

# IDENTIFYING AND RESOLVING MIDDLEWARE ISSUES 4X FASTER AT 1/5TH THE OPERATING COST

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# About TD Securities



- With more than 2,700 people in 14 offices around the world, TD Securities provides a wide range of capital market products and services to corporate, government and institutional clients who choose us for our knowledge, innovation and experience in the following key areas of finance:
  - Investment and Corporate Banking
  - Capital Markets
  - Interest Rate, Currency and Derivative Products
  - Commodities
- Our services include the underwriting and distribution of new debt and equity issues, providing advice on strategic acquisitions and divestitures, and executing daily trading and investment needs.

# The Challenge

Unable to answer the question, “Are our critical applications performing as necessary to support our business services?”

## Project Driver: Move to Centralized Monitoring

- TD Security ESB providing infrastructure supporting 10 trading systems across the bank (TIBCO EMS, BusinessWorks, Hawk)
- TDS Risk Reporting System (TIBCO EMS, BusinessWorks, Hawk)

# The Challenge

## Requirements:

1. Operational perspective with real-time, single-pane-of-glass views across three key areas:
  - Infrastructure performance
  - Middleware application health
  - Governance assessment
2. Real-time, single-pane-of-glass views:
  - Spanning several critical application domains
  - Fully customizable to ensure right information and most intuitive presentation for application support teams
3. Deliver a solution that could easily and quickly be extended to other application domains
4. Provide role-based views:
  - Developers only have access to dev environment. Have read-only access to TIBCO processes.
  - You can give anyone read-only access in a single view. Helps to bridge silos.
  - Two categories of views: administrator view and read-only view. Execs will have the read only view.

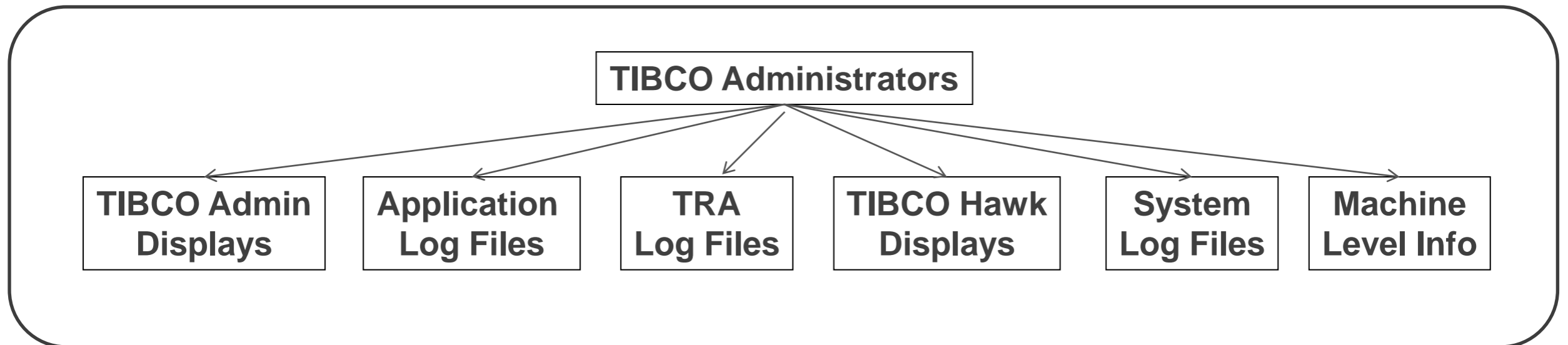
# The Challenge (cont.)

5. Particular concern surrounding new TIBCO releases, OS patches and market turbulence
6. No longer have to login to different Hawk domains
7. EMS monitoring really beneficial
8. Highly controlled environment



# What TD Securities Did Before

- Application support teams had no direct access to the information they needed - solicited information ad hoc from TIBCO middleware operations
- Machine-level information came from a separate operations team with access to Hawk displays
- TIBCO administrators manually collected information from multiple sources



- Analysis ranged anywhere from 30 minutes to a few hours

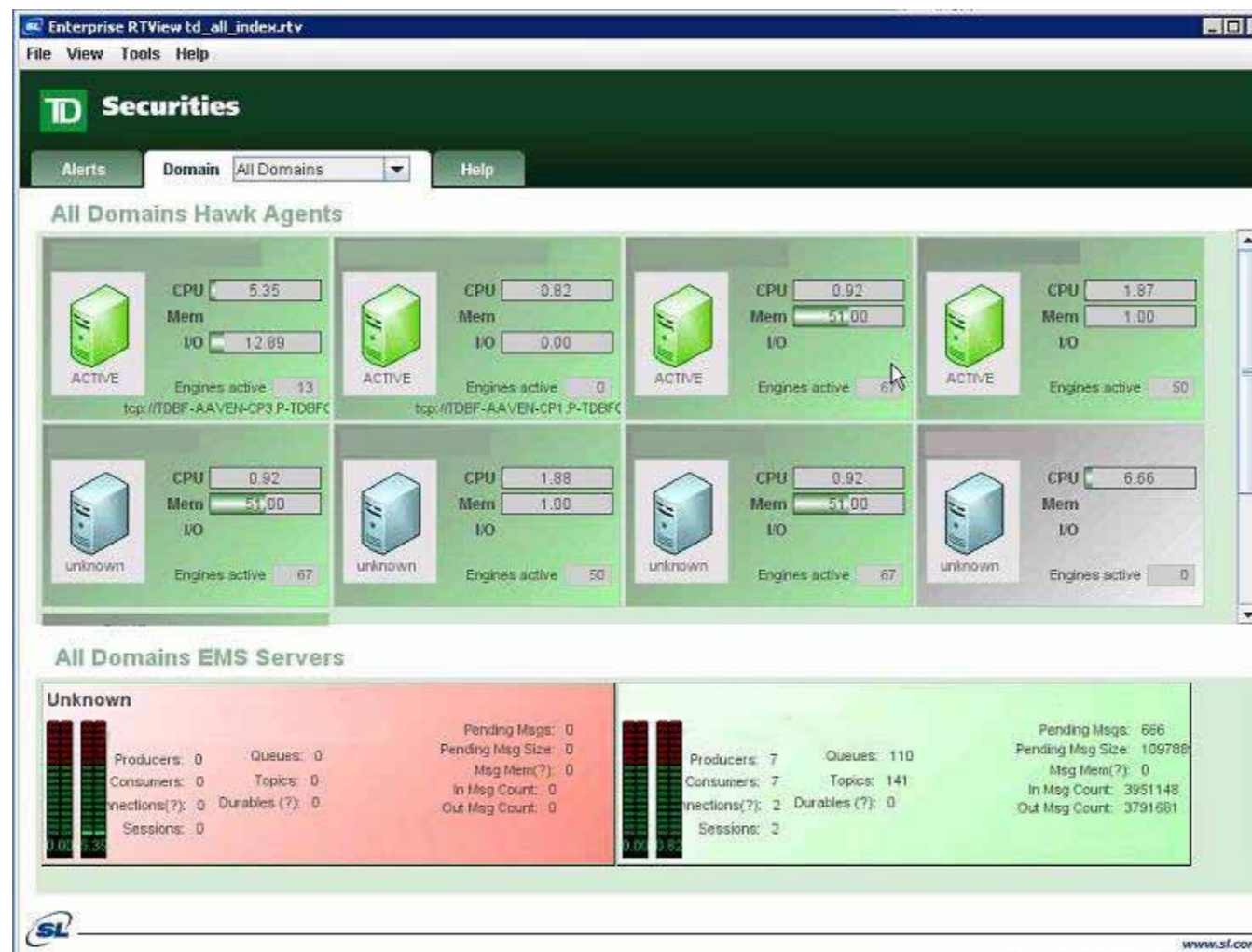
# TD Securities' Solution

- TIBCO RTView provides custom, single-pane-of-glass views into application health
- Full drill-down capabilities into TIBCO infrastructure components
- Framework approach can be easily extended to new application domains



# TD Securities' Solution









- High-level summary display comprised of tabs for each application domain:
  - TD Securities Enterprise Service Bus
  - Risk Reporting System
  - Additional application domains
  - All Hawk Alerts



# TD Securities

Alerts Domain All Domains Help

## All Domains Hawk Agents

 <p><b>ACTIVE</b></p> <p>CPU: 5.35 Mem: 12.89 IO: 12.89</p> <p>Engines active: 13</p> <p>top://TDBF-AAVEN-CP3.P-TDBFC</p>	 <p><b>ACTIVE</b></p> <p>CPU: 0.82 Mem: 0.00 IO: 0.00</p> <p>Engines active: 0</p> <p>top://TDBF-AAVEN-CP1.P-TDBFC</p>	 <p><b>ACTIVE</b></p> <p>CPU: 0.92 Mem: 51.00 IO: 67</p> <p>Engines active: 67</p>	 <p><b>ACTIVE</b></p> <p>CPU: 1.87 Mem: 1.00 IO: 50</p> <p>Engines active: 50</p>
 <p><b>unknown</b></p> <p>CPU: 0.92 Mem: 51.00 IO: 67</p> <p>Engines active: 67</p>	 <p><b>unknown</b></p> <p>CPU: 1.88 Mem: 1.00 IO: 50</p> <p>Engines active: 50</p>	 <p><b>unknown</b></p> <p>CPU: 0.92 Mem: 51.00 IO: 67</p> <p>Engines active: 67</p>	 <p><b>unknown</b></p> <p>CPU: 6.56 Mem: 0 IO: 0</p> <p>Engines active: 0</p>

## All Domains EMS Servers

<p><b>Unknown</b></p> <p>Producers: 0    Queues: 0 Consumers: 0    Topics: 0 Connections(?): 0    Durables(?): 0 Sessions: 0</p> <p>Pending Msgs: 0 Pending Msg Size: 0 Msg Mem(?): 0 In Msg Count: 0 Out Msg Count: 0</p>	<p>Producers: 7    Queues: 110 Consumers: 7    Topics: 141 Connections(?): 2    Durables(?): 0 Sessions: 2</p> <p>Pending Msgs: 666 Pending Msg Size: 109786 Msg Mem(?): 0 In Msg Count: 3951148 Out Msg Count: 3791681</p>
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# All Hawk Alerts

The screenshot shows the RTView - TD Securities application interface. The main window title is "RTView - TD Securities" and the menu bar includes "File", "View", "Tools", and "Help". The application logo "TD Securities" is visible in the top left. Below the logo, there are tabs for "Alerts" and "Domain" (set to "VENOM"), along with a "Help" button. A filter bar shows "Filter: -- All Agents --" and "WinXP".

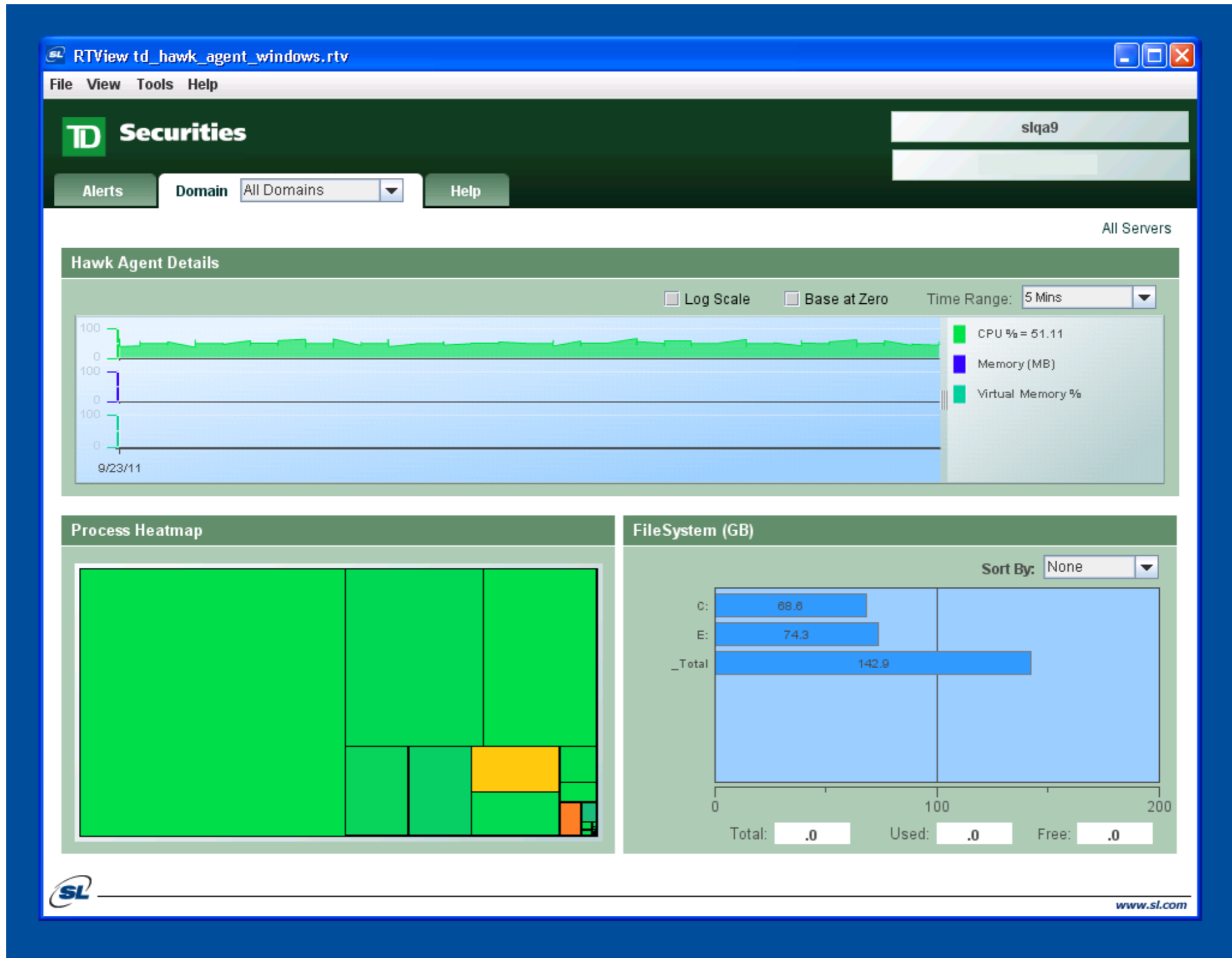
Time	Agent	AlertString	Clear...	RuleBase	AlertText
Sep 22, 2011 10:02:40 PM	agent37p	ALERT_LOW	false	WinXP	Server Processes are at 80.0
Sep 23, 2011 1:04:26 AM	agent30p	ALERT_LOW	false	WinXP	Server Processes are at 65.0
Sep 23, 2011 3:05:55 AM	agentbp1	ALERT_LOW	true	WinXP	Server Processes are at 110.0
Sep 23, 2011 4:07:15 AM	agent33p	ALERT_LOW	false	WinXP	Page file use is at 88.33320234682267 %
Sep 23, 2011 2:01:19 AM	agent33p	ALERT_LOW	true	WinXP	Server Processes are at 77.0
Sep 23, 2011 4:07:15 AM	agent33p	ALERT_LOW	false	WinXP	Page file use is at 88.33320234682267 %
Sep 23, 2011 4:06:02 AM	slpro31	ALERT_LOW	false	WinXP	Server Processes are at 91.0
Sep 23, 2011 4:03:50 AM	slqa9	ALERT_LOW	false	WinXP	Server Processes are at 151.0

Below the table is an "Alert Details" section with the following fields:

- Agent: [Text Box]
- Time: [Text Box]
- Alert String: [Text Box]  Cleared
- Rule Base: [Text Box]
- Alert Text: [Text Area]

The bottom left corner features the "SL" logo, and the bottom right corner shows the URL "www.sl.com".

# TD Securities Enterprise Service Bus (TDS ESB)



# Risk Reporting System (RRS)

The screenshot displays the RTView td\_agent\_details.rtv application window. The interface includes a menu bar (File, View, Tools, Help) and a header section with the 'Securities' logo. The main content area is divided into several sections:

- Agent Information:** Shows 'agent: SLXP2' and 'server: tcp://SLXP2:7222'.
- Navigation:** Includes tabs for Alerts, Domain (set to 'All Domains'), and Help.
- Server Host Details:**
  - Agent: SLXP2, IP: 192.9.200.238, Platform: x86:Windows XP:5.1
  - Top Processes Table:**

Process Name	CPU Time	Mem Usage	AgentName
System Idle ...	-1	0	SLXP2
<ACCESS D...	1850031	220	SLXP2
smss.exe	108	380	SLXP2
csrss.exe	57780	5184	SLXP2
winlogon.exe	5436	5576	SLXP2
services.exe	92703	6036	SLXP2
lsass.exe	7734	1864	SLXP2
Ati2evx.exe	328	3384	SLXP2
svchost.exe	1124	4436	SLXP2
lnCDsrv.exe	124	2776	SLXP2
GtwRsvTdm...	30	2532	SLXP2
spoolsv.exe	593	5212	SLXP2
  - Performance Graph:** A line graph showing metrics over time (04:18 to 04:20). The y-axis ranges from 0 to 10. The graph includes checkboxes for CPU Utilization, Available Memory, Page Faults/Sec, and Interrupts/Sec. The Time Range is set to 4 Min.
- Alerts Table:**

Time	AlertID	AlertString	AlertText
Sep 22, 2011 9:02:53 PM	11	ALERT_LOW	Server Processes are at 185.0
Sep 23, 2011 4:12:42 AM	35	ALERT_MEDIUM	Hawk Agent Error: ERROR : RemoteAccessServer.processRequest(), request type=subscribe,...

The bottom of the window features the SL logo and the website address www.sl.com.

# A Better Process

- No more door-to-door
- Information at fingertips
- Instant visibility and drill down
- Target specific ops teams to resolve issues
- Framework custom but reusable for easy expansion to other application domains



# Business Outcome

- Much faster detection and troubleshooting of issues up and down the application stack
- Significant cost savings related to
  - Reduced degradations and outages
  - Increased compliance
  - Increased productivity
- Streamlined problem identification, resolution
  - 75% less time
  - 80% less in operations fees
- Custom yet reusable framework dramatically reduces cost to extend the solution
  - Just add a few lines of code to an xml configuration file

# TD Securities ROI

## *Predicted ROI by TD*

### *Labor Savings*

*Reduction in labor to troubleshoot a typical application issue.*

- Minimum of 4 FTEs one hour to identify problem = 4 man hours*
- Now requires one FTE 15 minutes to determine this.*

*Represents an improvement in time to identify of 75% (3X faster)  
and a reduction operational cost/labor of 80% (4X lower cost)*

# About SL Corporation

- Privately owned software company since 1983
- Located in Marin County, CA
- Subsidiary office in Tokyo, Japan
- Over 100,000 licenses sold
- Core expertise in middleware monitoring and application performance monitoring

# Select SL RTView Customers

## Financial Services

 AMERITRADE

Deutsche Bank 

 BNP PARIBAS

ING  BANK

 TWO SIGMA  
INVESTMENTS

 SOCIETE  
GENERALE

 DOWJONES

 BARCLAYS  
CAPITAL

 EDWARDS  
FULLY INVESTED IN OUR CLIENTS™

 UBS

OTA  LLC

Little  
& Co

 H&R BLOCK™

 Allstate  
You're in good hands.

## E-Commerce/Retail

 macy's

P&G

 PEPSI

OfficeMax

McAfee  
Proven Security™

ORBITZ

 MOTOROLA

 RIOT  
GAMES

Smart&Final.

## Energy

 ISO NEW YORK  
INDEPENDENT  
SYSTEM OPERATOR



 New York Power  
Authority

 Gaz de France

 HYDRO

TVA

## Telecommunications

FUJITSU

Telstra

 PCCW®

 TELECOM  
ITALIA

 verizon

..T.. Mobile

 NTT Group

 bp

## Other

HARRIS

 HEALTHWAYS

 SOUTHWEST  
AIRLINES

 DOW

OOCL

ON24  
ENGAGING COMMUNICATION

FUJIFILM

 BOEING

Harrah's

NORTHROP GRUMMAN

 TIBCO 2011

# RTView: The Solution Offering

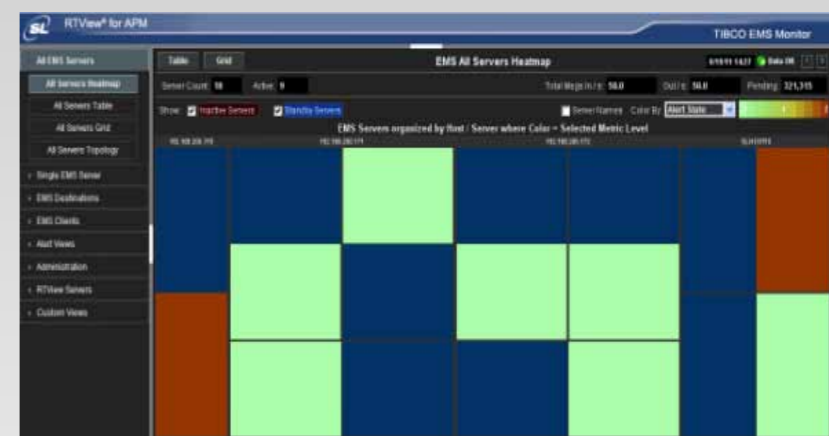
## Application Performance Monitoring

- Provide app support teams with visibility into supported applications
- Collect all necessary application-centric and middleware-centric performance data
- Configure data aggregation and persistence, filters, analytics, alerts and displays to deliver information tailored for app support teams



## TIBCO and other Middleware Monitoring

- Determine how applications are interacting with TIBCO infrastructure
- Assess whether applications are running efficiently and reliably
- Ensure the maximum benefit from a TIBCO investment



# RTView for TIBCO

## BusinessWorks Monitor



## EMS Manager



## Hawk Monitor

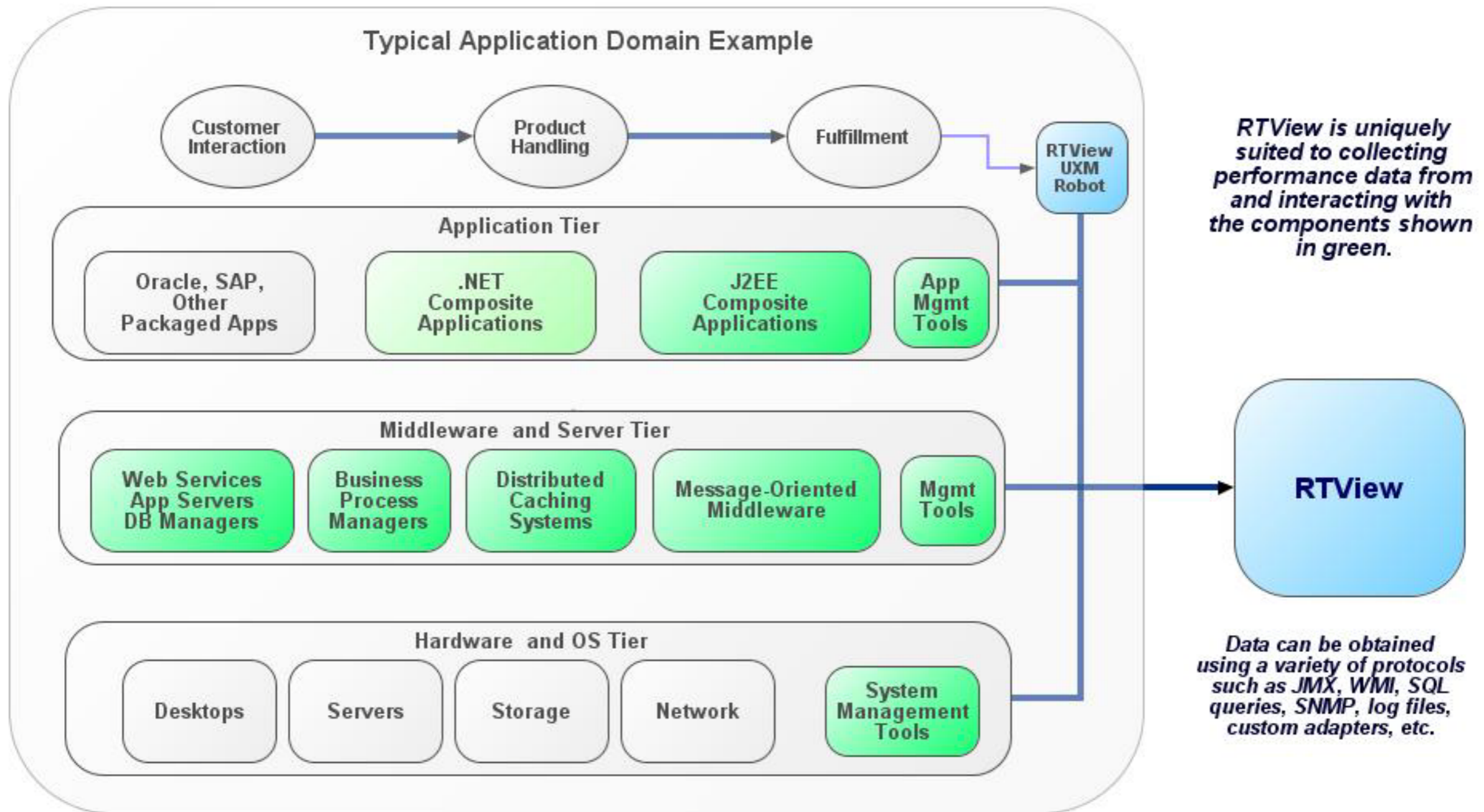


## Rendezvous Monitor

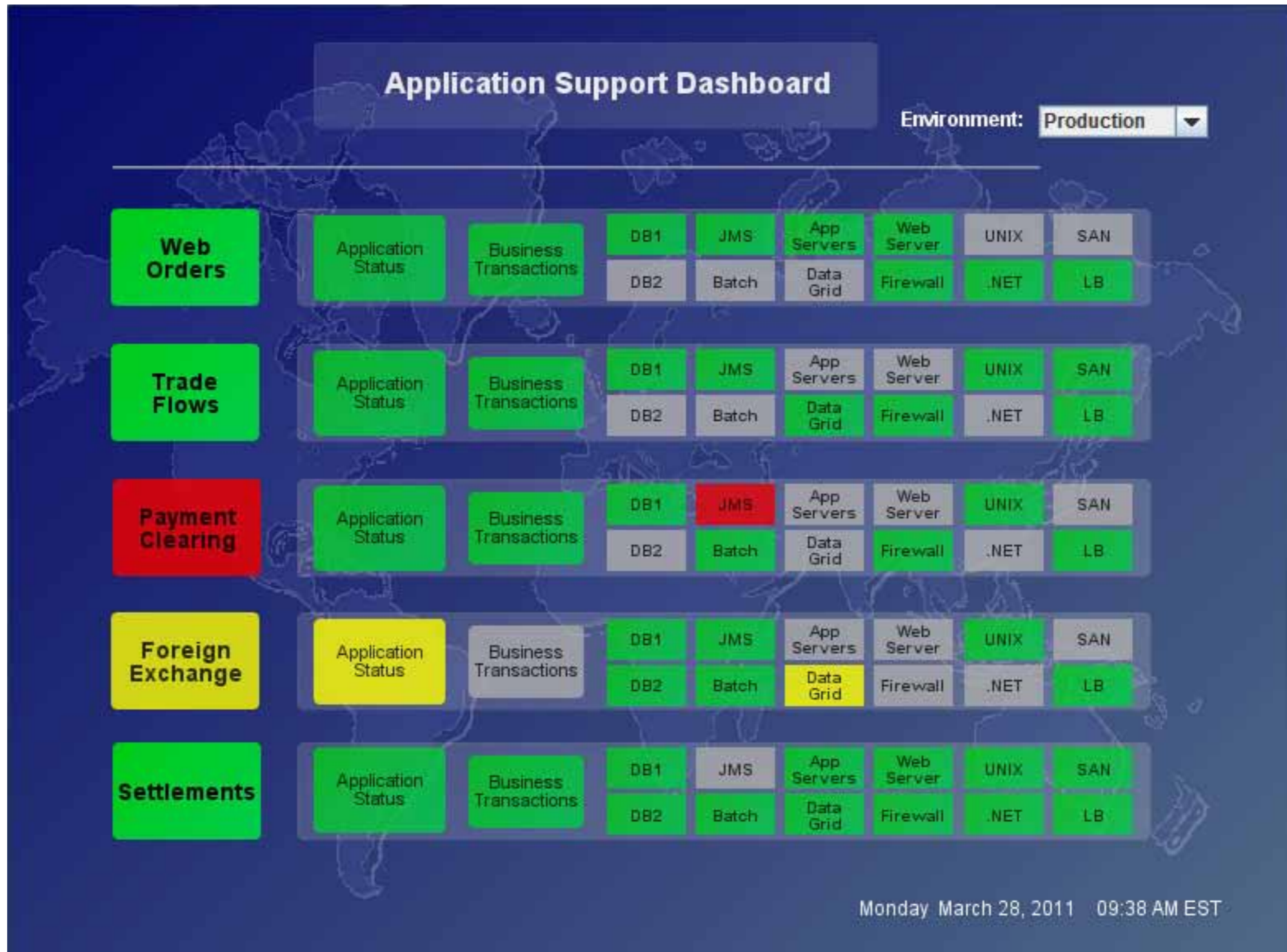


## RTView Platform

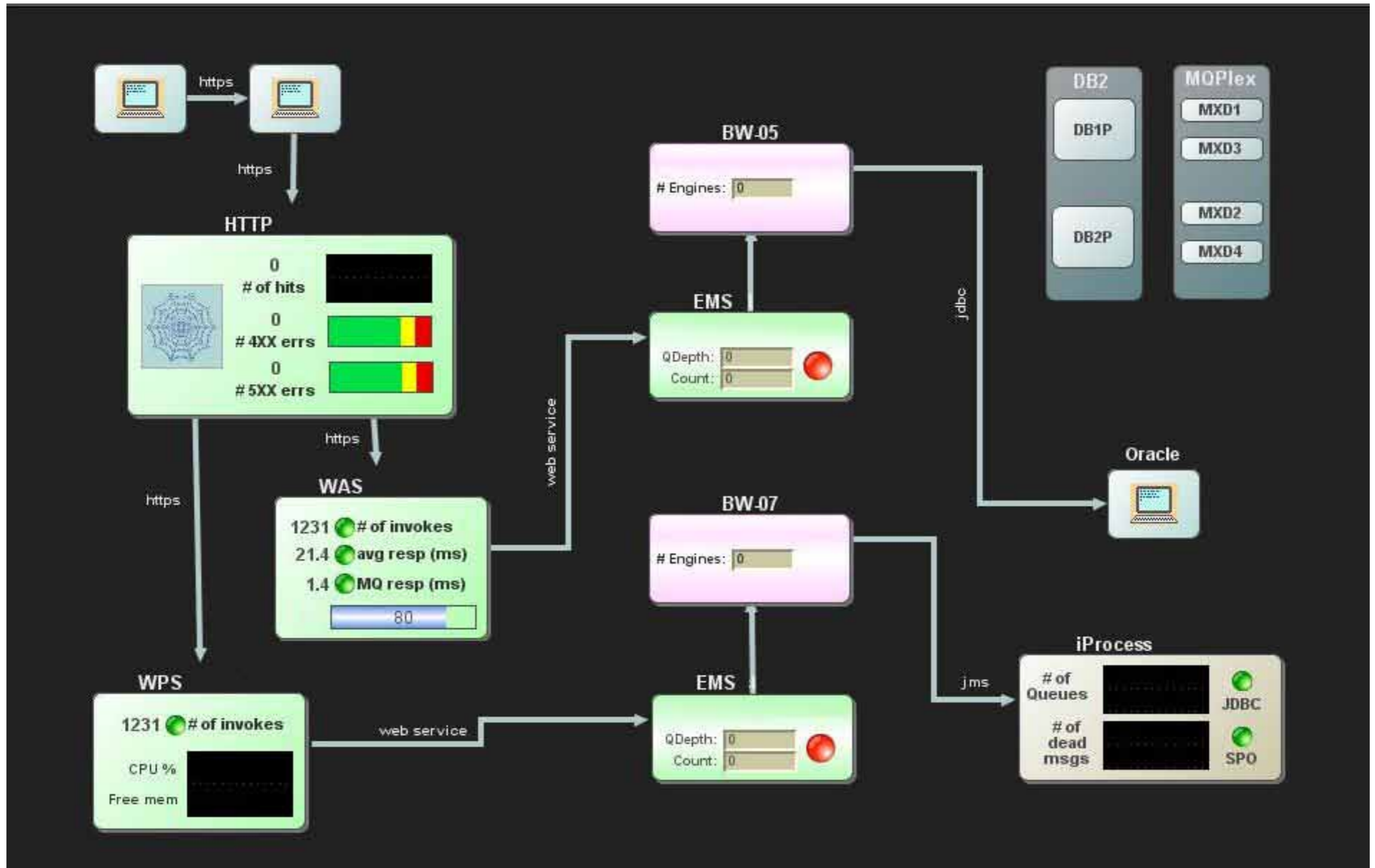
# Application Domain – High-Level Overview



# Application Performance Summary



# Architectural View



QUESTIONS?

# RTView Solution - Architecture

