BusinessConnect and SolutionsConnect
It's time to make bold moves.

IT Operations Analytics

Predict outages before they occur and increase service levels

Dean Hayes
Tze Ping Yeo

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0
15
30
45
60
20
40
60
80
100
120
140
160
180
200
220
240
260
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6
7
8
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100
150

000 MPH
CHUTE OK
00 RPM

There Is A Need for Agile & Leaner Operations

Operational Visibility

IT Overwhelmed by Data

- Large enterprises generate TB of data per day
- 50% growing dissatisfaction with traditional performance management solutions for production IT
- No way to proactively detect problems
- Looking to gain actionable insights from raw data

…by churning through piles of data and translating this to understandable, relevant information, and actionable insights.

..to avoid or shorten outages that might cost millions of dollars per hour

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Introducing IBM SmartCloud Analytics

Business Outcome

Capabilities

Built On IBM Big Data Platform

IBM or 3rd Party Solutions

Operational Environment

Proactive Outage Avoidance

Predict

Predict problems before they occur

Faster Problem Resolution

Search

Search quickly across massive amounts of data

Optimised Performance

Optimise

Optimise across your IT app infrastructure

IBM SmartCloud Analytics

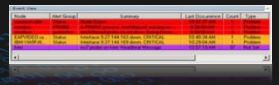
Application Performance

Documentation

System & Log Monitoring

Transactions

Assets & Workorders



Alerts, Alarms & Events

Applications | Systems | Workloads | Wireless | Network | Voice | Security | Mainframe | Storage | Assets

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User Scenario

Proactive Outage Avoidance
Predict

Predict problem before they occur

App Performance

APM data

Predictive Insights

PI behavioral learning on APM data

1. Monitor full service stack
2. Learn normal behaviour
3. Alert on abnormal deviation
4. Diagnose abnormality with log search to find problem

PI sends anomaly alert to Event Mgmt

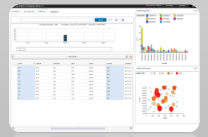
Faster Problem Resolution
Search

Quickly search across Massive amounts of data

Log Analysis

OMNIbus

LOB Admin.
Or IT Operations



In-context search from anomaly event to find and resolve problem in logs

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Joe, the App Dev/Ops SME

Joe is a Dev/Ops Engineer on the eDaytrader team. He supports the full lifecycle of the eDaytrader application including release automation, monitoring and infrastructure.

The **business prides itself in providing an exceptional online experience and quality of service to their eDaytrader customers.**

These are their **key differentiators separating their boutique online trading application** from the larger incumbents.

This is at the **heart of the company's culture** and each employee places great emphasis in the role they play in this. *(this is dev/ops)*

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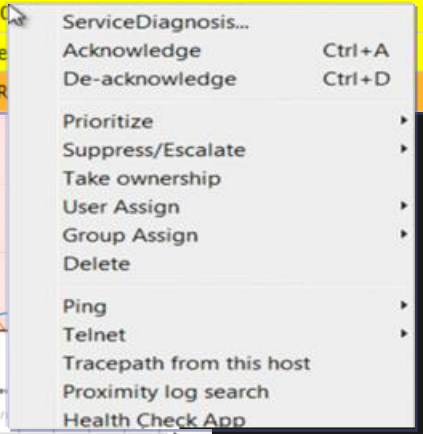
Gmail - eDayTrader Application Anomaly Detected https://mail.google.com/mail/u/0/?ui=2&ik=fc0f14b894&view=pt&sear...

Gmail by Google

AppDevOpsOnCall <devops@edaytrader.com>

eDayTrader Application Anomaly Detected
1 message

Sev	Last Occurrence	Anomalous Metrics	Anomalous Resources	Summary
!	5/24/13 4:35 PM	InTotalbytes	GigabitLink-c0372	High Traffic Volume on Telecommunication Link
!	2/16/13 4:15 PM	Response Time; CPU Used; Active Users	IBWEBSRV2; CRMWAS2; IBWEBSRV2	Slow Response Time on Internet Banking Front End
⚠	8/16/12 10:30 PM	Timesrun;Usercpupct;Totalwaittime	wasnode0	Anomalous Behaviour on Financial Transaction System
⚠	12/17/11 1:00 AM	AvgDiskMs/read;DiskWriteBytes/sec	AppServe	High Disk Usage on Exchange Servers
!	9/3/12 10:30 AM	RespTime	IBWEBSR	Poor Response Time on Financial Transaction System



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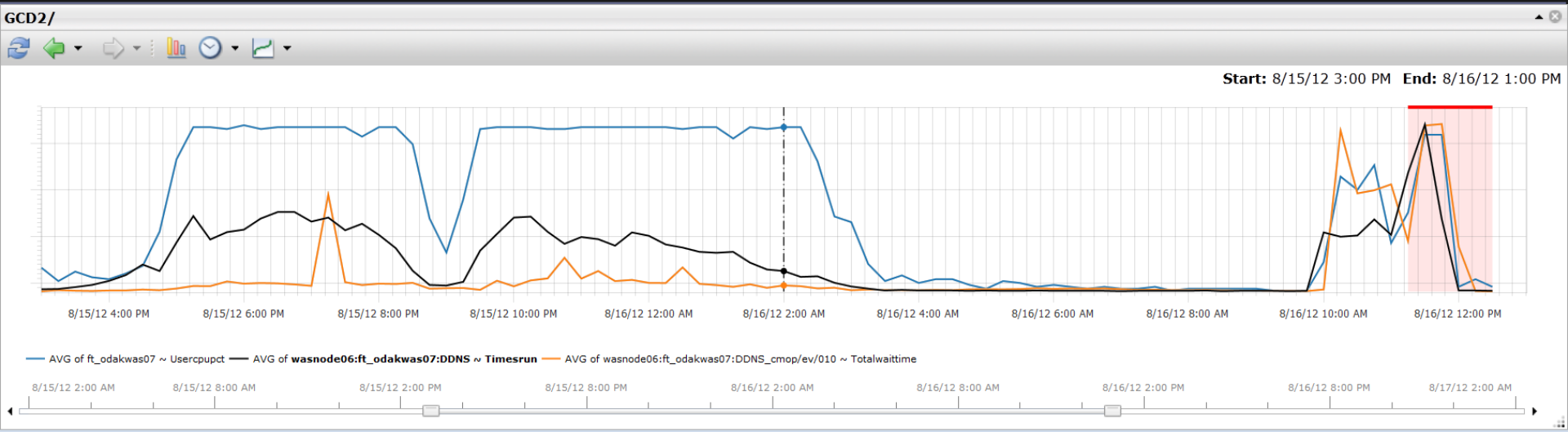

Timesrun on **wasnode06:ft_odakwas07:DDNS** has been out of sync for **1 hour 15 minutes**

Summary | Detail

The following metrics are historically related to each other:

- **Timesrun** on **wasnode06:ft_odakwas07:DDNS** is **132** (Min:**3**,Expected:**7.056**,Max:**141**)
- **Usercpupct** on **ft_odakwas07** is **46** (Min:**2**,Expected:**7.068**,Max:**92**)
- **Totalwaittime** on **wasnode06:ft_odakwas07:DDNS_cmop/ev/010** is **108.685** (Min:**1**,Expected:**11.437**,Max:**918.036**)

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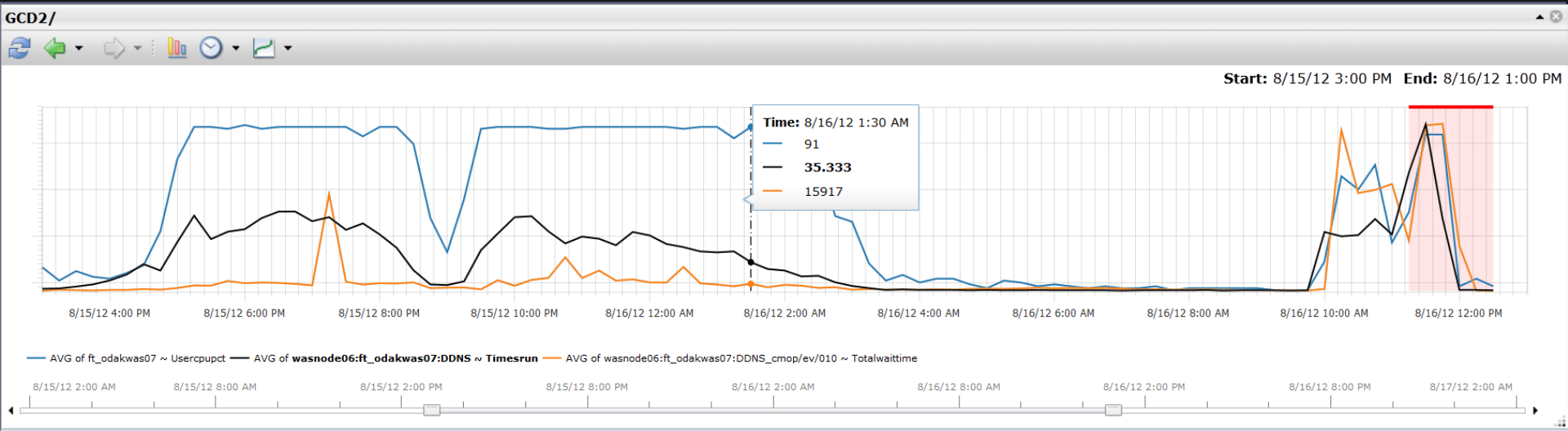

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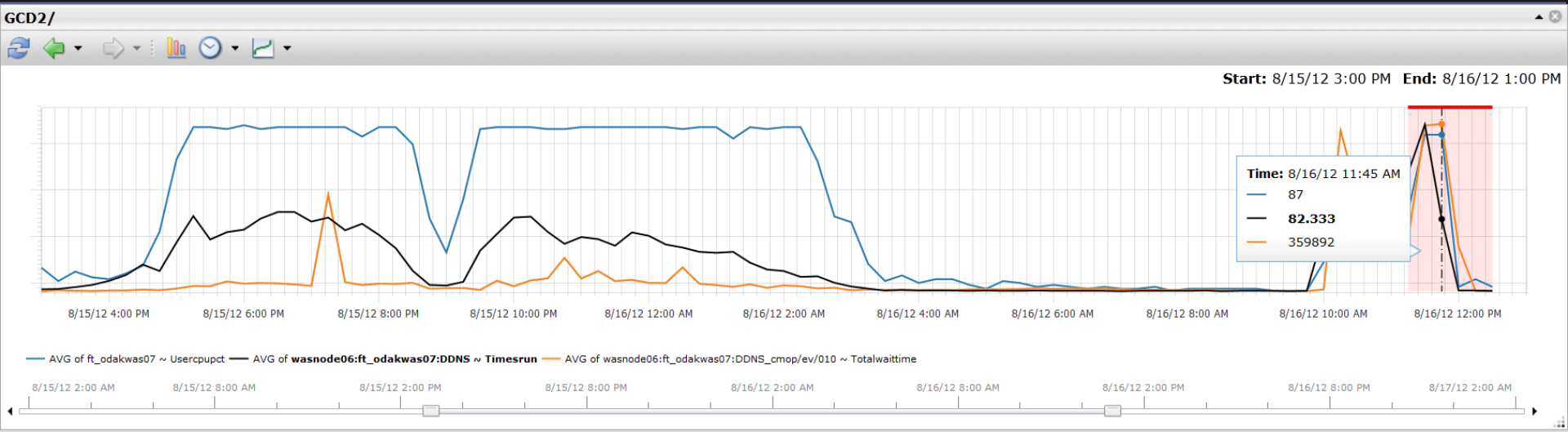

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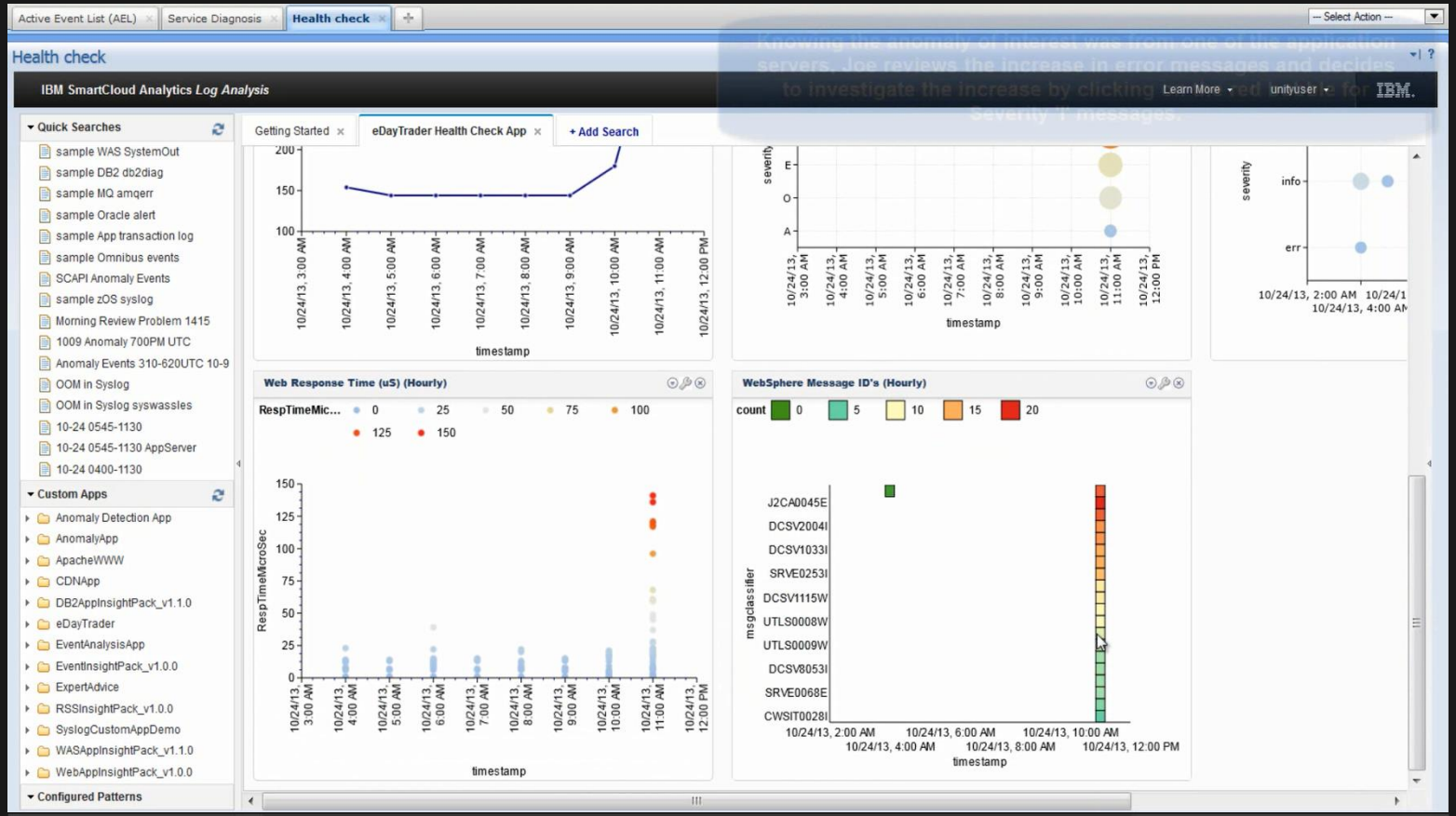

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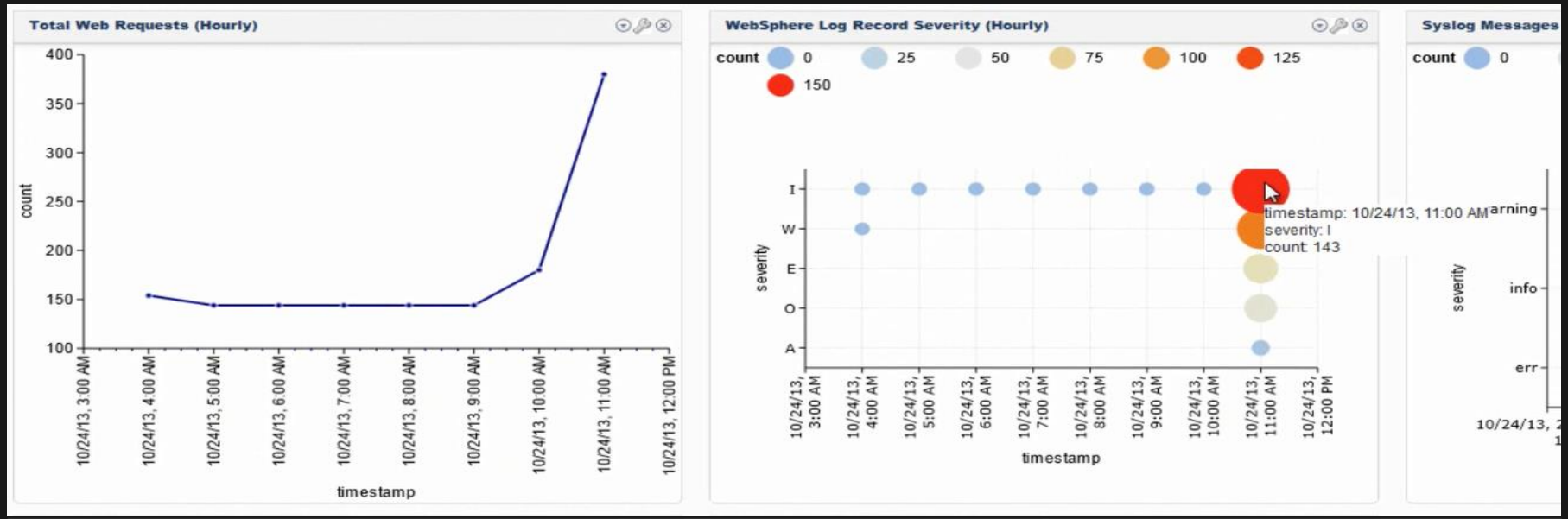

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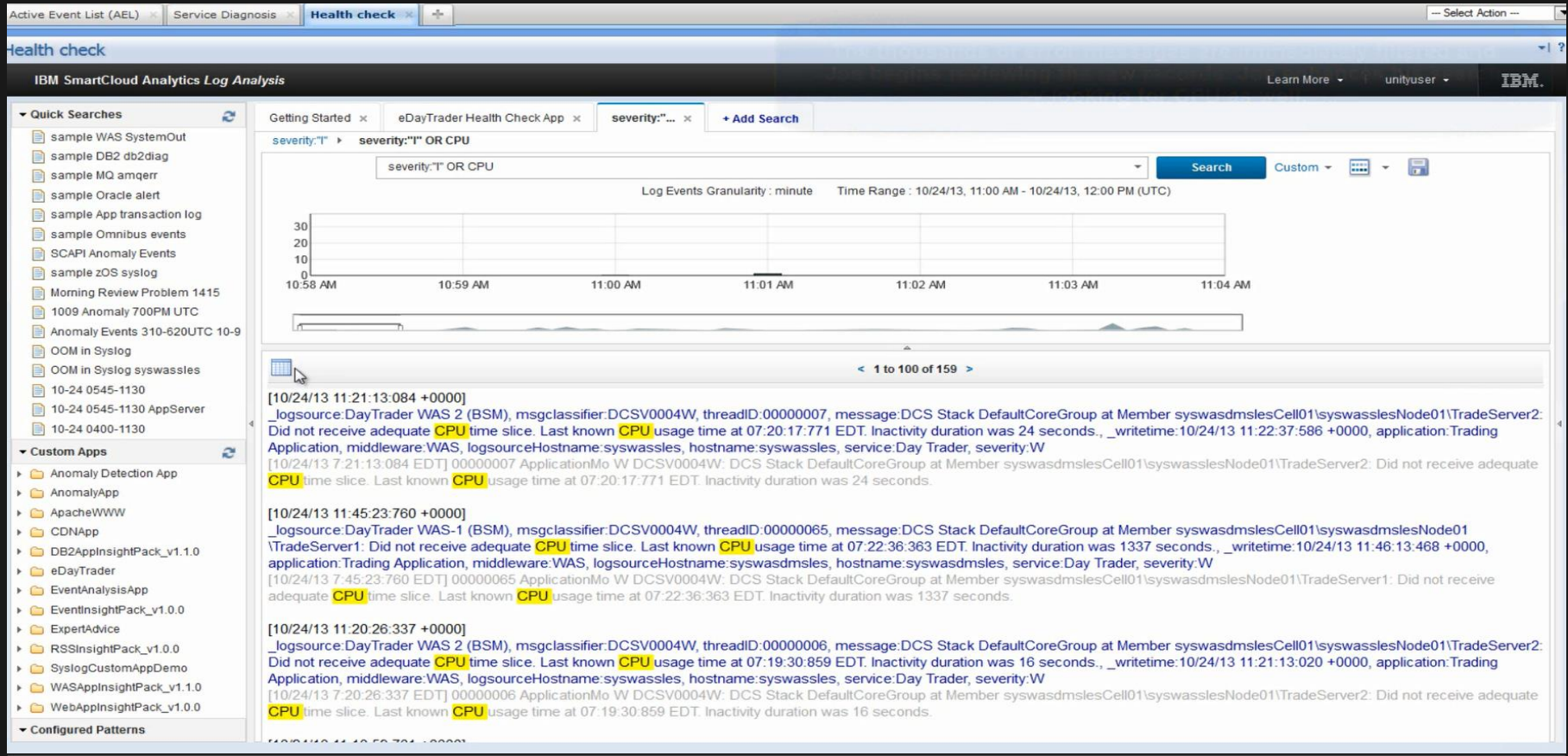

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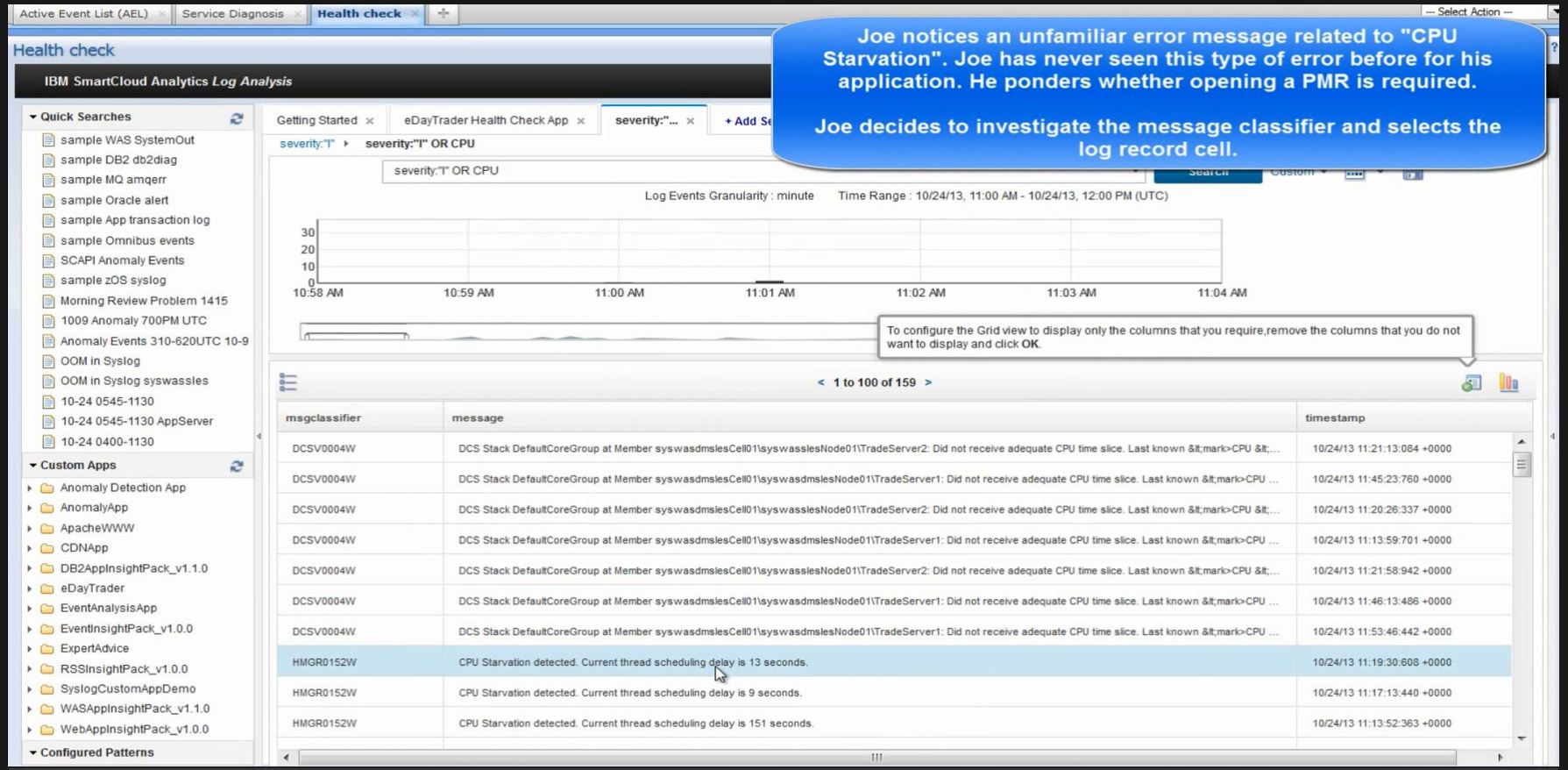

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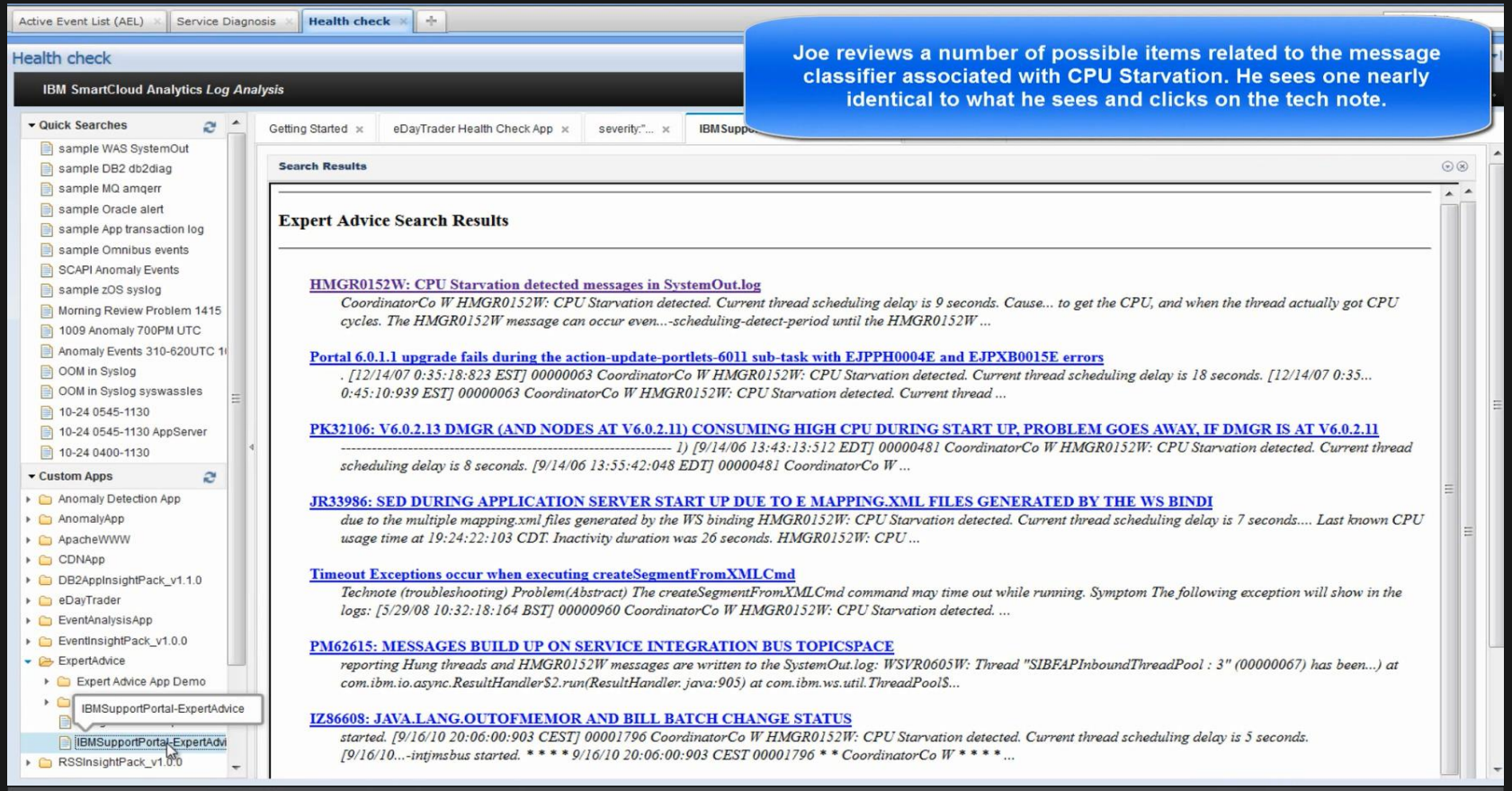

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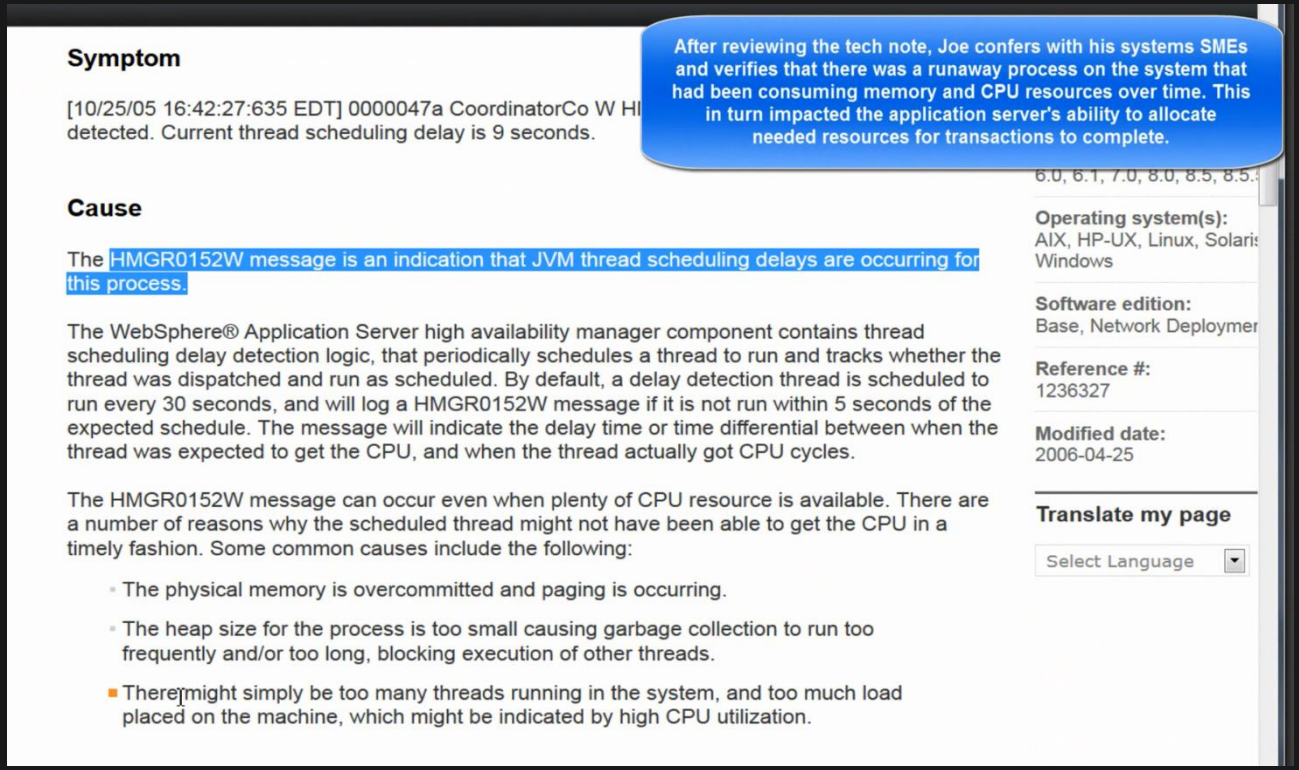

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“IBM SmartCloud Analytics helped detect 100 percent of the major incidents that occurred, including silent failures, and helped us eliminate manual thresholds, which will result in a cost avoidance of $300K USD annually”

-

Chris Smith, Director, Tools and Automation
Consolidated Communications Holdings, Inc.

Predict

Consolidated Communications avoids network outages and improves customer service

Need

- Monitoring a customer base of 250k access lines, 125k Internet, and 30k video is a challenge
- Managing manual thresholds within this networking environment is a nightmare

Benefits

- Using SmartCloud Analytics, behavioral learning techniques generate alerts automatically when something is not normal
- Enable earlier detection and insight into issues not detected by existing monitoring systems
- Easily obtain impact analysis into how the network copes with various failure conditions

Leading pharmaceutical company optimises VMWare server resources, realising an annual cost savings of $150K

Need

- Customer was lacking formal analysis of resource capacity
- Unclear if resources were over-allocated with associated increased costs or under-allocated risking SLA commitments

Benefits

- Capacity optimisation solution provided clear visibility and insight into virtualisation usage patterns
- Ability to right-size virtual machine resources to efficiently service workloads while reducing costs

Optimise

IBM SmartCloud Analytics

Proactive Outage Avoidance	Faster Problem Resolution	Optimised Performance
Predict	**Search**	**Optimise**
Predict problems before they occur	Search quickly across massive amounts of data	Optimise across your IT app infrastructure

NO!
NO!
x1000RPM
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