

If you can't clone yourself,
Delegate!





Summary

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Self Service



4 **Self service** is the practice of serving oneself... Common examples include many **gas stations**, where the customer pumps their own gas rather than have an attendant do it... **Automatic Teller Machines** (ATMs) in the banking world have also revolutionized how people withdraw and deposit funds; most **stores** in the Western world, where the customer uses a shopping cart in the store, placing the items they want to buy into the cart and then proceeding to the checkout counter/aisles; or at **buffet-style restaurants**, where the customer serves their own plate of food from a large, central selection.

Source: Wikipedia

Self Service Requirements

Safe

- Oregon and New Jersey do not allow self service gas and one key reason is safety
 - A survey conducted by the Petroleum Equipment Institute showed approximately two-thirds of the documented cases of gas pump fires involved returning to the driver's seat.

Secure

- ATM and online account security are obvious examples.
 - Only those authorized to complete the transaction should be able to.

Simple

- Stakeholders may have little or no training
 - Interface should be intuitive and guide them to the right actions

Scalable

- Have to be able to handle the volume of consumers
 - Higher usage can be expected

Why the Interest in Self Service?

Drivers for Self Service in WebSphere MQ

- Decreasing middleware staff
- Expanding duties of the middleware staff
- Stakeholders Increasing (development, operations, support)
- Increased complexity of the applications

Enterprise Stakeholders



**Middleware
Team**

- DEV, TEST & PROD
- Management of messaging backbone



**Application
Support**

- Faster time to repair (MTTR)
- Identify root cause of MQ issues



**Application
Developers**

- Self-Service tooling for Dev, QA & UAT testing
- Improved quality of new releases



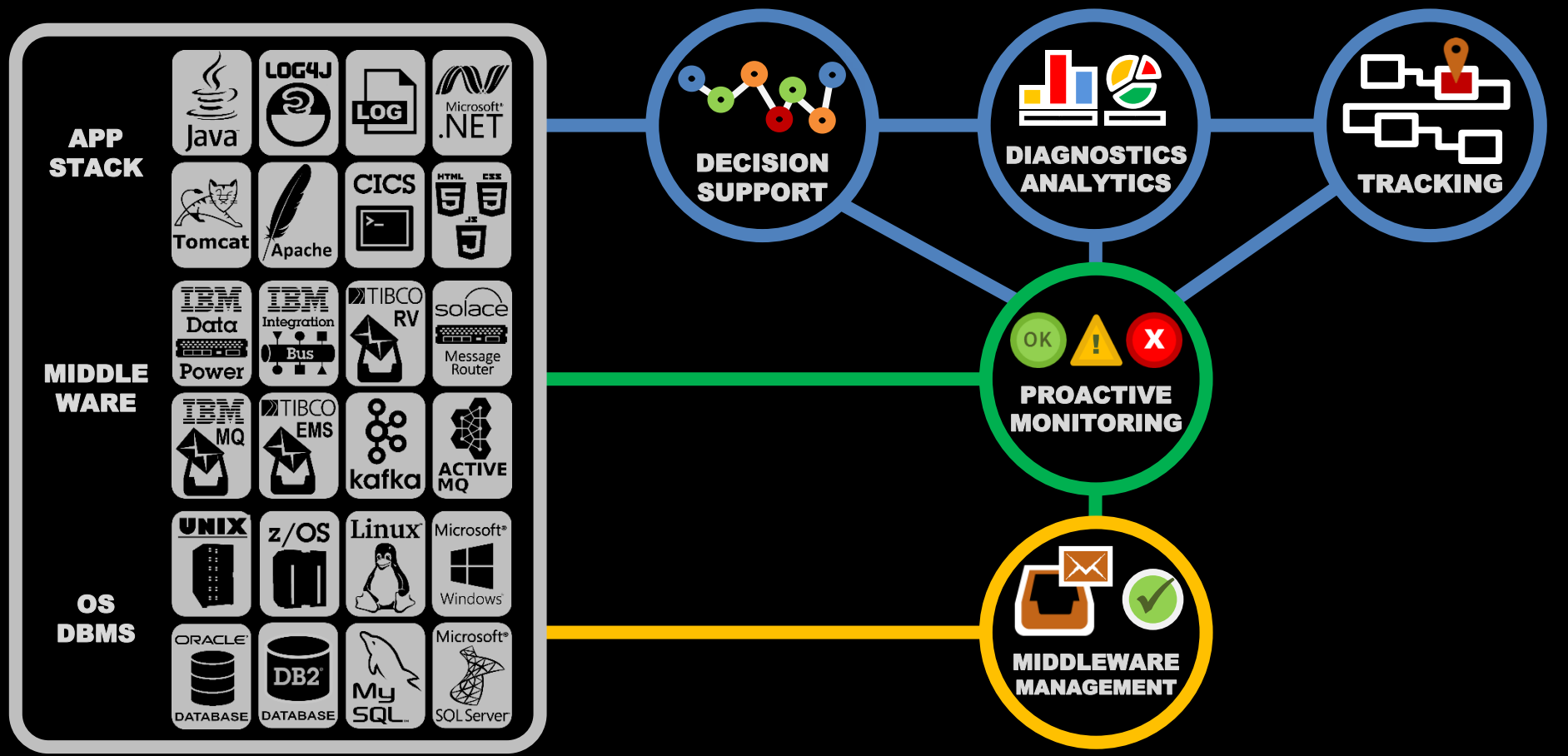
**Enterprise
Architects**



**Application
Owners**

- Improve processes
- Reduce costs
- Prevent performance problems

Nastel's Solution - 360° Situational Awareness™



Nastel Solution Summary



Nastel Xray

Predictive Analysis of your business applications using machine learning, ergonomic communications, advanced visualization and automation



Nastel AutoPilot

Proactively & Holistically Monitor Infrastructure, Platform, Middleware and Applications



Nastel Navigator

Manage Middleware, securely, efficiently and effectively

Our Clients Speak for Us

FINANCIAL SERVICES



HEALTHCARE



TELCO



ENERGY



TRAVEL

WHOLESALE DISTRIBUTION



CHEMICALS



RETAIL





Why Nastel?

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Self service should provide application support, Development, or operations the ability to:

- View queue status and depth, channel usage
- Examine queues, channels, queue managers, and subscriptions
- Browse and manipulate application messages
- Act on application specific messages (move, copy, edit, route, replay, create)
- Understand behavior over time

What is our Objective? To increase the number of opportunities for the stakeholders of WebSphere MQ (and related technologies) to service themselves as long as the methods that are:

- Safe
 - Protect the systems from damage
- Secure
 - Can only do what are authorized to do
- Simple
 - Easy to deploy and use
- Scalable
 - Large stakeholder population

MQ Networks have many attributes

- Different Operating Systems
- Different Versions of MQ
- Varied Queue Manager Definition
- Queues
- Channels
- Processes
- Etc.

IBM WebSphere MQ Explorer (Installation1)

File Edit Window Help

MQ Explorer - Navigator

- IBM WebSphere MQ
 - Queue Managers
 - DESKTOP99_QMGR
 - MB8QMGR
 - Queues**
 - Topics
 - Subscriptions
 - Channels
 - Client Connections
 - Channel Authentication Rec
 - Listeners
 - Services
 - Process Definitions
 - Namelist
 - Authentication Information
 - Communication Information
 - Queue Manager Clusters
 - JMS Administered Objects
 - Service Definition Repositories

MQ Explorer - Content

Queues

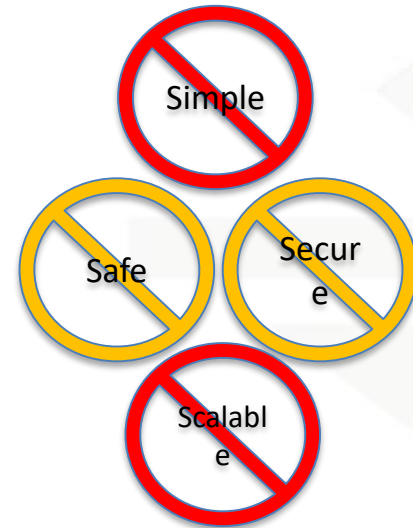
Filter: Standard for Queues

Queue name	Queue type	Open input count	Open output count	Current qu
A_LONG_LOCAL_Q	Local	0	0	0
A.SRF.B	Local	0	0	0
A.SRF.C	Local	0	0	0
A.SRF.DC	Local	0	0	0
A.SRF.DC1	Local	0	0	0
A.SRF.E	Remote			
AAAA	Local	0	0	0
ADDRESSBOOK_FAULT	Local	0	0	0
ADDRESSBOOK_IN	Local	0	0	0
ADDRESSBOOK_OUT	Local	0	0	0
AMQ.4FE41E7903410020	Local	0	0	0
AQ2NoWear	Remote			
BACK.REPLY	Local	0	0	0
BACK.REQUEST	Local	0	0	0
BACK.REQUEST2	Local	0	0	0
BadAlias	Alias			
BadModel	Model			
BadRemote	Remote			
BBB1	Local	0	0	0
BBBV1	Local	0	0	0
BBBV2	Local	0	0	0
CSQ7	Local	0	0	0
CSQ7_ADMIN	Remote			
DataPowerEnd	Local	0	0	0

Schema: Standard for Queues - Distributed

Disadvantages for Using for MQ Explorer for Self Service

- Eclipse client required
 - Installation
 - Maintenance
 - Configuration
- Can potentially see and do more than needed
 - Additional security planning required
- Problems not easily visible
 - Primarily an Admin tool
- Opening ports and client channels required
 - MQ improvements in V8/V9 Improve but still challenging



MQ Console

Tab 1 ▾ +

Local Queue Managers

Q Search Create +

▲ Name	Status
V910Qmgr	● Stopped
V910Test	● Running

Total: 2 Last updated: 7:04:57 AM

Queues on V910Test

Q Search Create + Add widget

▲ Name	Queue type	Queue depth
SYSTEM.ADMIN.ACCOUNTING.QUEUE	Local	0
SYSTEM.ADMIN.ACTIVITY.QUEUE	Local	0
SYSTEM.ADMIN.CHANNEL.EVENT	Local	0
SYSTEM.ADMIN.COMMAND.EVENT	Local	0
SYSTEM.ADMIN.COMMAND.QUEUE	Local	0

Total: 56 Last updated: 7:04:40 AM

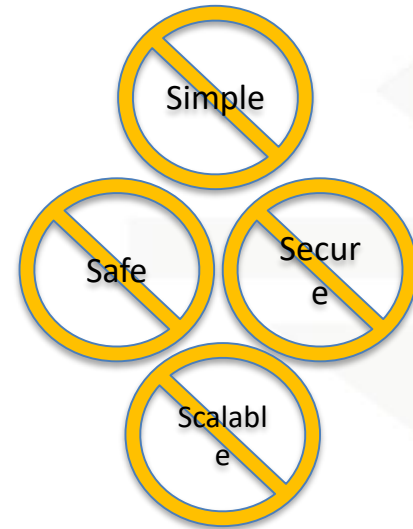
Channels on V910Test

Q Search Create +

▲ Name	Type	Overall channel status
MyAdmin.SvrConn	Server-connection	● Inactive

Disadvantages for Using for MQ Console for Self Service

- Single server view
 - Multiple logins required in a production environment
 - No ability to see across queue manager
- Can potentially see and do more than needed
 - Limited Security options (read only)
- Problems not easily visible
 - Charts provided but no analysis
- Still Evolving
 - Took 2 years to get first release to LTS version
 - 2 more years before next LTS update



Why us?

Technology

Easy to use, deploy and consume

Same stack for on premise and SaaS

Built on open source stack + FatPipes™

Unique data query & analytics language (JKQL)

Scale

Built on big data & clustered computing platform (FatPipes)

Native multi-tenancy for SaaS and on-premise

Linear horizontal and vertical scaling (FatPipes)

Customer Focus

Develop custom features and extensions

Personal 24x7 support with inline portal

Direct access to our R&D and roadmap

Flexible licensing: SaaS, perpetual, term, subscriptions



Use Cases

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Common Business Challenges of Our Customers

Financial Services - Avoiding stiff penalties for failing to reconcile with Federal Reserve funds transfers deadlines

Financial Services - Reducing risk by tracking actual or potential breaches in breaches in trade compliance (e.g., Dodd-Frank trade reporting)

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

Retail - Capturing of user experience data in real time from POS for improved business planning

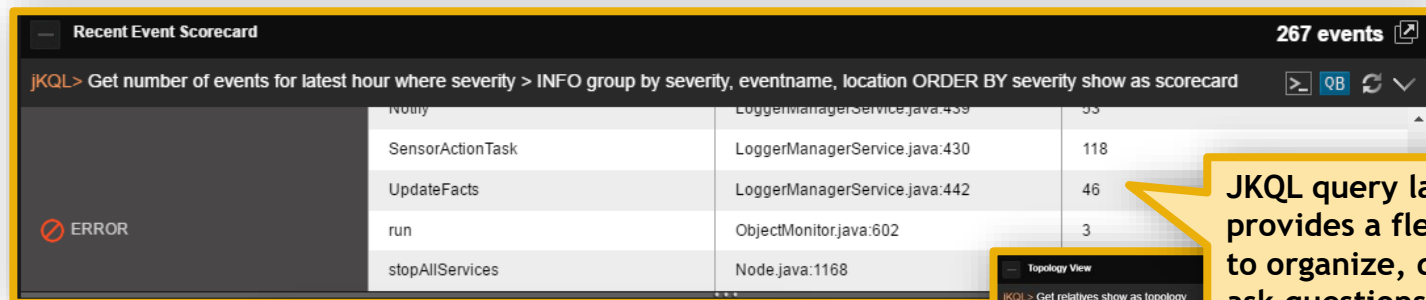
Telco - Slashing support costs for on-line order management of services

Insight through Capture, Analytics & Visualization



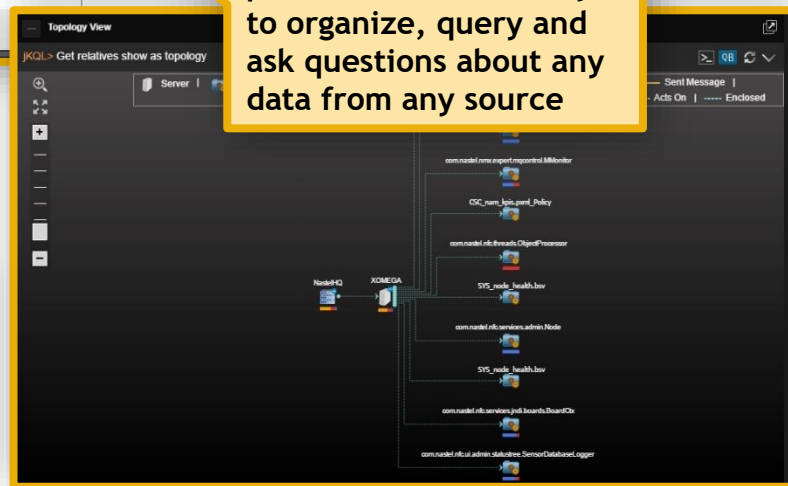
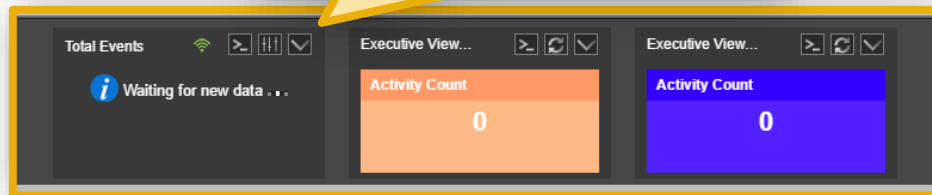
Natural query language

- Ability to ask any question about application performance, logs, transaction and metrics using JKQL English like query language.



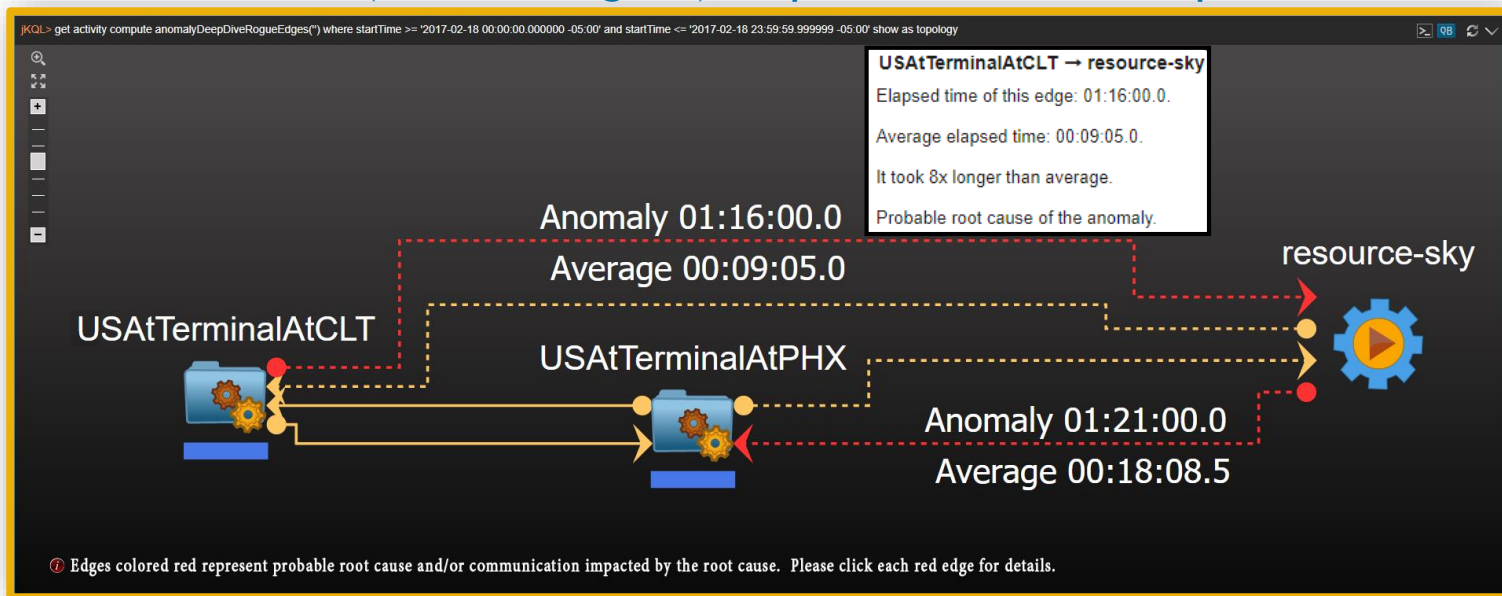
JKQL query language provides a flexible way to organize, query and ask questions about any data from any source

Real time (CEP/EPL) expressions that let App Support see what's happening in real-time

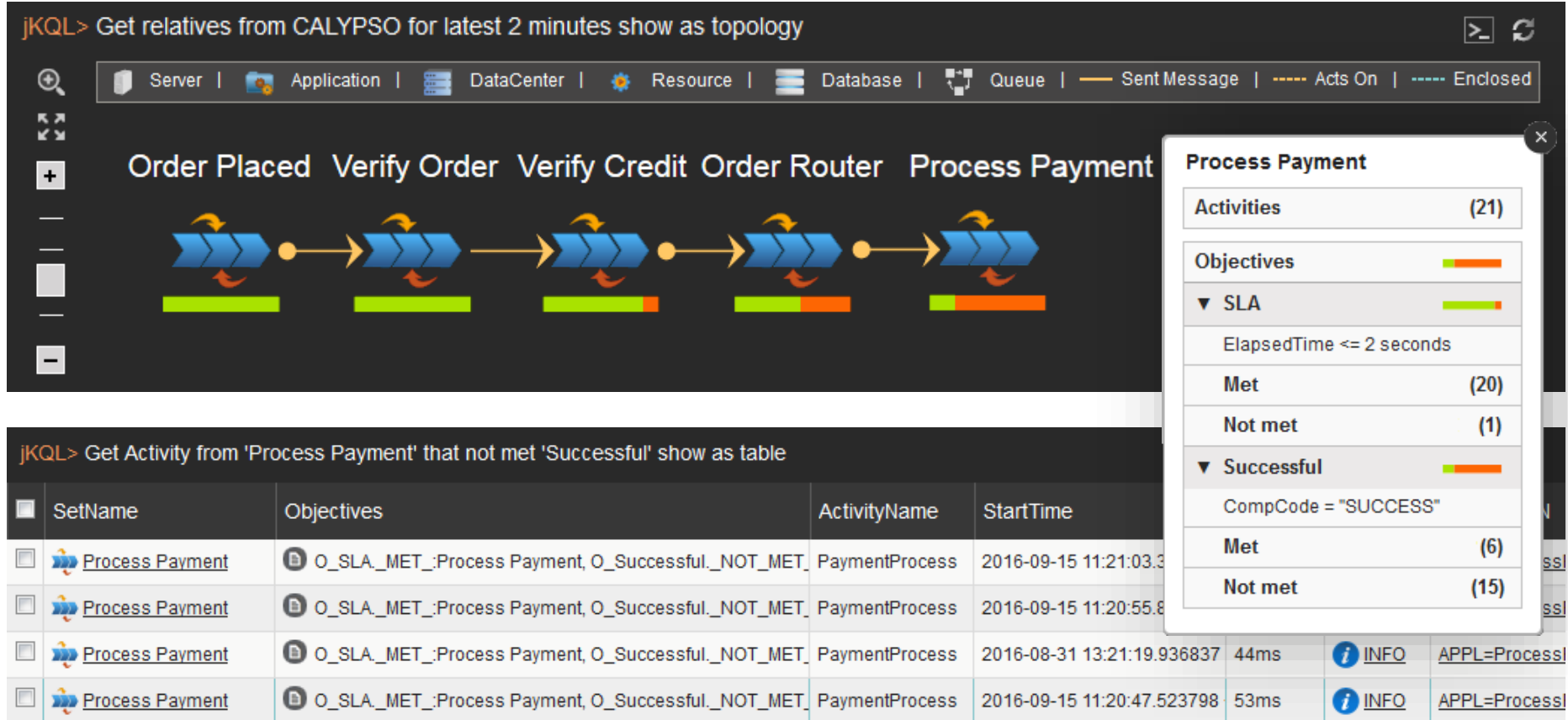


Machine Learning, Anomaly Detection & Root Cause Analysis

- Drilldown to graph of nodes and edges representing topology at time of anomaly
- Topology graph automatically created for all relationships in time window
- Related nodes are automatically stitched together
- Lines between nodes (called “edges”), represent relationships between nodes



Transaction Milestones: Retail Example





Navigator Demo

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Diagnosing MQ Messages

WorkspaceQueuesFavoritesExceptionsMy New DashboardDemo3

Summary

Local Queues

Default schema: Default Local Queues DirFilter by:

Queue Name	Current Depth	Maximum Depth	Get Messages	Put Messages	Open Input Counter	Open Output Counter	Last Updated
HTTP_OUT	61	5000	Allowed	Allowed	0	0	00:29:00 hours
MyTrace.Out	24	5000	Allowed	Allowed	0	0	00:29:00 hours
Q2	15	5000	Allowed	Allowed	0	0	00:29:00 hours
HTTP_LISTENER_OUT	2	5000	Allowed	Allowed	0	0	00:29:00 hours
Q2OFN	1	5000	Allowed	Allowed	0	0	00:29:00 hours
V9Test	0	5000	Inhibited	Allowed	0	0	00:29:00 hours
SampleReplyQueue	0	5000	Allowed	Allowed	2	0	00:29:00 hours
SampleOutputQueue	0	5000	Allowed	Allowed	0	0	00:29:00 hours
RGN1_XQ	0	5000	Allowed	Allowed	0	0	00:29:00 hours
REQUEST.QUEUE	0	5000	Allowed	Allowed	0	0	00:29:00 hours
REPLY.QUEUE	0	5000	Allowed	Allowed	0	0	00:29:00 hours

Total: 60 Visible:60 Selected:0Last refresh time:

Q2

Select all

Message Cursor	Descriptor	DLH	MD	MDE	Data Size	MD::Type	MD::Format	MD::Message ID	MD::Correl. ID	MD::Put Date	MD::
1	1	false	true	false	64	DATAGRAM		AMQ V9Test		20180822	1317
2	1	false	true	false	64	DATAGRAM		AMQ V9Test		20180822	1317
3	1	false	true	false	64	DATAGRAM		AMQ V9Test		20180822	1317
4	1	false	true	false	64	DATAGRAM		AMQ V9Test		20180822	1317
5	1	false	true	false	64	DATAGRAM		AMQ V9Test		20180822	1317
6	1	false	true	false	64	DATAGRAM		AMQ V9Test		20180822	1317
7	1	false	true	false	64	DATAGRAM		AMQ V9Test		20180822	1317
8	1	false	true	false	64	DATAGRAM		AMQ V9Test		20180822	1317
9	1	false	true	false	64	DATAGRAM		AMQ V9Test		20180822	1317



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