CALYPSO-CIBOS,M	ATP001.QMGR,BANKS.MT300.DUPS.TO.TRA

Events

Children

jKQL> Get Events where ActivityID in ('3d978bd8-7cb7-11e6-b5de-00259035f22d') order by starttime asc

EventName	StartTime	ElapsedTime	EventType	Message	Severity	Resou
/book-trade	2016-09-17 11:14:59.621000 +02:00	0ms	OTHER		INFO	book-tr
HTTP/POST/book-trade	2016-09-17 11:14:59.621446 +02:00	0ms			INFO	book-tr
QueueSender.send	2016-09-17 11:14:59.621924 +02:00	13ms			INFO	JMS:/qu
MQPUT	2016-09-17 11:14:59.635724 +02:00	2.507s			WARNING	BANKS
MQGET	2016-09-17 11:15:02.117492 +02:00	26ms			INFO	BANKS
MQPUT	2016-09-17 11:15:02.732387 +02:00	24ms			CRITICAL	COUNT
QueueReceive.receive	2016-09-17 11:15:02.760401 +02:00	13ms			INFO	JMS:/qu
HTTP/Response/match-confi	2016-09-17 11:15:02.774201 +02:00	0ms	OTHER	{:15A: :20:LD000618 :22A:NEWT :22B:CONF...	INFO	match-

```
{:15A: :20:LD000618 :22A:NEWT :22B:CONF
:22C:BSUIPP0042CITIZZ :82A:BSUIFRPP
:87A:CITICHZZ :15B: :17R:B :30T:20000614
:30V:20000618 :30P:20010618
:32B:CHF5000000 :30X:20010618
:34E:CHF210000 :37G:4,2 :14D:360/360 :15C:
:53A:BSUICH22 :57A:CITICHZZ :15D:
:57A:BSUICH22 -}
```


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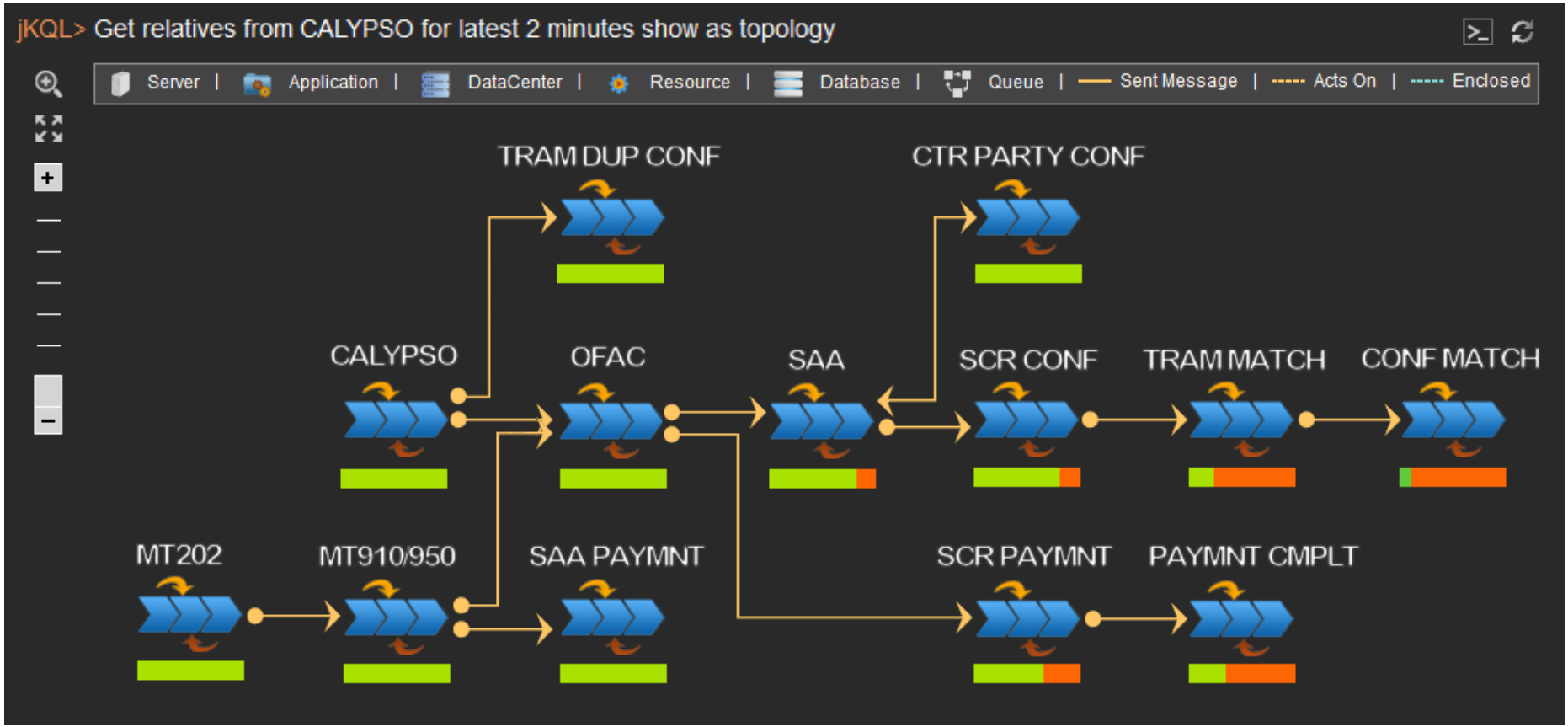
Transaction Milestones: Financial Services Example



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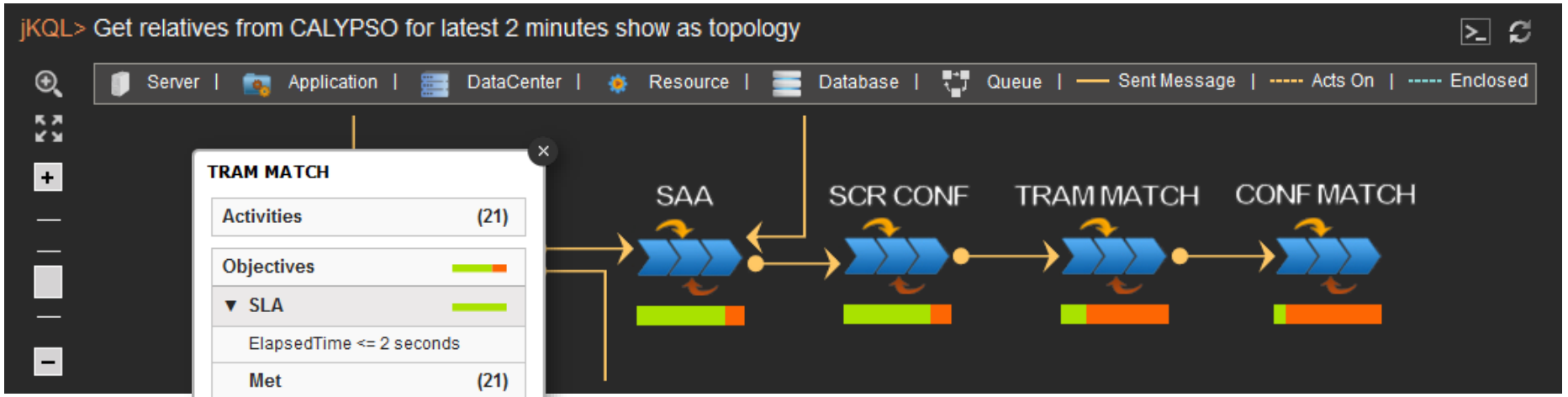
Transaction Milestones - Details



jKQL> Get Activity ... ccessful' show as table

SetName		ActivityName	StartTime	Elapsed	Severity	SourceFQN
TRAM MATC	..., O_Successful._NOT_MET_	TRAM MATCH	2016-09-15 11:21:03.361726	52ms	INFO	APPL=TRAM#SE
TRAM MATC	..., O_Successful._NOT_MET_	TRAM MATCH	2016-09-15 11:20:47.523798	53ms	INFO	APPL=TRAM#SE
TRAM MATCH	O_SLA._MET_: TRAM MATCH, O_Successful._NOT_MET_	TRAM MATCH	2016-09-15 11:21:03.361726	52ms	INFO	APPL=TRAM#SE
TRAM MATCH	O_SLA._MET_: TRAM MATCH, O_Successful._NOT_MET_	TRAM MATCH	2016-09-15 11:20:47.523798	53ms	INFO	APPL=TRAM#SE

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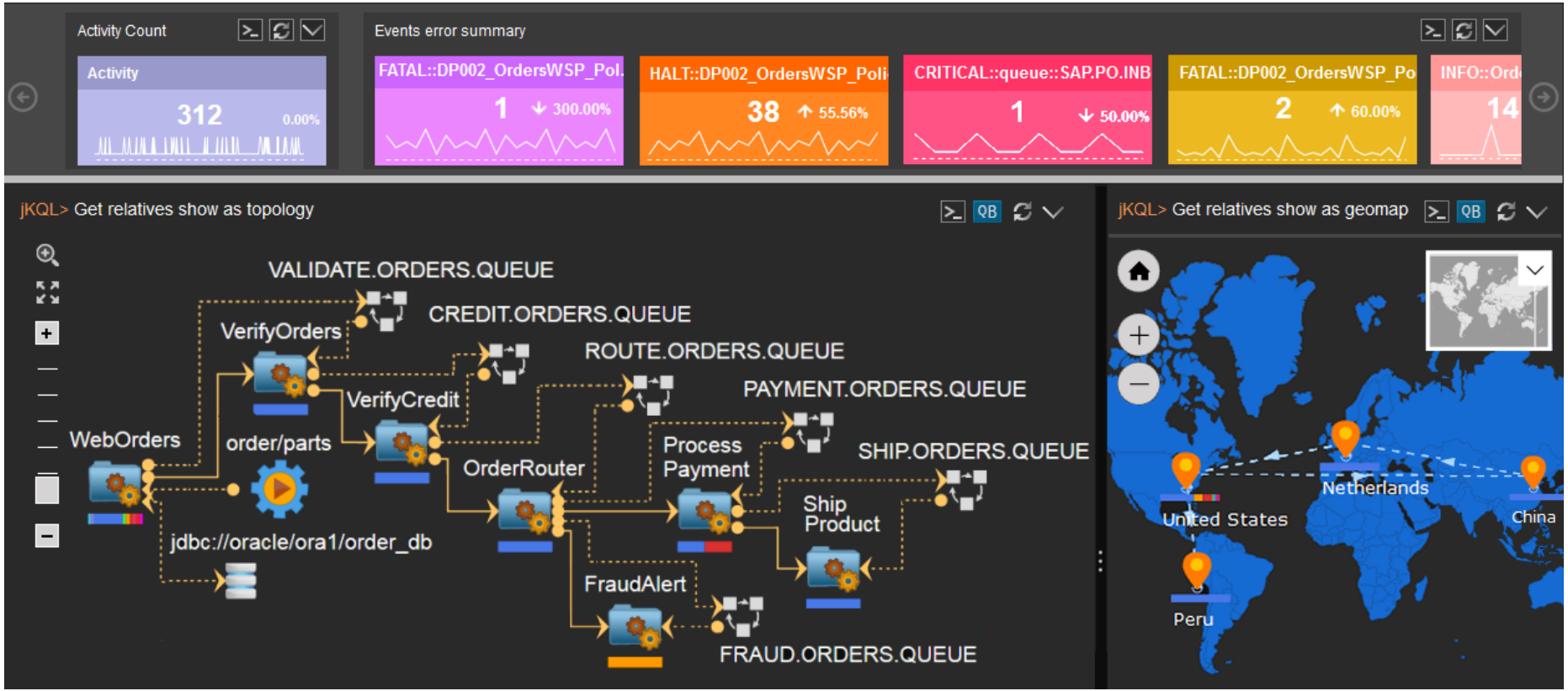
Example Transaction: Retail Organization



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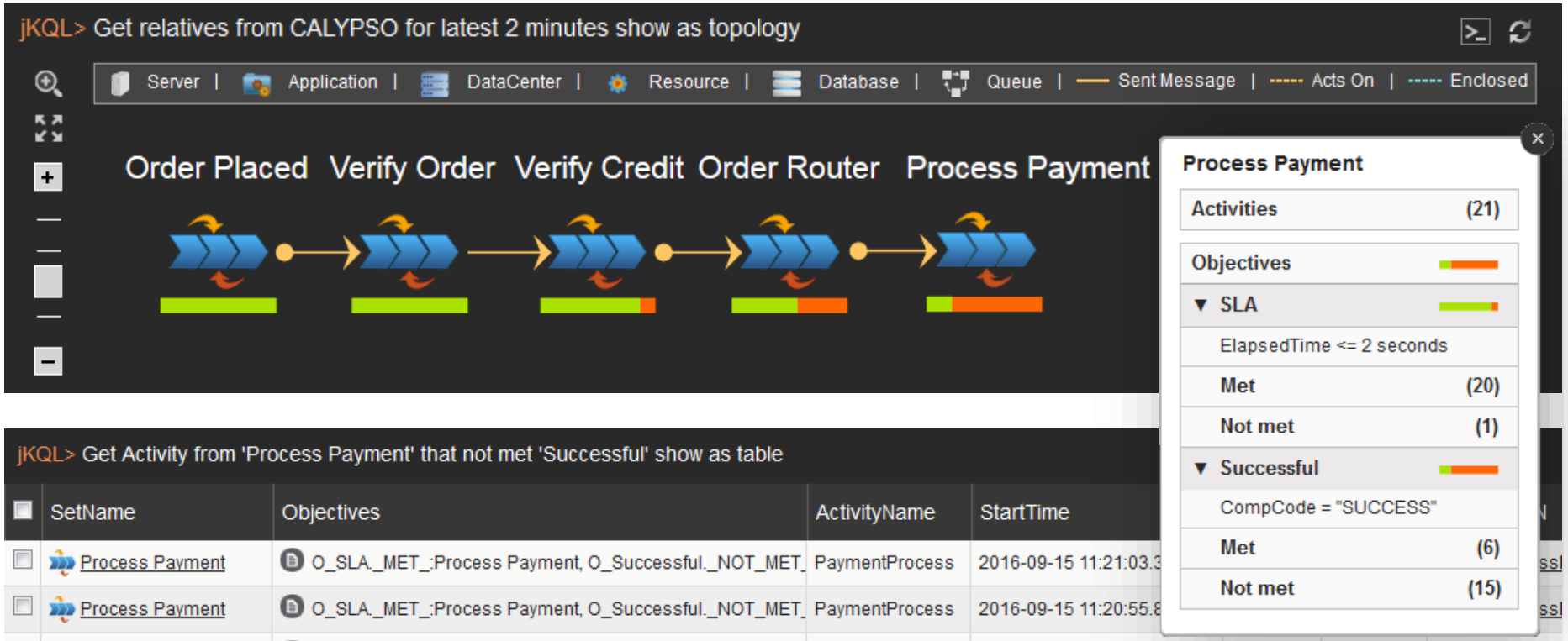
Transaction Milestones: Retail Example



jKQL> Get Activity from 'Process Payment' that not met 'Successful' show as table

SetName	Objectives	ActivityName	StartTime			
Process Payment	O_SLA._MET_:Process Payment, O_Successful._NOT_MET_	PaymentProcess	2016-09-15 11:21:03.3			
Process Payment	O_SLA._MET_:Process Payment, O_Successful._NOT_MET_	PaymentProcess	2016-09-15 11:20:55.8			
Process Payment	O_SLA._MET_:Process Payment, O_Successful._NOT_MET_	PaymentProcess	2016-08-31 13:21:19.936837	44ms	INFO	APPL=Processl
Process Payment	O_SLA._MET_:Process Payment, O_Successful._NOT_MET_	PaymentProcess	2016-09-15 11:20:47.523798	53ms	INFO	APPL=Processl

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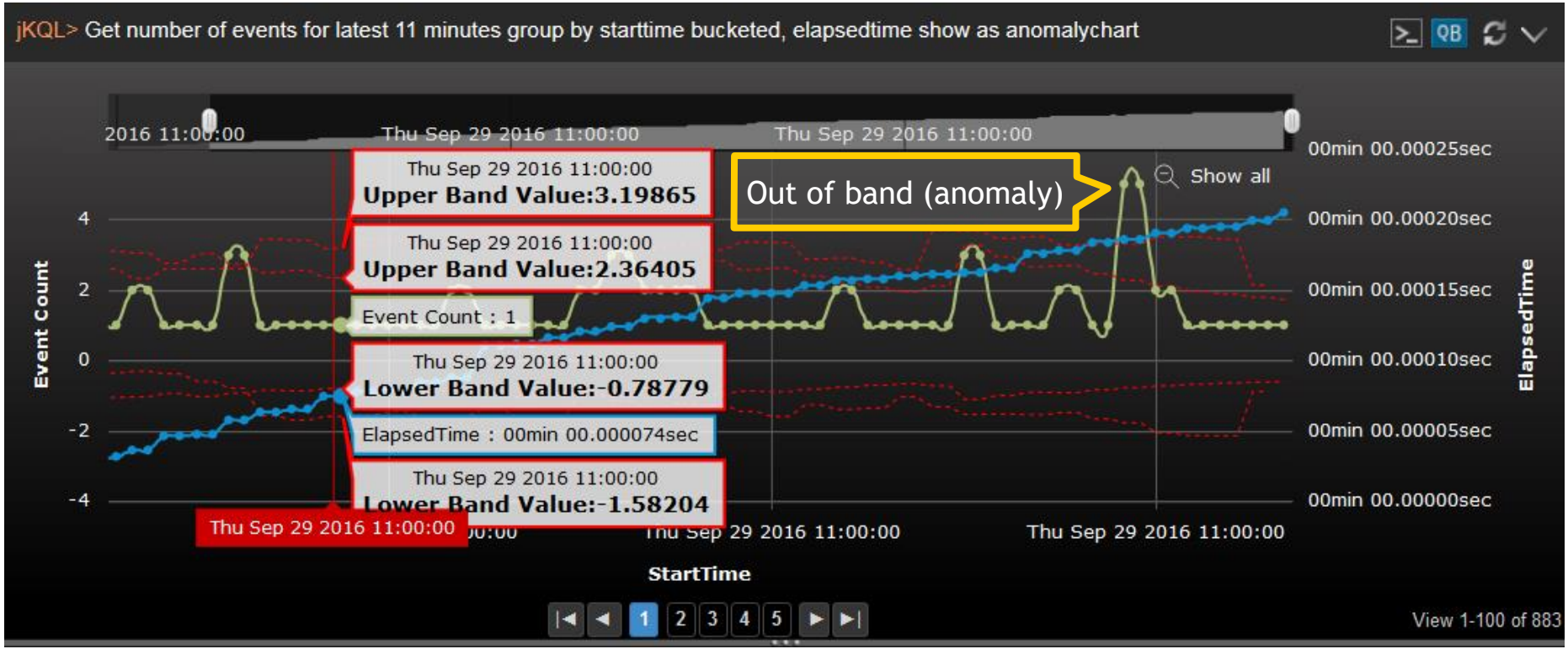
Automatic Detection of Anomalies



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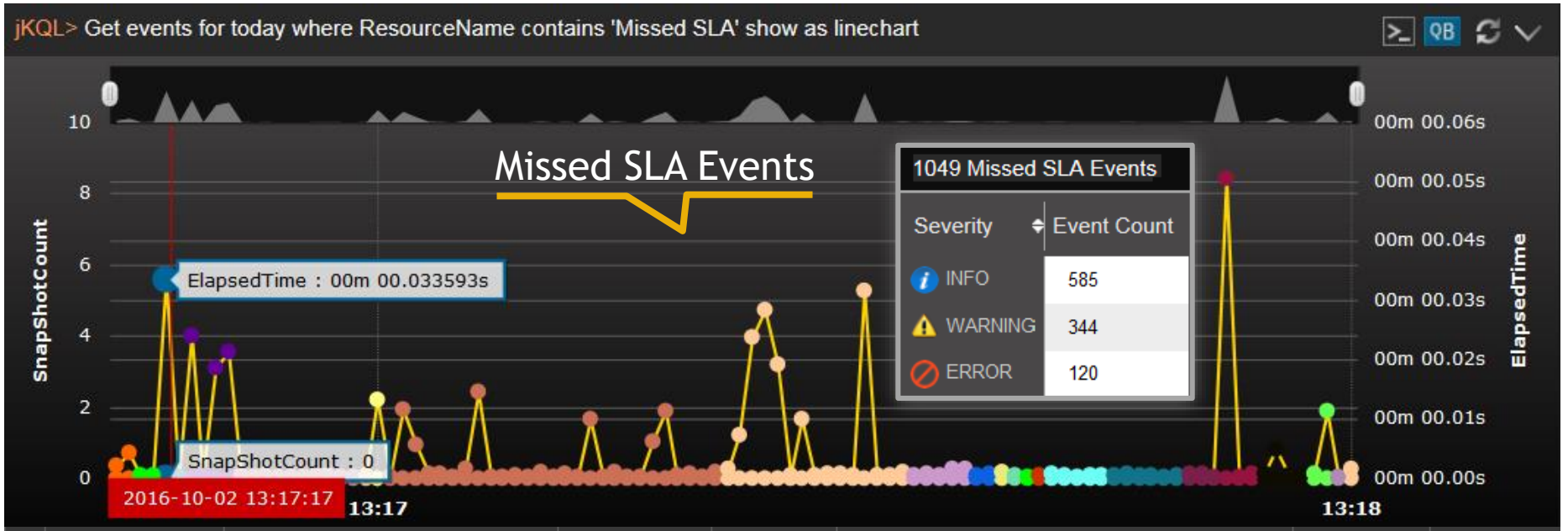
Missed SLA Transactions



EventName	StartTime	ElapsedTime	EventType	Message	Severity	SourceFQN
ReadOrder	2016-05-24 21:30:35.548116 +02:00	25ms	RECEIVE	Process Payment ProductId=8380203...	WARNING	APPL=Proces
ReadOrder	2016-05-24 21:30:48.542458 +02:00	27ms	RECEIVE	Process Payment ProductId=8380203...	WARNING	APPL=Proces
ReadOrder	2016-05-24 21:30:35.548116 +02:00	25ms	RECEIVE	Process Payment ProductId=8380203...	ERROR	APPL=Proces

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Total Transactions and Transaction Volumes

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Summary: Optimizing Digital Transaction Performance

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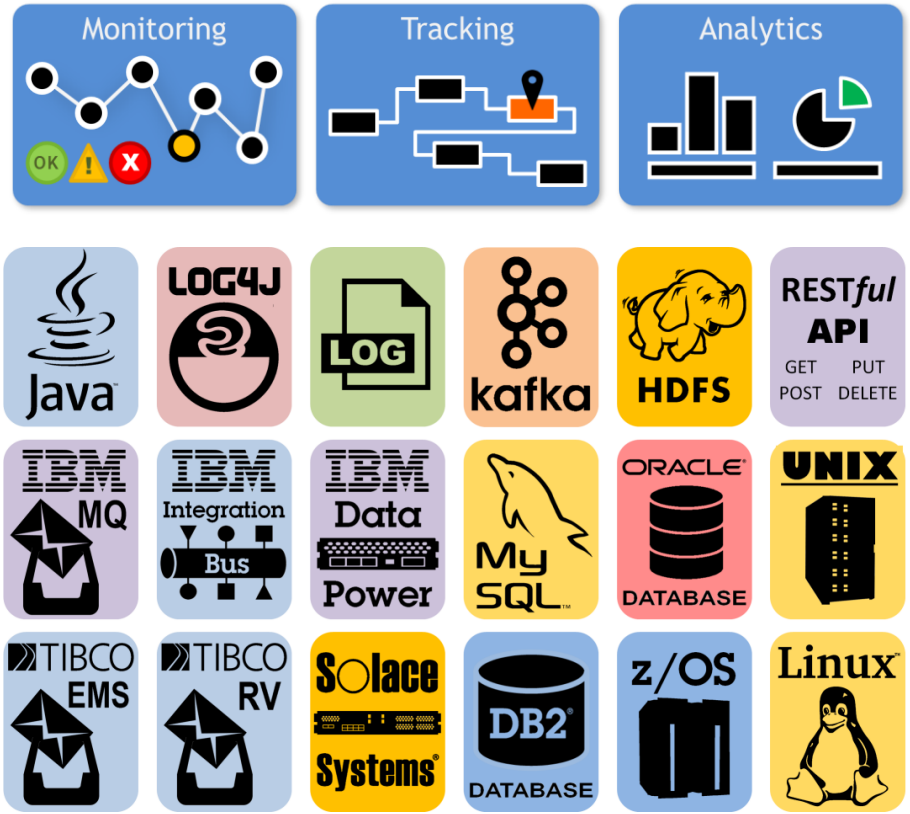
AutoPilot® Insight: Data Collectors

Log Analytics

- Log4j/SLF4J/Logback
- Syslog
- Folder & File Tracking
- Log Streams
  - Files, HDFS, Kafka, JMS, MQ, MQTT, Logstash, Apache Flume …)



Application Performance

- Java JMX
- JEE Servlet Filter
- Java Garbage Collection
- Java Transaction Profiling
- End User Monitoring via Browser
- Middleware (MQ, Tibco, IIB, DataPower …)
- Databases
- Operating Systems

https://www.nastel.com/tech/#collectors

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Case References & Testimonials

www.nastel.com

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Frequently Encountered Business Challenges

Healthcare – Tracking electronic health records & claims processing in healthcare insurance with strict adherence to HIPAA rules

Retail – Real-time capture of user experience data from POS

Telco – Reduction of support costs for on-line order management

Financial Services – Reducing risk by tracking SLA breaches in trade compliance

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Case Study: Large Bank

Application: AutoPilot Tracking Transactions Across Distributed and Mainframes

Problem: Compliance violations and resultant penalties

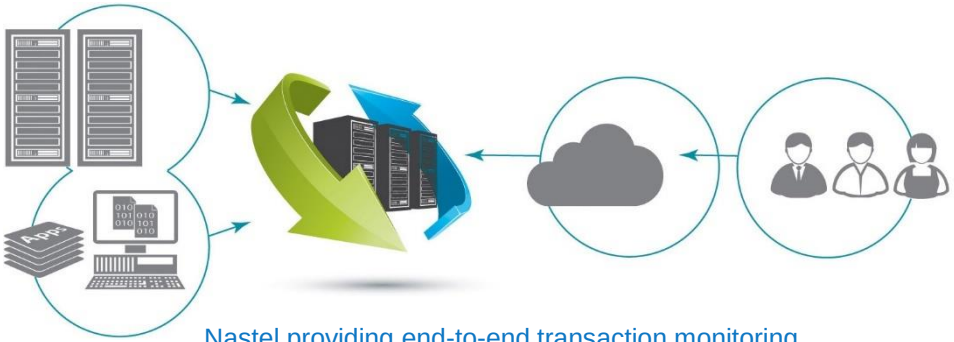
> Major compliance violations
> Financial and reputational impact visible to senior management

- Poor problem visibility
- Unable to prioritize during periods of high demand
- Unable to track long-running transactions or business milestones

Nastel provides tracking, monitoring & analysis for:
- Mainframe and Java
- MQ family
- Messages across multiple lines of business

Replaced IBM Omegamon

RESULTS:
On-time reconciliation with the Fed improves the bottom-line by eliminating penalties.



Nastel providing end-to-end transaction monitoring and the visibility necessary to prioritize messages

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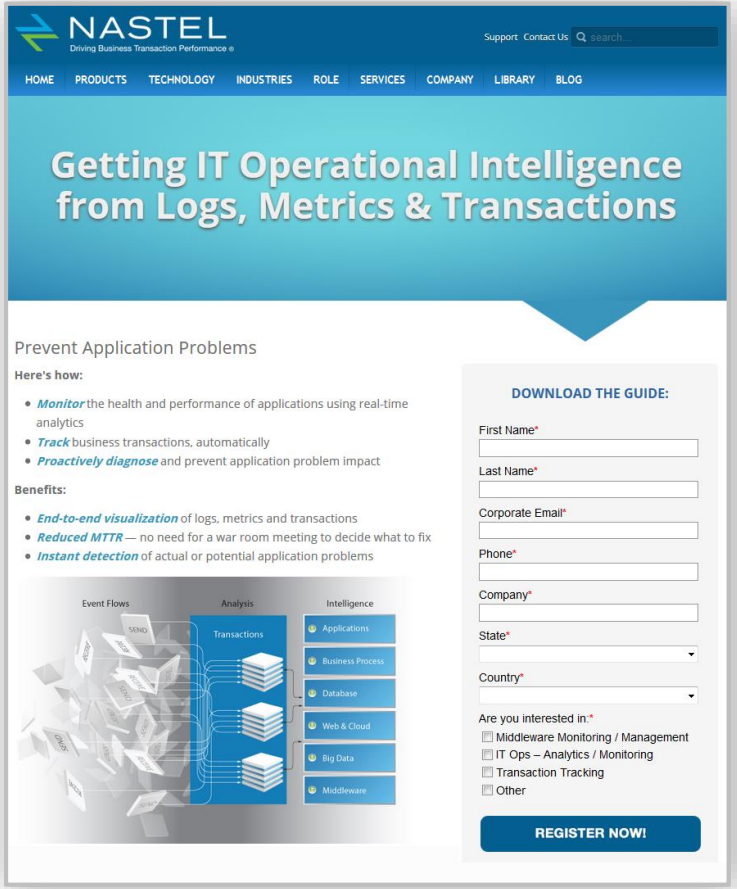
For more information …

- See Nastel Whitepaper:
  - *"Getting IT Operational Intelligence from Logs, Metrics & Transactions"*

http://www.nastel.com/whitepapers/prevent-app-problems



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