



*We take it personally*

# Tracking for Trouble

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# About OOCL

*We take it personally*

- Orient Overseas Container Line, Ltd.
  - Founded in 1947
  - 270 offices in 60 countries
  - Member of Grand Alliance, operating 120 container ships
  - Fleet of containers sized at 700,000 TEU (Twenty-foot Equivalent Units)
  - Over \$6 billion in annual revenue
  - Considered a leader in information technology in the ocean carrier industry
  - TIBCO customer since 2006
    - EMS, Business Works, Business Events, B2B and EDI Connect, Spotfire, and RTView



Proprietary Orient Overseas Container Line Limited

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# Highlighting OOCL's Performance

- American Shipper magazine, July 2012 Article “A Seasick Industry”
  - OOCL was one of only two carriers in the industry to achieve a profit in 2011
  - OOCL had the largest profit in the entire industry for the past five years combined
- “Over that five year stretch, one line stands out – OOCL has made at least double the profits of every other publicly traded carrier save for Maersk Line, which is five times bigger in terms of revenue”.
- “OOCL has consistently outperformed the pack, despite their relatively modest scale. Good management remains key”. -- Tan Hua Joo, Executive Consultant, Alphaliner

# Good Management

- Being able to see what is going on now.
- Having the ability to quickly separate the “wheat from the chaff”.
- Getting the right people working on the right problem at the right time with the right contextual information (right?).
- Understanding of the consequences.
  - According to calculated standard averages from our industry, each minute of downtime costs about \$10,000.
  - By far the highest cost for ocean carriers is fuel. Any delay in a ship leaving port must be caught up at sea by increasing speed, which burns more fuel.
  - In a highly commoditized industry, proactive problem resolution and transparency in providing information related to issues are key differentiators.

# Objectives for Monitoring

- Development productivity and time to market are primary drivers
  - Effective platform for gathering, aggregating, and displaying real-time information
  - Re-use wherever feasible
  - Leverage existing data sources provided by the platform or application
  - Capture information once
- Information must be displayed in context
  - Knowing that a server is down is only useful if we understand what that means to the business applications that depend on it.
    - Does the server host a critical business application?
    - Is the server part of a fault-tolerant configuration, and did failover occur?
    - Are other servers sharing the same platform resource also down – indicating that the problem could be there?



# Examples of How OOCL Monitors

- Centralized monitoring of a system of end-to-end business applications
  - Central Monitoring and Control
- Monitoring of platform components
  - Standard Oracle Coherence monitoring
  - Custom Business Events monitoring
- Direct monitoring of business operations
  - Shipment checkpoint monitoring

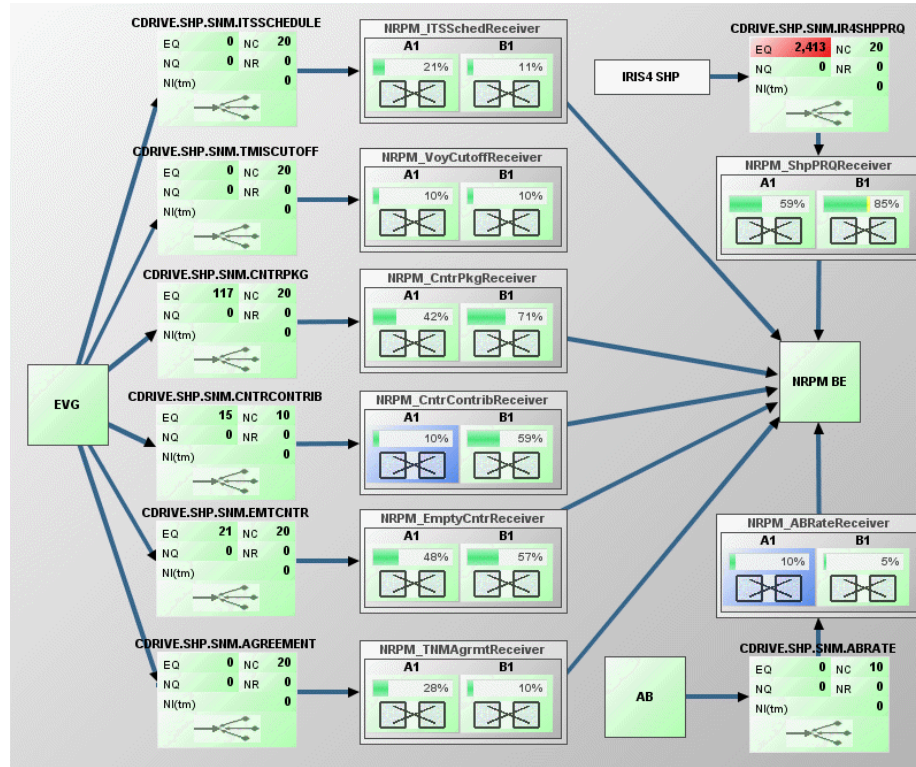


# End to End Applications – Health Summary

The screenshot displays a web-based monitoring dashboard for 'End to End Applications'. It is organized into three vertical panes:

- PLATFORMS:** Contains tiles for HAWK, EMS, OC4J, and COHERENCE.
- FRAMEWORKS:** Contains tiles for BPF, SF, ESF, WFIM, EVG, OODSMAPPER, and ORS.
- APPLICATIONS:** This pane is subdivided into several sections:
  - Common:** CMN, TSM
  - Customer:** CI\_REPL, CI\_LOGG, SSEC DATA AGGR, SSEC DATA LOAD, IM
  - Shipment:** SEP 1.1, CDT (red), BPSR, CW
  - Dashboard:** DSH3.0
  - Trade & Marketing:** AIOSALES, AB, RB INLAND MAP, RB PMTXAGG, SHM IAT\_SA, SHM IAT\_SA\_SVVD, SHM IAT\_PROSP
  - Operations:** EOM, EQMIF, TMSIF (red)
  - Event Generation:** REPL

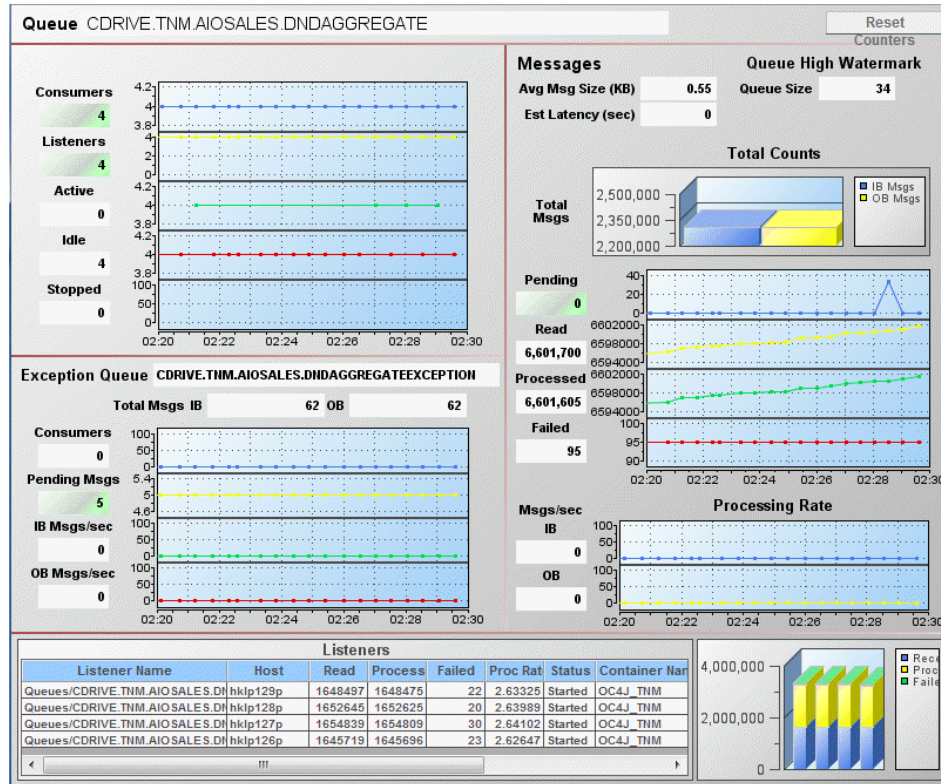
# End to End Applications – Data Flow



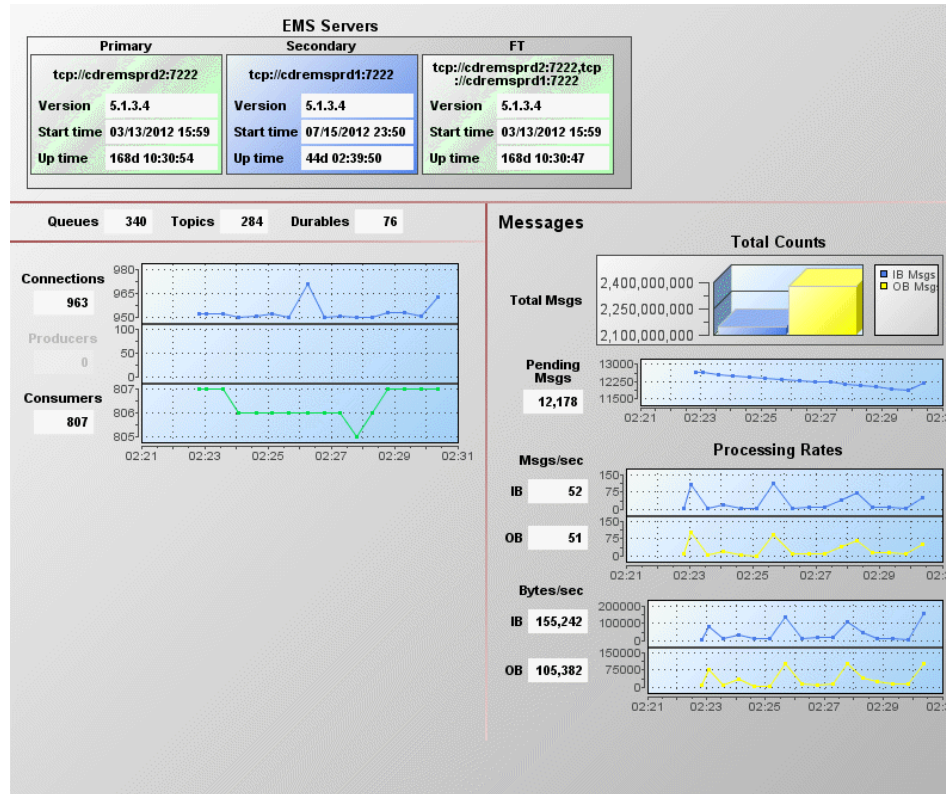
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# End to End Applications – Event Destination Detail



# End to End Applications - Platform



# Monitoring of Platform Components - OCM



# Monitoring of Platform Components - OCM



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# Monitoring of Platform Components – TIBCO BE

**RTView® for APM** Solutions Package

**Events** **BE Inference Node Summary** 8/29/12 17:34 Data OK

Node: **agents58705** Last Update: 08/29/12 17:34:32

Agent Count: **1** Inference Agents for this Node

Agent ID	Expired	Started	Suspended	Concurrent	Queue Capacity	Queue Size	Thread Count	Total # Rules Fired
3	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,024	0	10	0

**RTC Txn Manager Report**

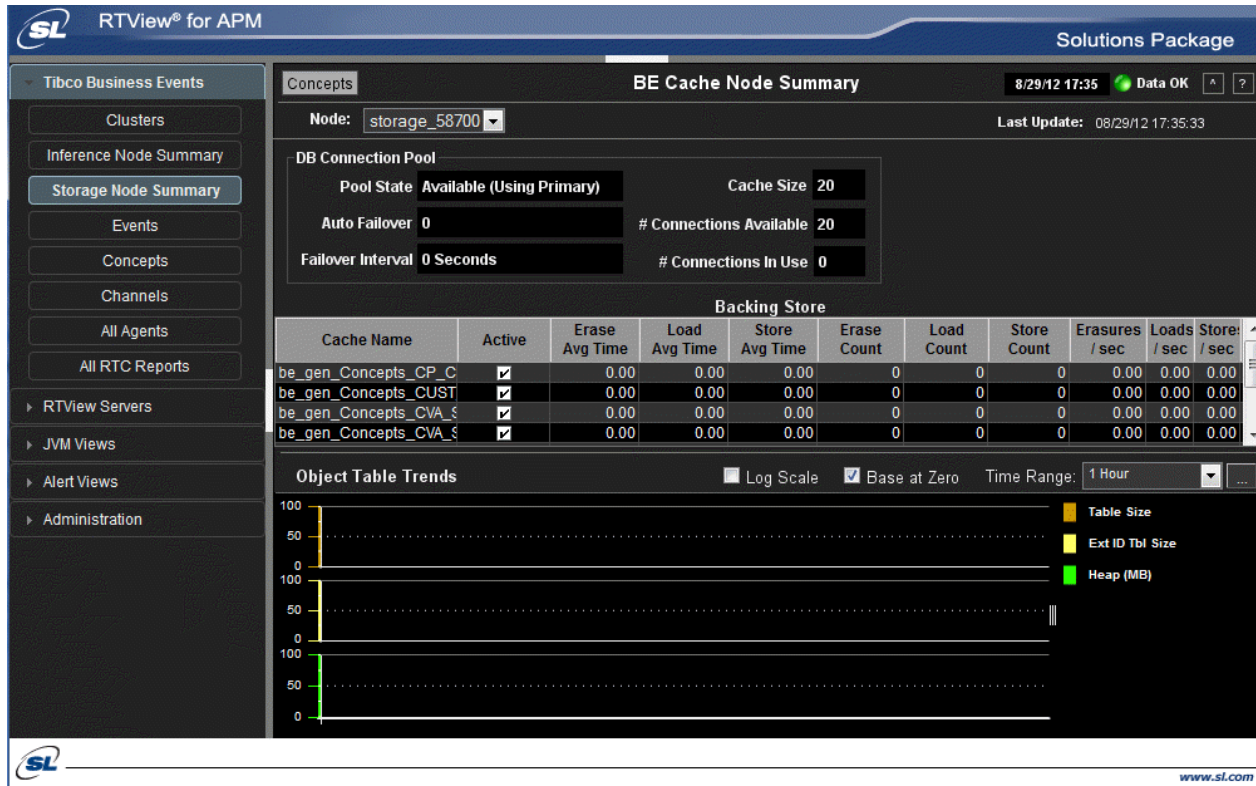
AvgActionTxnMillis	0.0
Expired	false
AvgCacheQueueWaitTim...	0.0
AvgCacheTxnMillis	0.0
AvgDBOpsBatchSize	0.0
AvgDBQueueWaitTimeMi...	0.0
AvgDBTxnMillis	0.0
AvgSuccessfulTxnTimeM...	0.0
LastDBBatchSize	0
PendingActions	0
PendingCacheWrites	0
PendingDBWrites	0
PendingEventsToAck	0
PendingLocksToRelease	0
TotalDBTxnsCompleted	0
TotalErrors	0
TotalSuccessfulTxns	0

**DB Connection Pool**

Pool State	Available (Using Primary)	Cache Size	20
Auto Failover	0	# Connections Available	20
Failover Interval	0 Seconds	# Connections In Use	0

Node: [Suspend] [Resume] [Node Profiling] [Start] [Stop]

# Monitoring of Platform Components – TIBCO BE





# Monitoring of Platform Components – TIBCO BE

SL RTView® for APM Solutions Package

Tibco Business Events

BE Events - Table 8/29/12 17:36 Data OK

Node: agents58705 Last Update: 08/29/12 17:36:44

Agent: 3 Event Statistics for Agent 3

Event	Avg Time Pre RTC	Avg Time in RTC	Avg Time Post RTC	Cache Mode	# Hits in L1 Cache	# Misses in L1 Cache	# Recovered	# Asserted from Agents
AGGR.ev_CusBkgContrib	0.00	0.00	0.00	MEMORY	0	0	0	0
AGGR.ev_CusBkgVSUtil	0.00	0.00	0.00	MEMORY	0	0	0	0
AGGR.ev_CVA_SWVD_Usage	0.00	0.00	0.00	MEMORY	0	0	0	0
AGGR.ev_CVA_Usage	0.00	0.00	0.00	MEMORY	0	0	0	0

Event Count: 39

Node-Level Event Statistics

Event	Cache Size	Get Avg Time	Put Avg	Remove Avg Time	Get Count	Put Count	Remove Count	Gets /sec	Puts /sec	Removes /sec
AGGR.ev_CusBkgContrib	0	0.00	0.00	0.00	0	0	0	0.00	0.00	0.00
AGGR.ev_CusBkgVSUtil	0	0.00	0.00	0.00	0	0	0	0.00	0.00	0.00
AGGR.ev_CVA_SWVD_Usage	0	0.00	0.00	0.00	0	0	0	0.00	0.00	0.00
AGGR.ev_CVA_Usage	0	0.00	0.00	0.00	0	0	0	0.00	0.00	0.00
AGGR.ev_PolPodVSUtil	0	0.00	0.00	0.00	0	0	0	0.00	0.00	0.00
AGGR.ev_SvcDirVSUtilYearWk	0	0.00	0.00	0.00	0	0	0	0.00	0.00	0.00
AGGR.ev_TS_PlannedCargo	0	0.00	0.00	0.00	0	0	0	0.00	0.00	0.00
AGGR.ev_UnPlannedCargo	0	0.00	0.00	0.00	0	0	0	0.00	0.00	0.00
AGGR.ev_VoyStopAggr	0	0.00	0.00	0.00	0	0	0	0.00	0.00	0.00
CORE.ev_AgreementRateUpd	0	0.00	0.00	0.00	0	0	0	0.00	0.00	0.00
CORE.ev_BE_CntrPkgUpdate	0	0.00	0.00	0.00	0	0	0	0.00	0.00	0.00
CORE.ev_CMS_CusVesselAll	0	0.00	0.00	0.00	0	0	0	0.00	0.00	0.00
CORE.ev_CntrPkgBatch	0	0.00	0.00	0.00	0	0	0	0.00	0.00	0.00
CORE.ev_ContainerPkgSched	0	0.00	0.00	0.00	0	0	0	0.00	0.00	0.00

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# Monitoring of Platform Components – TIBCO BE

SL RTView® for APM Solutions Package

Tibco Business Events

BE Channel Status 8/29/12 17:38 Data OK A ?

Node: agents58705 Last Update: 08/29/12 17:38:45

Destination Count: 67 Destinations

Destination URI	Num Events Received	Num Events Sent	Received Events Rate	Received Rate last Interval	Suspended
/Channels/AggregateChannel/AggregateReBuild	0	0	0	0	<input type="checkbox"/>
/Channels/AggregateChannel/CusBkgContrib	0	0	0	0	<input type="checkbox"/>
/Channels/AggregateChannel/CusBkgVStringUtil	0	0	0	0	<input type="checkbox"/>
/Channels/AggregateChannel/CVA_SVVD_Usage	0	0	0	0	<input type="checkbox"/>
/Channels/AggregateChannel/CVA_Usage	0	0	0	0	<input type="checkbox"/>
/Channels/AggregateChannel/PolPodVStringUtil	0	0	0	0	<input type="checkbox"/>
/Channels/AggregateChannel/SvcDirVStringUtilYearWeek	0	0	0	0	<input type="checkbox"/>
/Channels/AggregateChannel/TS_PlannedCargo	0	0	0	0	<input type="checkbox"/>
/Channels/AggregateChannel/UnPlannedCargo	0	0	0	0	<input type="checkbox"/>
/Channels/AggregateChannel/VoyStopAggr	0	0	0	0	<input type="checkbox"/>
/Channels/AggregateExceptionChannel/AggregateReBuilderRec	0	0	0	0	<input type="checkbox"/>
/Channels/AggregateExceptionChannel/CusBkgContribRec	0	0	0	0	<input type="checkbox"/>
/Channels/AggregateExceptionChannel/CusBkgVStringUtilRec	0	0	0	0	<input type="checkbox"/>
/Channels/AggregateExceptionChannel/CVA_SVVD_UsageRec	0	0	0	0	<input type="checkbox"/>
/Channels/AggregateExceptionChannel/CVA_UsageRec	0	0	0	0	<input type="checkbox"/>
/Channels/AggregateExceptionChannel/PolPodVStringUtilRec	0	0	0	0	<input type="checkbox"/>
/Channels/AggregateExceptionChannel/SvcVStringUtilRec	0	0	0	0	<input type="checkbox"/>
/Channels/AggregateExceptionChannel/TS_PlannedCargoRec	0	0	0	0	<input type="checkbox"/>
/Channels/AggregateExceptionChannel/UnPlannedCargoRec	0	0	0	0	<input type="checkbox"/>
/Channels/AggregateExceptionChannel/VoyStopAggrRec	0	0	0	0	<input type="checkbox"/>
/Channels/CoreChannel/AgreementRateUpdate	0	0	0	0	<input type="checkbox"/>
/Channels/CoreChannel/BE_CVA_CMSUpdate	0	0	0	0	<input type="checkbox"/>
/Channels/CoreChannel/BECtrnPkgBatch	0	0	0	0	<input type="checkbox"/>
/Channels/CoreChannel/BECtrnPkgUpdate	0	0	0	0	<input type="checkbox"/>
/Channels/CoreChannel/CMS_CusVesselAllocation	0	0	0	0	<input type="checkbox"/>

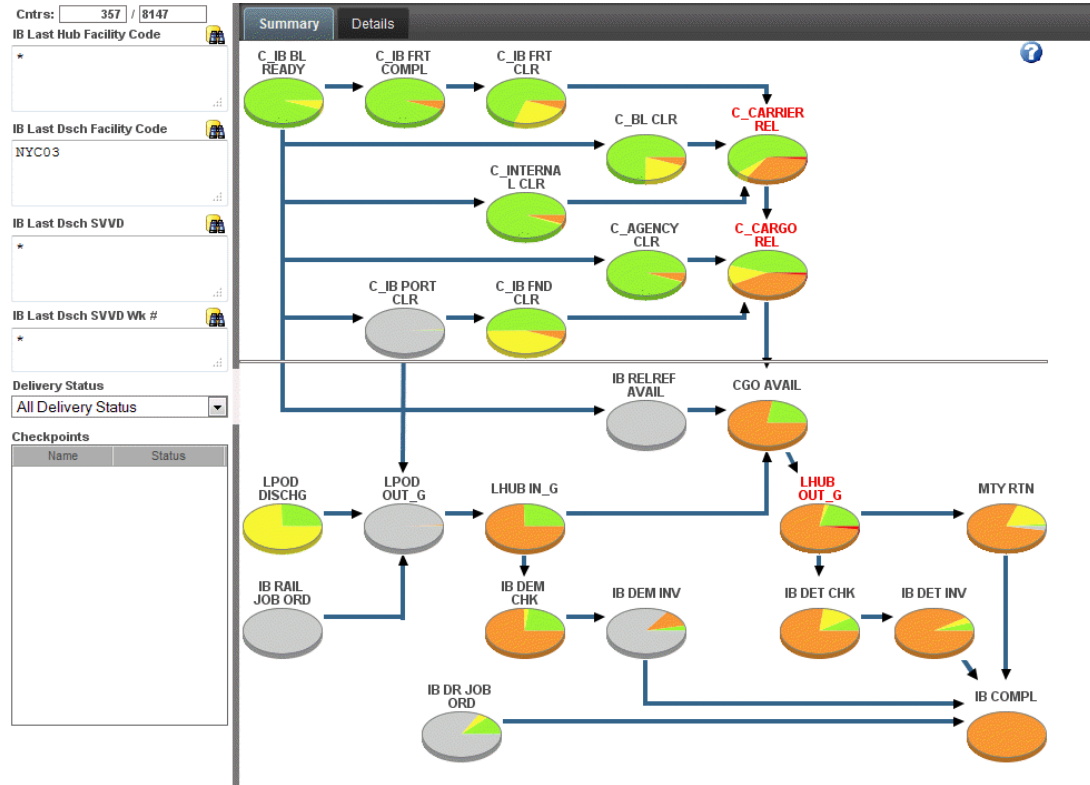
Channel Count: 10 Channels

Channel URI	State
/Channels/ReplayChannel	Connected
/Channels/SnapShotExceptionChannel	Connected
/Channels/SnapShotSchedulerChannel	Connected
/Common/Channels/AppExceptionChannel	Connected

Suspend/Resume Selected Destination

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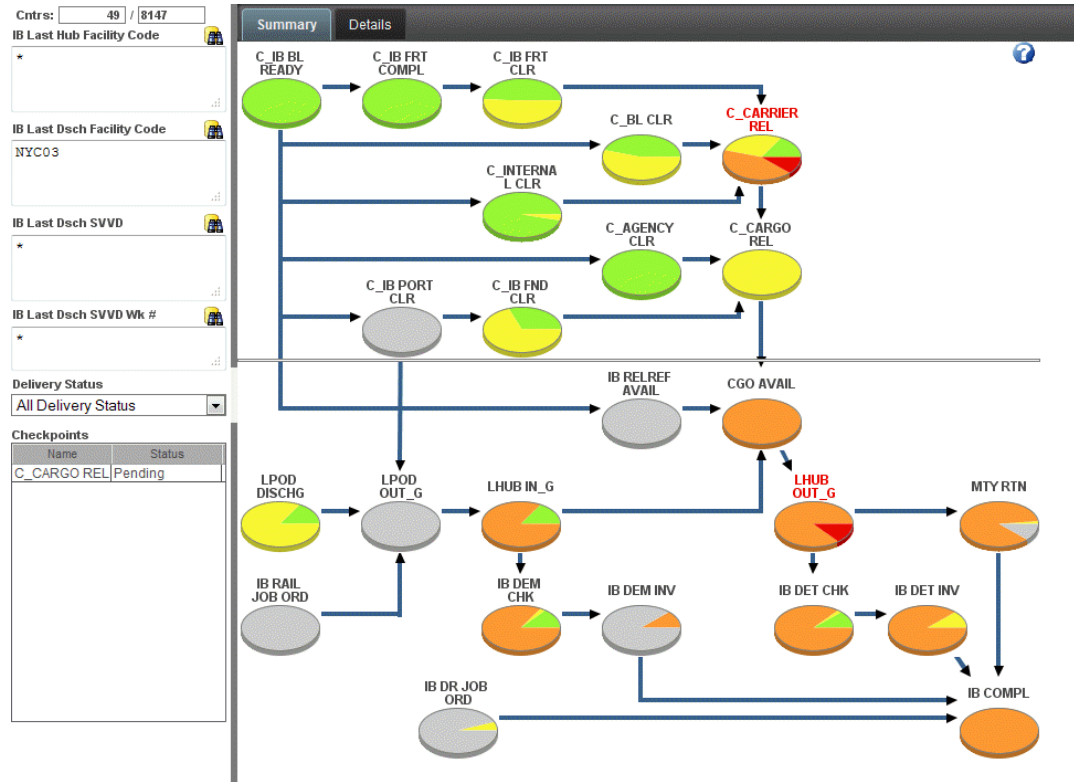
# Direct Monitoring of Business Operations



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# Direct Monitoring of Business Operations



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# Direct Monitoring of Business Operations

Cntrs:  /   
 IB Last Hub Facility Code

Summary		Details					
Details							
SVVD	Last SVVD Arrival D/T	Last SVV	Size/Type	Load	Input Email Address Here	Download	
IB				Weight	Cargo #	Cargo Available	Last Hub A
IEX-MTT-009 W	05-JUL-2012 05:42	201227	20GP	24,240.000 KG	GC RICE	Dependent	06-JUL-20
IEX-MTT-009 W	05-JUL-2012 05:42	201227	20GP	24,240.000 KG	GC RICE	Dependent	06-JUL-20
IEX-NDX-027 W	12-AUG-2012 18:30	201233	40HQ	10,308.000 KG	GC ALUMINIUM PRODUCTS	Dependent	13-AUG-20
IEX-MTT-009 W	05-JUL-2012 05:42	201227	20GP	22,430.000 KG	GC MUSHROOMS	Dependent	06-JUL-20
IEX-MTT-009 W	05-JUL-2012 05:42	201227	20GP	24,260.000 KG	GC RICE	Dependent	06-JUL-20
IEX-MTT-009 W	05-JUL-2012 05:42	201227	20GP	22,191.000 KG	GC MUSHROOMS	Dependent	06-JUL-20
IEX-MTT-009 W	05-JUL-2012 05:42	201227	20GP	22,430.000 KG	GC MUSHROOMS	Dependent	06-JUL-20
IEX-EIF-024 W	28-AUG-2012 13:00	201235	40HQ	13,930.000 KG	GC BOYS 100% POLYESTER H	Dependent	29-AUG-20
IEX-MTT-010 W	05-SEP-2012 07:30	201236	40HQ	23,500.000 KG	GC BOURNVITA	Dependent	05-SEP-20
IEX-MTT-010 W	05-SEP-2012 07:30	201236	40HQ	9,752.000 KG	GC ALUMINIUM FOILS	Dependent	05-SEP-20
IEX-MTT-010 W	05-SEP-2012 07:30	201236	40GP	9,254.500 KG	GC 100% COTTON KNITTED S	Dependent	05-SEP-20
IEX-EIF-024 W	28-AUG-2012 13:00	201235	40HQ	11,130.970 KG	GC COTTON TERRY TOWEL	Dependent	29-AUG-20
IEX-EIF-024 W	28-AUG-2012 13:00	201235	40GP	10,150.390 KG	GC COTTON TERRY TOWEL	Dependent	29-AUG-20
IEX-EIF-024 W	28-AUG-2012 13:00	201235	20GP	14,766.700 KG	GC STUDENT POSTER COLO	Dependent	29-AUG-20
IEX-EIF-024 W	28-AUG-2012 13:00	201235	40GP	11,754.800 KG	GC DENIM CLOTHING ARTIST	Dependent	29-AUG-20
IEX-EIF-024 W	28-AUG-2012 13:00	201235	20GP	8,158.000 KG	GC BOYS 100% POLYESTER H	Dependent	29-AUG-20
IEX-EIF-024 W	28-AUG-2012 13:00	201235	40GP	9,405.060 KG	GC Hand Made Glass Article	Dependent	29-AUG-20
IEX-MTT-010 W	05-SEP-2012 07:30	201236	40GP	6,979.800 KG	GC GARMENTS	Dependent	05-SEP-20
IEX-MTT-010 W	05-SEP-2012 07:30	201236	40HQ	18,672.000 KG	GC WHEAT CRISPY (KHAKHAF	Dependent	05-SEP-20
IEX-EIF-024 W	28-AUG-2012 13:00	201235	40GP	23,830.000 KG	GC COTTON GREY CLOTH	Dependent	29-AUG-20
IEX-MTT-010 W	05-SEP-2012 07:30	201236	20GP	20,907.000 KG	GC AIR COMPRESSORS	Dependent	05-SEP-20
IEX-EIF-024 W	28-AUG-2012 13:00	201235	20GP	8,500.000 KG	GC MENS T-SHIRTS	Dependent	29-AUG-20
IEX-MTT-010 W	05-SEP-2012 07:30	201236	40GP	12,788.500 KG	GC 100% COTTON WOVEN BL	Dependent	05-SEP-20
IEX-SAX-012 W	21-AUG-2012 07:00	201234	40HQ	11,045.000 KG	GC ALUMINIUM PRODUCTS	Dependent	21-AUG-20
IEX-MTT-010 W	05-SEP-2012 07:30	201236	40HQ	11,953.710 KG	GC TERRY TOWELS	Dependent	05-SEP-20
IEX-EIF-024 W	28-AUG-2012 13:00	201235	40HQ	17,317.000 KG	GC ARTISTIC GARMENTS, DEN	Dependent	29-AUG-20
IEX-MTT-010 W	05-SEP-2012 07:30	201236	20GP	22,194.000 KG	GC AUTOMOBILE SPARE PART	Dependent	05-SEP-20

IB Last Dsch Facility Code  
 NYCO3  
 IB Last Dsch SVVD  
 IB Last Dsch SVVD Wk #  
 Delivery Status  
 All Delivery Status  
 Checkpoints  
 C\_CARGO REL Pending

Process Progress  Outstanding Tasks Only All Descriptions All Cntrs All Checkpoints

Cntr	Checkpoint-cbr	Progress-cbr	Description	Status	Date (GMT)	Dashboard-cbr	Dashboard-cbr
OOLU144916	IB DET INV	Task	IB Detention - Review Charge	Started	27-Jul-2012 12:54	IB-DemDet-N	NE
OOLU300528	IB DET INV	Task	IB Detention - Review Charge	Started	27-Jul-2012 12:54	IB-DemDet-N	NE
OOLU302685	IB DET INV	Task	IB Detention - Review Charge	Started	27-Jul-2012 13:00	IB-DemDet-N	NE
UESU470261	IB DEM CHK	Task	IB Demurrage - Pending Last Hub C	Started	19-Aug-2012 03:59	IB-DemDet-N	NE
OOLU371677	IB DET INV	Task	IB Detention - Review Charge	Started	20-Aug-2012 13:59	IB-DemDet-N	NE
OOLU115064	IB DET INV	Task	IB Detention - Review Charge	Started	20-Aug-2012 13:59	IB-DemDet-N	NE
OOLU119356	IB DET INV	Task	IB Detention - Review Charge	Started	20-Aug-2012 13:59	IB-DemDet-N	NE

# Next Steps

- Capture component dependency model
  - Enable automated start / stop
  - Alert consolidation
- RTView Enterprise framework
- Monitoring of Long Beach Middle Harbor
  - Fully automated ocean terminal facility
  - Capacity to load / unload three ships simultaneously
  - Effective monitoring will be critical to realizing return from OOCL's biggest investment

# OOCL's RTView Experience

- Highly productive in terms of development
  - Ability to define and reuse custom components
  - Wide range of platform monitoring solutions already available
- Full featured platform for collecting, transforming, aggregating, displaying real-time information visually
- Strong alert management
- Very scalable and efficient
- Built on standard platform (Java, Tomcat)
- Able to natively collect information from commonly needed sources
  - JMS, Database, JMX, log files, ...
- Good support from a highly knowledgeable team

# RTView Middleware Monitoring for TIBCO users

Packaged Monitors

EMS Monitor



TIBCO BW Monitor



RTView Standard Monitor System: Hawk, EMS, and RV  
– platform for rapid creation of custom monitoring applications

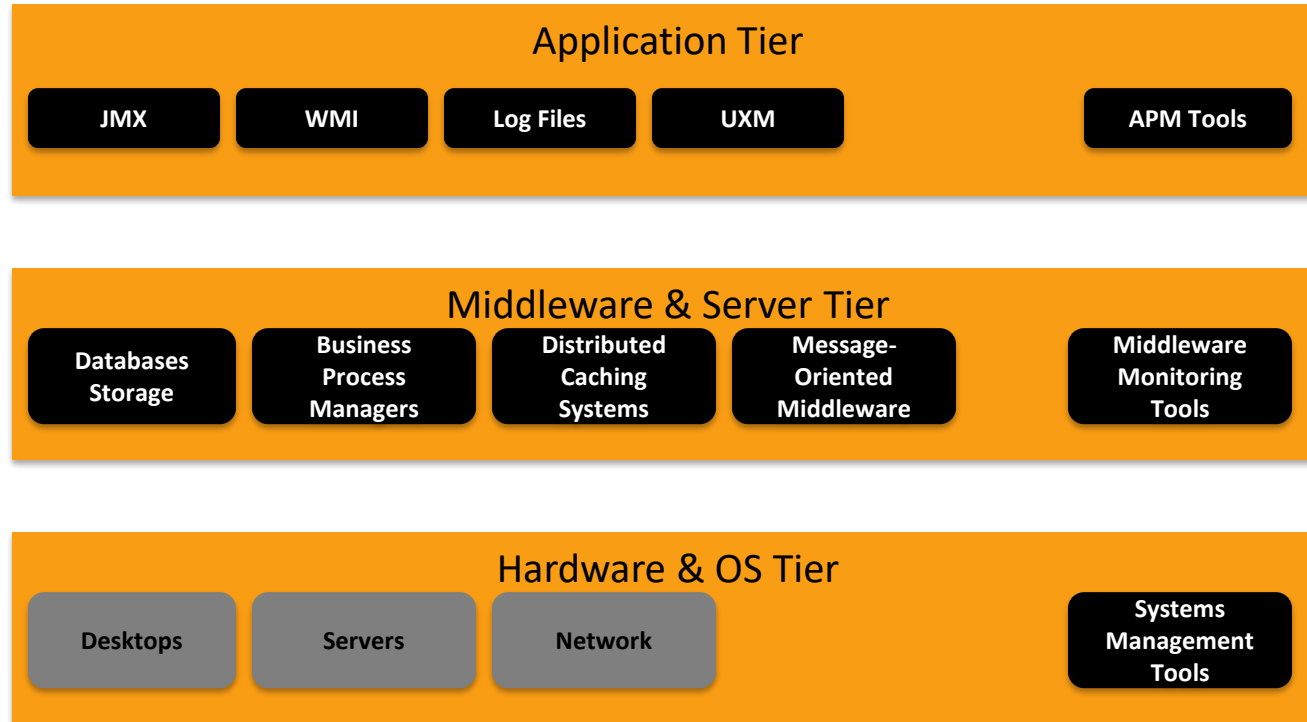


Platform



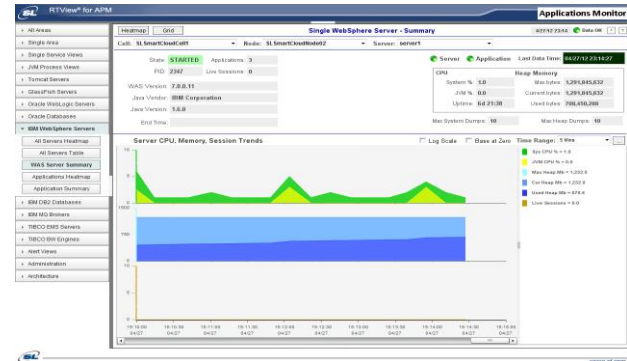
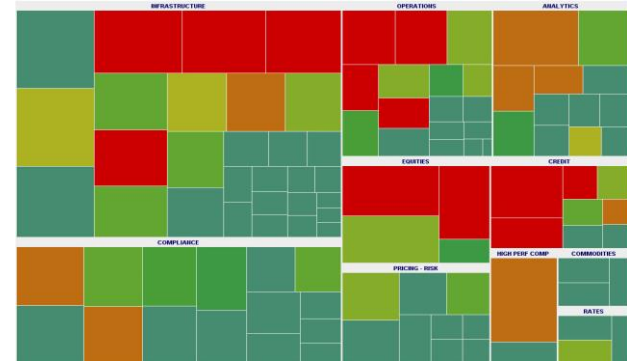


# Application Domain – High-Level Overview



# RTView Enterprise

- Application monitoring summary views analyze Business Impact and Service Criticality
- Drilldown to TIBCO and non-TIBCO infrastructure components enables the detection and pinpointing of application bottlenecks
- Lightweight solution extends existing monitoring tools and applications
- Alert workflow



# Example: Single Pane of Glass at Investment Bank

- Cuts across monitoring silos for more than 100 apps across different business units
- every layer in their IT landscape
- proactively detect problems



The logo for TU CON 2012 features the letters 'TU' in orange, 'CON' in white with a grey background, and '2012' in black. A registered trademark symbol (®) is positioned above the 'N'.

**TU CON<sup>®</sup> 2012**

Three small orange square icons are stacked vertically to the left of the text.

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