Performance Monitoring and Autonomic Computing

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Session 15863

Abstract

In this session, the speaker will answer how to avoid being on the wrong end of service disruption conversions. Monitoring for critical events will allow you to take corrective actions and minimize the extent of an outage. Monitoring for performance will alert you to bottlenecks or the need to grow your configuration. Attend this session and get some ideas on how to use event and performance management to avoid service disruptions. When you get back to your shop you can apply many, if not all, of the suggestions offered with your own event and performance management products.

Agenda

- Autonomic Computing
    - What is it?
    - Why is it important?
    - What are the challenges?
    - How do we do it?
- Autonomic Opportunities
- Summary
- Questions and Answers

What is it?

- Self-protecting
  - Able to anticipate and cure intrusions
- Self-healing
  - Able to recover from mistakes
- Self-optimizing
  - Able to improve performance
- Self-configuring
  - Able to adapt to changes in the system

Why is it important?

- Cost
- Application economy
- Complexity

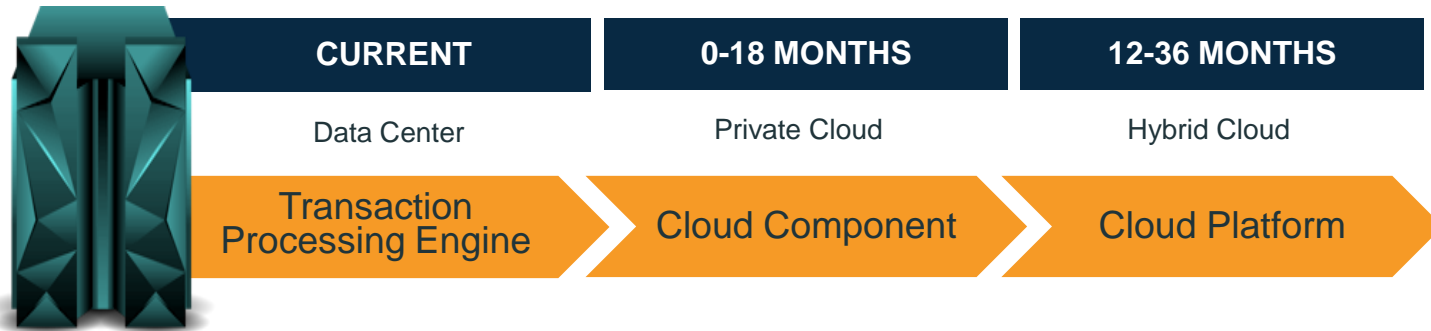# The Application Economy: Business Solutions on Demand

SHARE
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Continuous Delivery

Predictive Analytics

Bring Your Own Device

Big Data

Java

System z

Cloud Agility

Linux on System z

Exceptional User Experience

The Dynamic Data Center
Evolving Role of System z in the Application Economy

Business Responsiveness	Dynamic expansion/contraction
Transaction Growth	Infinite Scalability
Cost Optimization platforms	Spans across
Emerging Opportunities	Rapidly adapts

System z

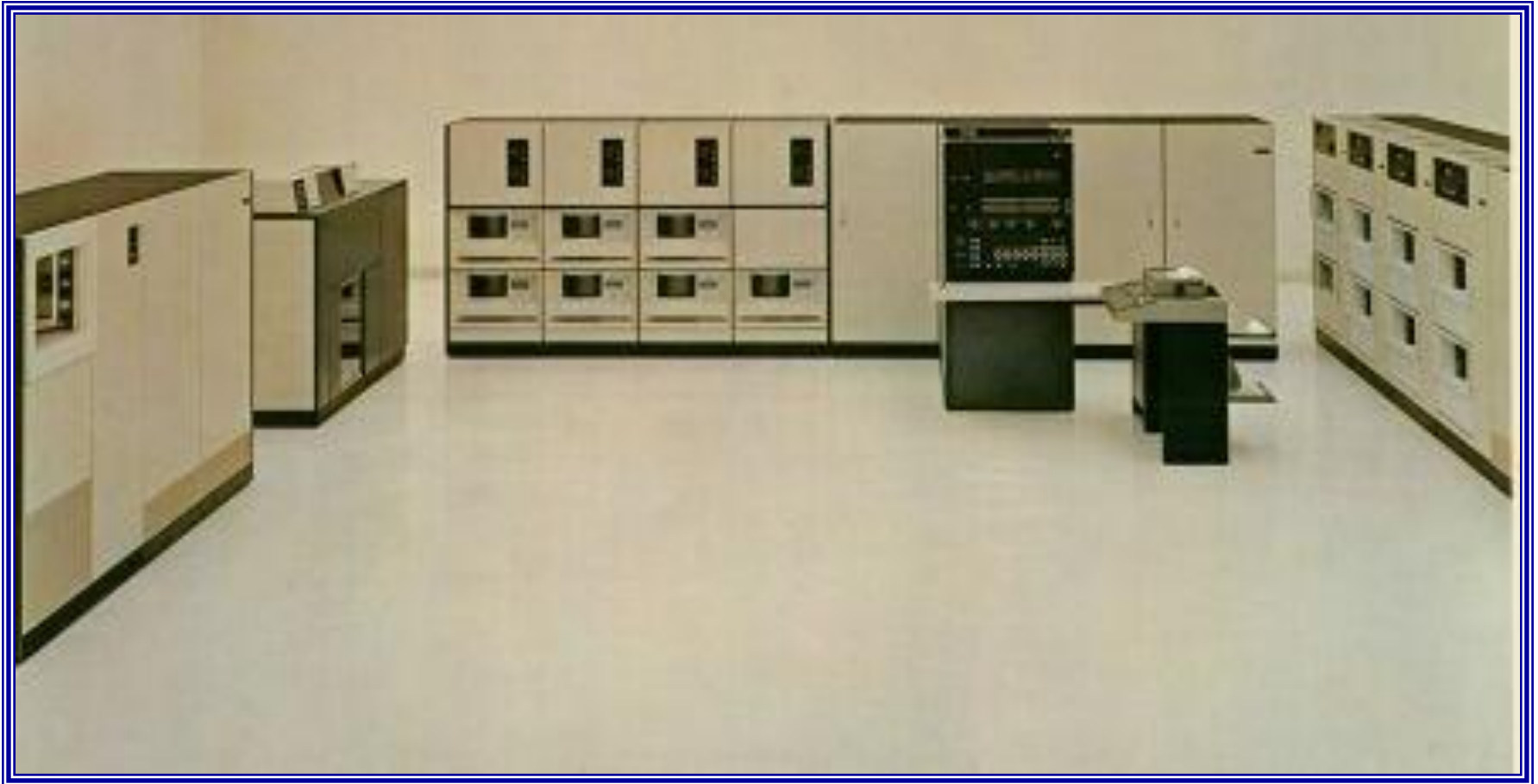| CURRENT	0-18 MONTHS	12-36 MONTHS
Data Center	Private Cloud	Hybrid Cloud
Transaction Processing Engine	Cloud Component	Cloud Platform

Would you fly this ?

With the same monitoring and control Systems that were in this ?

Then why would you monitor this ?

The way we monitored this?

Cost of Downtime

Type of Business	Average Hourly Impact
Retail Brokerage	$6,450,000
Credit Card Sales Authorization	$2,600,000
Home Shopping Channel	$113,750
Catalog Sales Centers	$90,000
Airline Reservations Centers	$89,500
Cellular Service Activation	$41,000
Package Shipping Service	$28,250
On-line Network Connect Fees	$25,250
ATM Service Fees	$14,500

What are the Challenges?

- More users
- Overwhelming complexity
- Faster hardware (no one can type faster then the System can process
- Operating System sophistication(WLM Hyper Dispatch)

Can you spell "M.O.B.I.L.E"?!

2005

2013

What a difference 8 years makes. St. Peter's Square in 2005 vs. 2013. #NBCPope

Complete your session evaluations online at www.SHARE.org/Pittsburgh-Eval
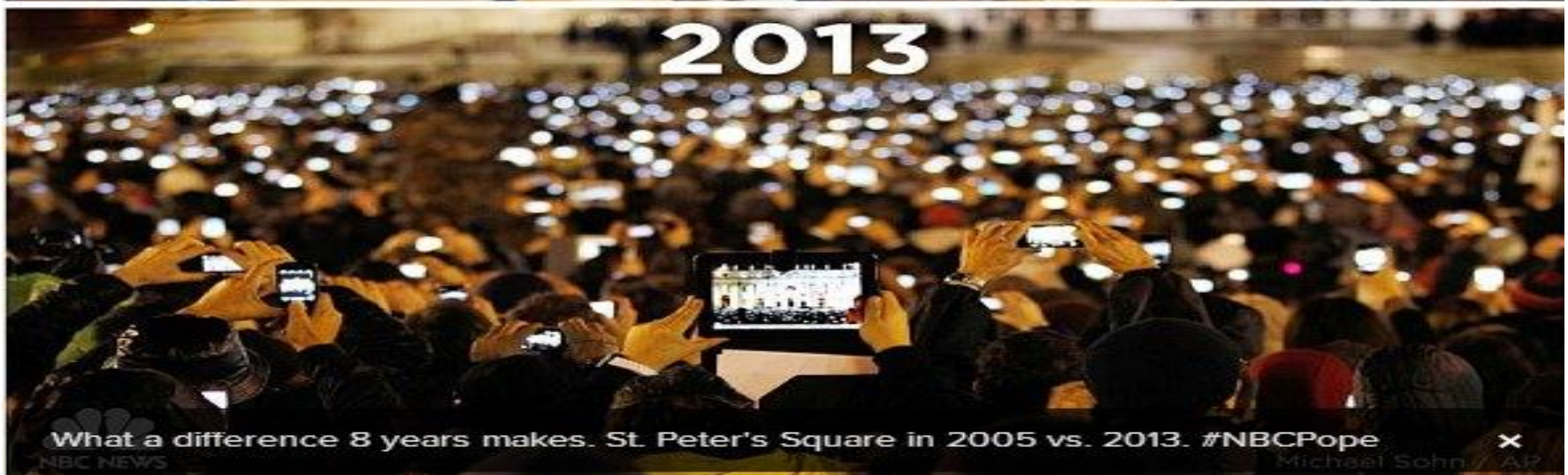
….and IT cannot stop the trend

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   40% of IT executives say they allow their users to access corporate information with their own smartphone…

70% of users say they are already accessing corporate information with their own smartphone

-IDC

SHARE
in Pittsburgh 2014

How Do We Do It?

Integration between Your Monitoring solution and your Automation and event Management solution

- Results in higher levels of system availability
- Performance data is available for automation decisions.
- Performance alerts can trigger an automation event.

How Do We Do It?   (Cont.)

- Customers have deployed and configured these products to better meet the self-healing objectives required for continuous availability
- Provide automation for system monitoring when thresholds are exceeded
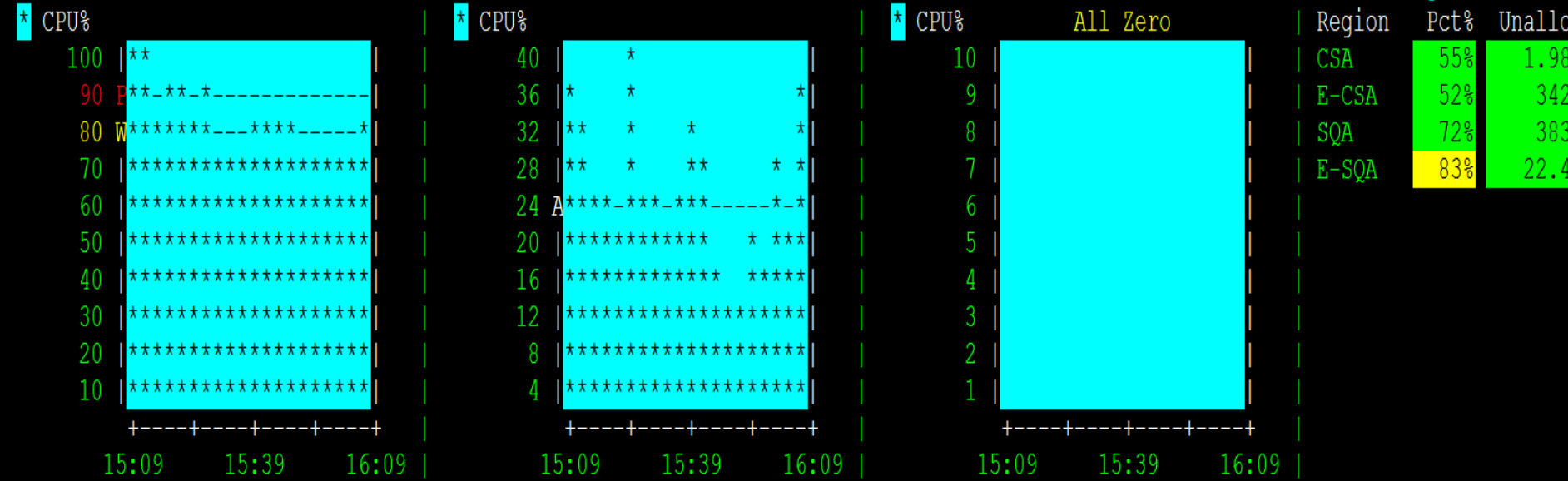
Autonomic Opportunities

- CICS Events such as Short on Storage (SOS)
- CICS Events such as Maximum Tasks (MXT)
- System Write to Operator (WTO) buffer shortages
- **System Common Storage Area (CSA) shortages**
- JES2 Spool Utilization Thresholds

QWS3270   Edit   View   Options   Tools   Help

tpx.ca.com   CA06

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SYSVIEW CA31 ------------------------------ RXDISP.DASHBORD, Overview Dashboard ------------------------ 2014/06/17 16:08:
Command ====> _
                                                                                    Scroll *===> PA
-------------------------------------------------------------------------- Lvl 3 Row 1-22/128 Col 1-131/2
PLOT CPU% CP =========== W01P01 ? + PLOT CPU% IIP ========== W01P02 ? + PLOT CPU% IFA ========= W01P03 ? + Common Stg == W01P04
 * CPU%                         |  * CPU%                        |  * CPU%                        | Region   Pct%  Unalloc
   100 |**                      |    40 |        *               |    10 |                       | CSA      55%   1.98
    90 P**-**-*------------      |    36 |*       *           *   |     9 |                       | E-CSA    52%   342
    80 W*******---****-----*     |    32 |**     *      *      *  |     8 |                       | SQA      72%   383
    70 |*******************      |    28 |**   *    **      *  *  |     7 |                       | E-SQA    83%   22.4
    60 |*******************      |    24 A****-***-***------*-*    |     6 |                       |
    50 |*******************      |    20 |************   * ***     |     5 |                       |
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    20 |*******************      |     8 |*******************     |     2 |                       |
    10 |*******************      |     4 |*******************     |     1 |                       |
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ACTSUM Top CPU Users ====== W02P01 ? + WMSYSSUM WLM System Su W02P02 ? + JOBSUM Top JES Spool User W02P03 ? + Job Types = W02P04
Jobname   ASID  ALLT%  CPUT% ClockTim | Workload Class      Per Imp Index | Jobname   JobId    Userid    Spool% | Type  Count Pct%
CHRN3JL   036C  246.5  246.5 00:01:53 | STC      STCDB2       1   2   2.7 | MDSAKLOT  JOB41745 KLOTO01   1.472 | INIT    41   4%
BPXOINIT  00D9  70.30  70.30 66:24:25 | BATCHTST NOTINPOL     1   5   2.5 | CHRE1JH   STC19288 EVAADM    0.602 | JOB     83   8%
DA0GDIST  0164  56.15  56.15 66:24:03 | ONLINE   ONLMEDRD     1   2   1.8 |                                   | OTX    124  13%
CHQS3JL   0379  11.21  11.21 03:47:53 | DATABASE DATABASE     1   3   1.6 |                                   | STC    530  53%
BERAR03   0239  11.19  11.19 00:01:38 |                                   |                                   | SYS     38   4%
JEFFDRAS  0055  9.241  9.241 66:25:37 |                                   |                                   | TSU    176  18%
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1=HELP 2=SPLIT 3=RETURN 5=FIND 7=UP 8=DOWN 9=SWAP 10=LEFT 11=RIGHT 12=RECALL
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Connected to 141.202.36.6 port 23   2/16   NUM   16:10:26 IBM-3279-5-E - A06T

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SSM Resource Status---------- CA06 -- O P S V I E W ------- Exceptions exist
Command ===> _____  Scroll ===> CSR_
Date/Time: 2008/07/25 12:04                    Filtered: Y     View ===> ALL
System: *_____  SSM Mode: ACTIVE    Version: 2                Wait ===> 30_
                              States              Modes
Cm Sta Resource Name     Current  Desired   Res Pre Ref Tng Action     Message
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__  W  ALLOCATE          TIMEOUT_ UNKNOWN_    A   A   A   A  ACTIVE__   Exception
__     APPC              UP_____ UP_____    A   A   A   A  ACTIVE__
__     ARCSRV39          DOWN____ DOWN____    A   A   A   A  ACTIVE__
__     AWSTART           UP_____ UP_____    A   A   A   A  ACTIVE__
__     AWSTART6          UP_____ UP_____    A   A   A   A  ACTIVE__
__     BALANCE           UP_____ UP_____    A   A   A   A  ACTIVE__
__     BUNDL             UP_____ UP_____    A   A   A   A  ACTIVE__
__     CAESP             UP_____ UP_____    A   A   A   A  ACTIVE__
__     CAESPWSS          UP_____ UP_____    A   A   A   A  ACTIVE__
__  W  CASCHD            DOWN____ UNKNOWN_    A   A   A   A  ACTIVE__   Exception
__     CASPOOL           UP_____ UP_____    A   A   A   A  ACTIVE__
__     CAS9              UP_____ UP_____    A   A   A   A  ACTIVE__
__     CAUATCON          UP_____ UP_____    A   A   A   A  ACTIVE__
__     CA7ICOM           UP_____ UP_____    A   A   A   A  ACTIVE__
__     CA7ONL            UP_____ UP_____    A   A   A   A  ACTIVE__
__     CA7XTRK           UP_____ UP_____    A   A   A   A  ACTIVE__
__     CICSRGN1          UP_____ UP_____    A   A   A   A  ACTIVE__
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Common Storage Event

- Autonomic Attributes
    - Self Configuring
    - Self Healing
    - Self Protecting
    - Self Optimizing

LIVE DEMO
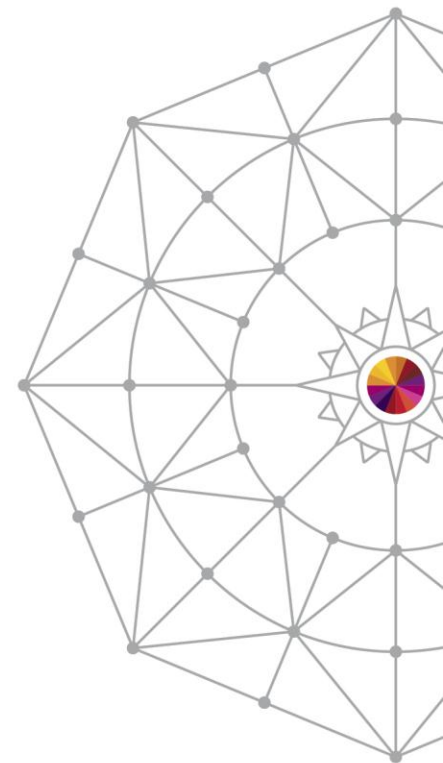
Summary

- Operational efficiency
- Human resources
- Decrease costs
- Reducing complexity
- Enhancing agility

Questions

- And Responses

Thank-you for Attending

Please fill out your session evaluations