What's New with OMEGAMON z/OS Version 4.1 and How OMEGAMON can be used with z/OS Management Console

Joe Winterton, IBM Tivoli OMEGAMON
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Agenda

- z/OS Systems Management
  - New Face on z/OS
- Tivoli OMEGAMON XE on z/OS 4.1.0
  - What is new in XE on z/OS 4.1.0
  - DWL - OMEGAMON z/OS
  - Problem Solving with XE
- zMC use with Tivoli OMEGAMON XE on z/OS 4.1.0
  - What is zMC?
  - DWL to XE
  - Using zMC and OMEGAMON XE together

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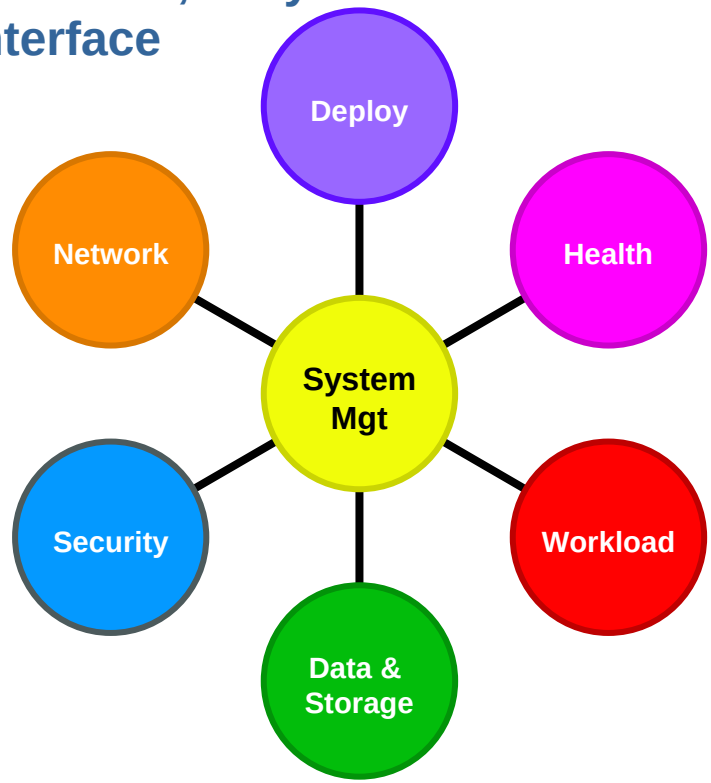
z/OS Management Focus Areas

Goals

- **Eliminate, or automate z/OS administrative and operational tasks**
- **Simplify the tasks that remain with a modern, easy to learn and useful interface**



Assist customers with the following tasks:

- **Deployment: Plan, order, install, migrate, configure, update OS, SW products, HW devices:**
  - Migrate to new releases and deploy “on demand” features
- **Health and availability management:**
  - Detect, diagnose, recover from – and prevent - z/OS problems.
- **Data and storage management:**
  - Deploy new storage devices; migrate data
  - Establish storage management policies that meet business goals.
- **Workload management:**
  - Define workload management policies and track policy execution
  - Monitor and control system activity: business applications, batch jobs, UNIX®processes, and other forms of work
- **Network management:**
  - Monitor, configure and administer network connections, servers, and security. Focus: IP and SNA over IP
- **Security management:**
  - Configure z/OS security and help protect resources and information from unauthorized use

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Tivoli OMEGAMON XE on z/OS 4.1.0

What is new with XE on z/OS 4.1.0

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New Functions in OMEGAMON XE on z/OS Version 4.1.0

- Translation into Chinese Simplified, Chinese Traditional, French, German, Italian, Japanese, Korean, Brazilian Portuguese, and Spanish
- ISA Plug-In for product support
- Integration of OMEGAMON XE for UNIX System Services
- Integration of RMF (Coupling Facility Data)

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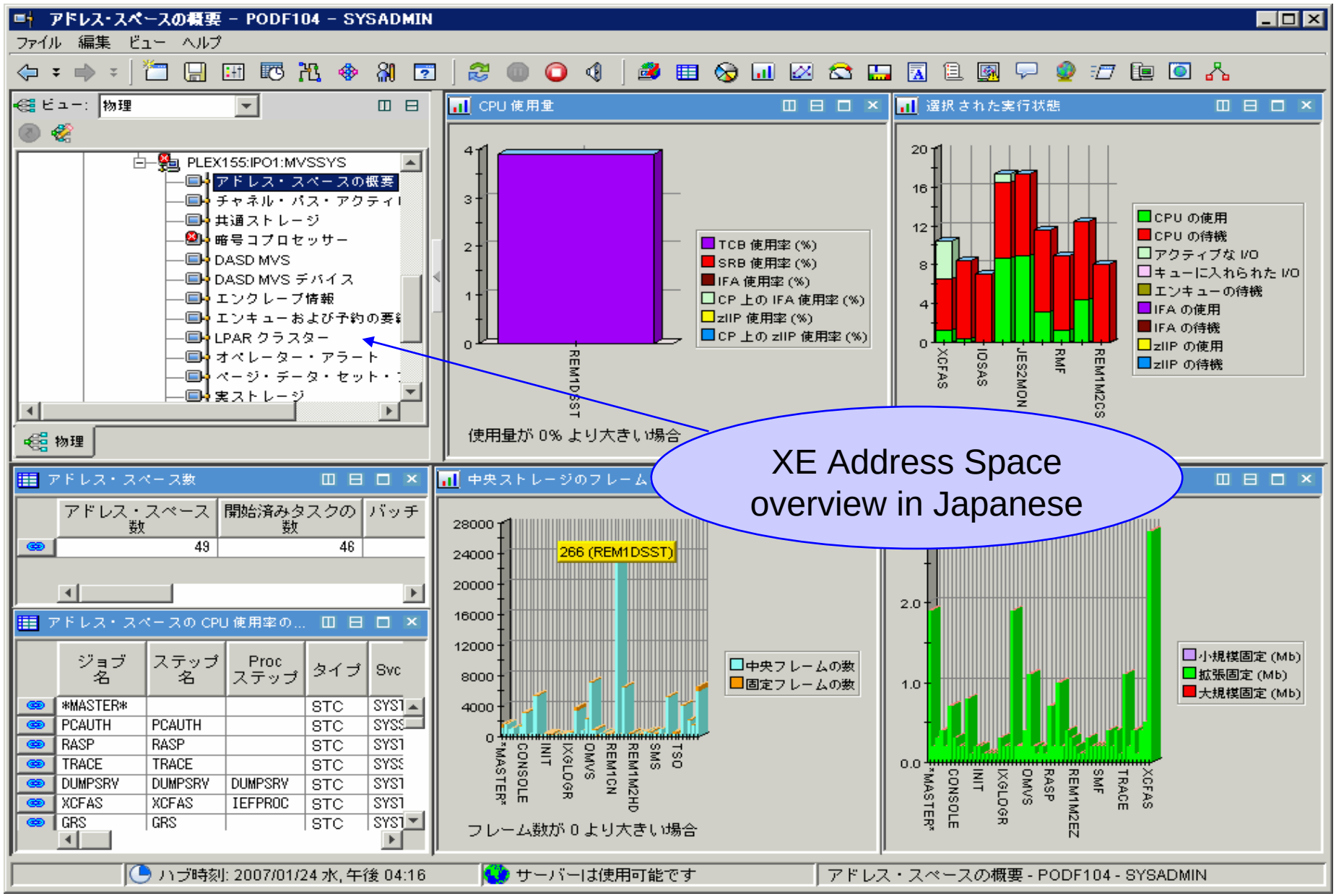

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New Functions in OMEGAMON XE on z/OS Version 4.1.0

- zAAP / zIIP Reporting
- Additional Real Storage Reporting
- Tape Mount Pending Time
- Coupling Facility Structure Duplex reporting
- Address Space I/O Rate
- Dynamic Workspace Linking

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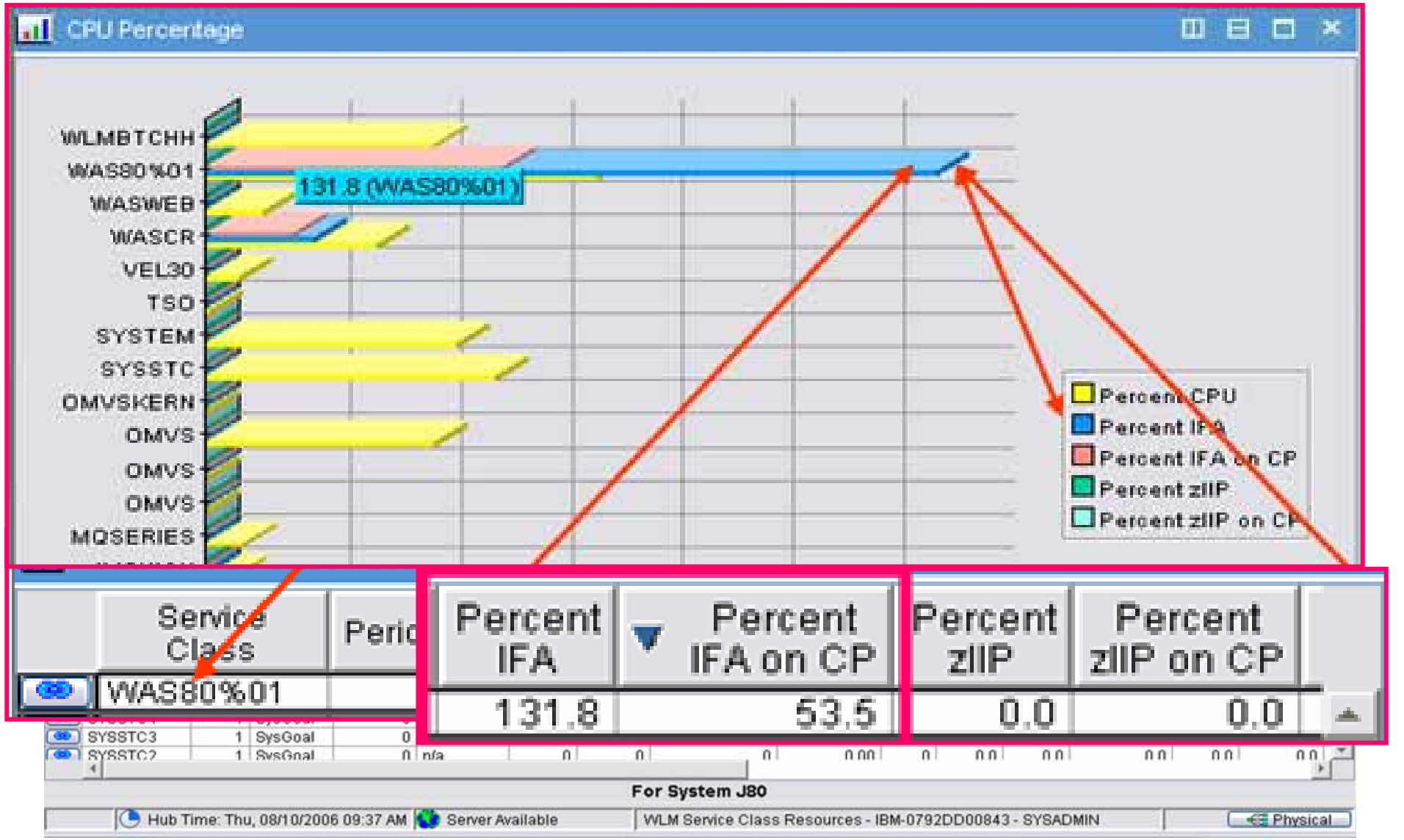
OMEGAMON XE on z/OS Specialty Engine Support
zIIP/zAAP – WLM Service Class Resources



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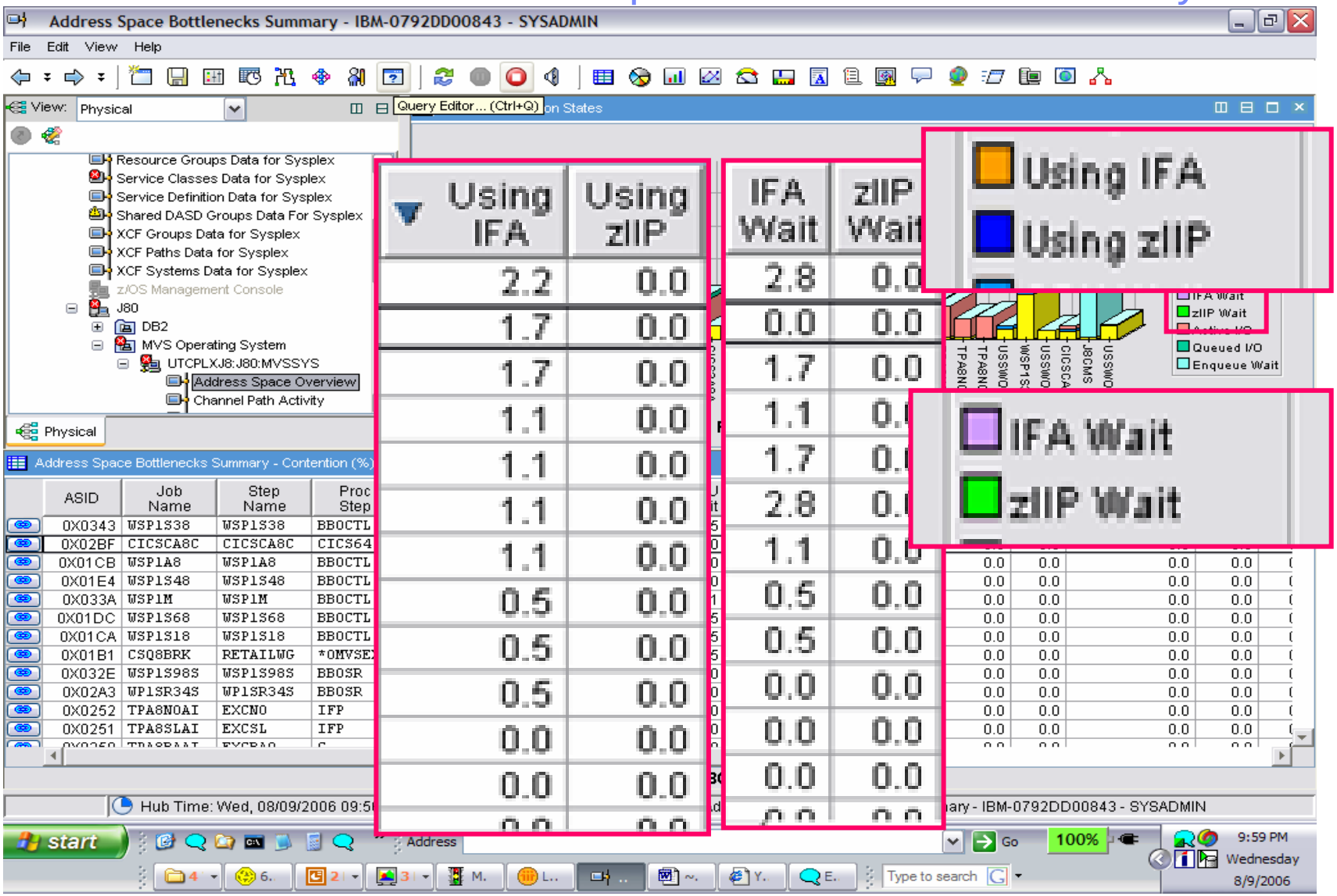
OMEGAMON XE on z/OS Specialty Engine Support
zIIP/zAAP – Address Space Bottlenecks Summary



Using IFA	Using zIIP	IFA Wait	zIIP Wait
2.2	0.0	2.8	0.0
1.7	0.0	0.0	0.0
1.7	0.0	1.7	0.0
1.1	0.0	1.1	0.0
1.1	0.0	1.7	0.0
1.1	0.0	2.8	0.0
1.1	0.0	1.1	0.0
0.5	0.0	0.5	0.0
0.5	0.0	0.5	0.0
0.5	0.0	0.0	0.0
0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0

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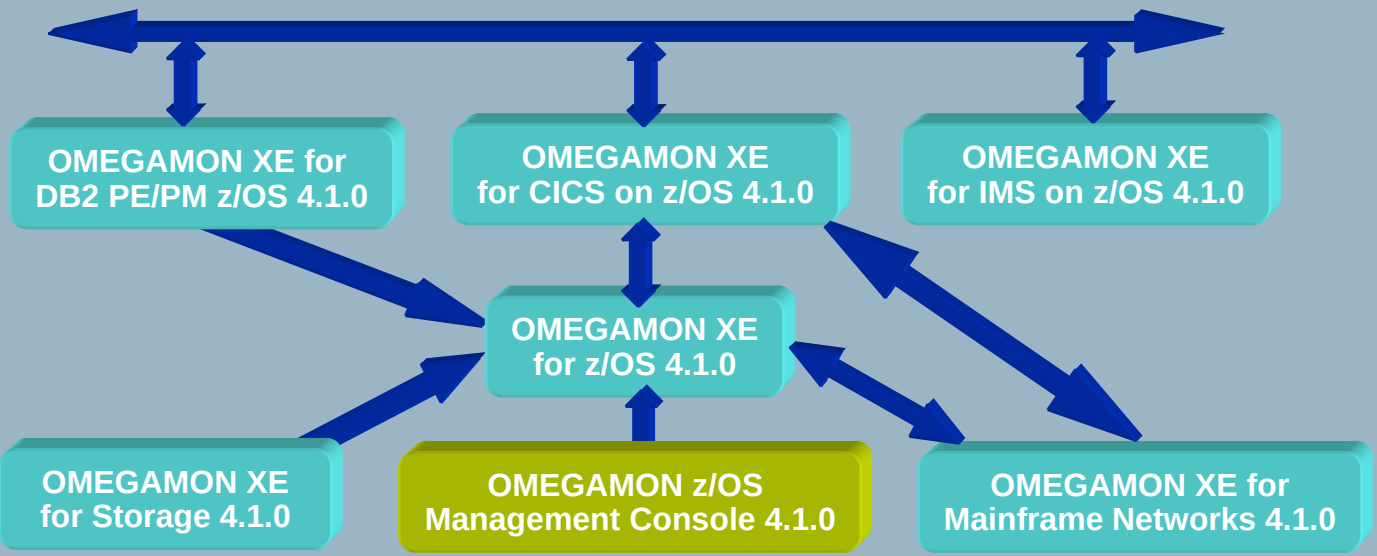
Dynamic Workspace Linking Function with 4.1.0

Problem: **How do I quickly find a potential problem that requires multiple monitoring products?**

Scenario: **Dynamically link in context from CICS transaction to the associated DB2 thread**

Solution: **Dynamic Workspace Linking**
Product provided links & user customized



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Tivoli OMEGAMON XE on z/OS 4.1.0

Problem Solving with XE

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High CPU Scenario

Bottleneck and Inspect Features in OM XE for zOS V4.1.0

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High CPU Scenario - Overview

- The Navigation Tree Goes Red……
- A Situation Has Identified a Looping Job……
- Go Check It Out……..
- Address Space Overview Shows Bottleneck Data……
- Display Links from Address Space Overview……
- Address Space CPU Utilization Shows LOOPER…….
- Display Links from Address Space CPU Utilization…..
- Link to Inspect Data Shows Hot Spot Offsets……
- Additional Inspect Data Shows CSECT Hot Spots.....
- You take action to cancel LOOPER……

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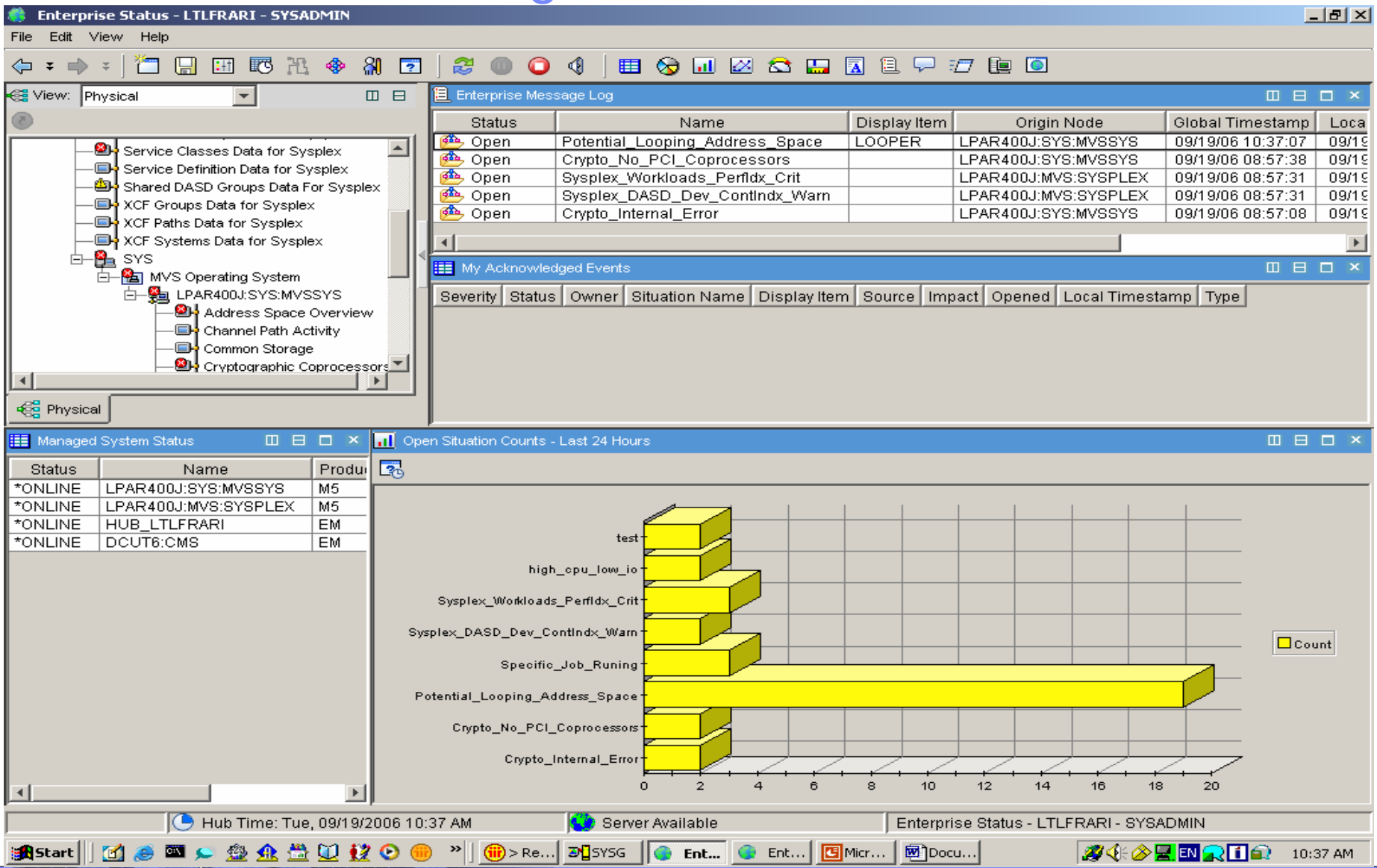
The Navigation Tree Goes Red



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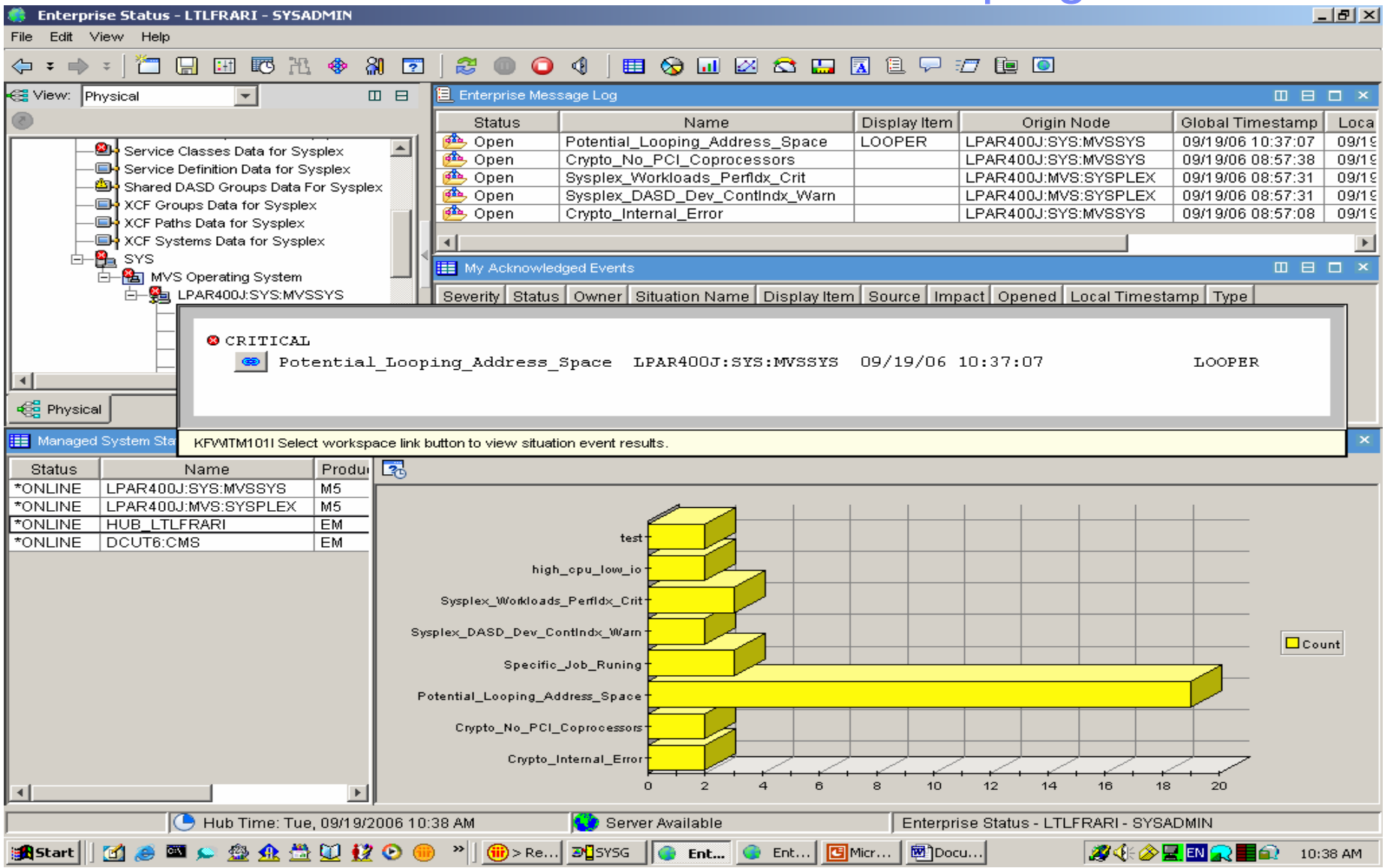
A Situation Has Identified a Looping Job



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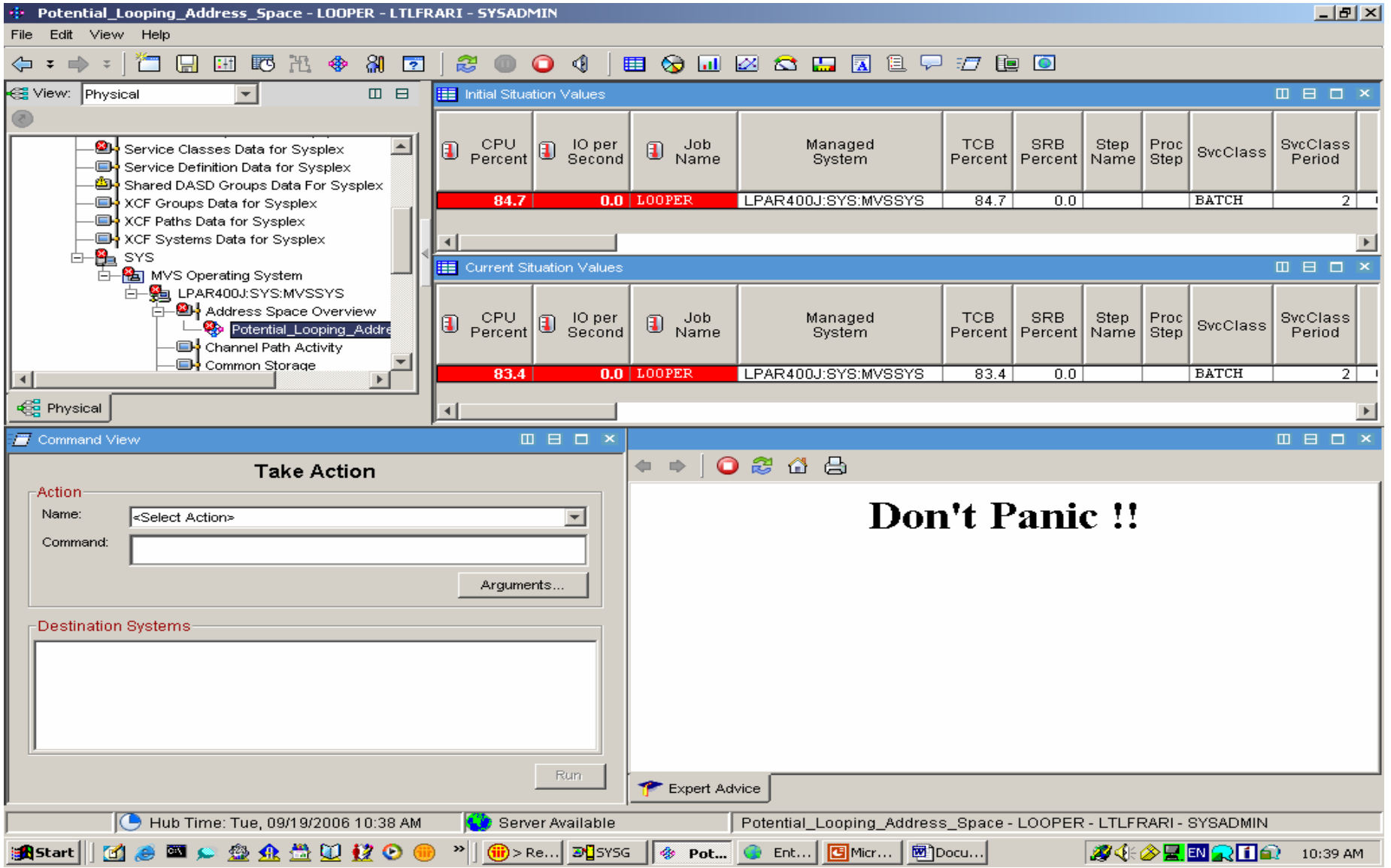
Go Check It Out



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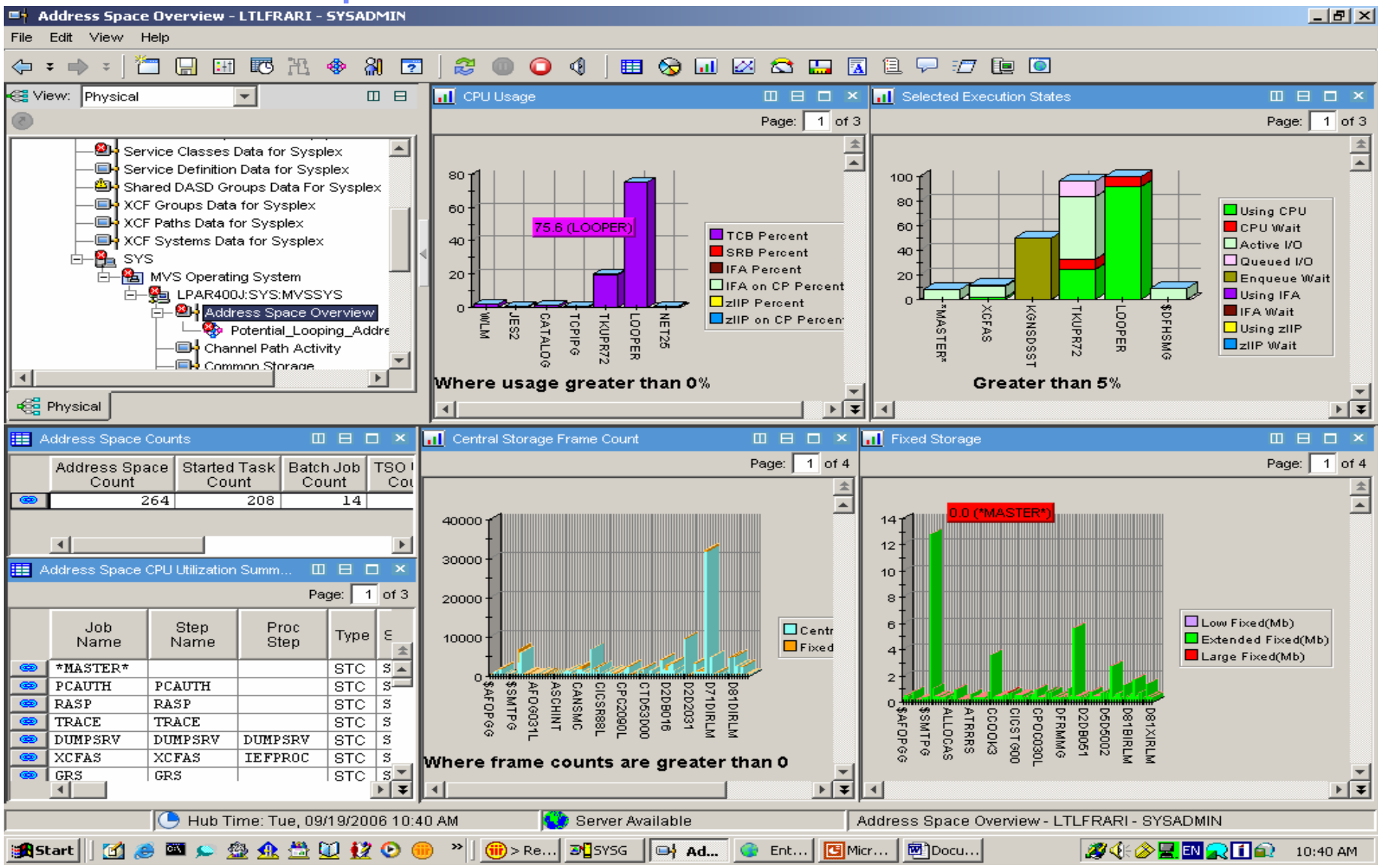
Address Space Overview Shows Bottleneck Data



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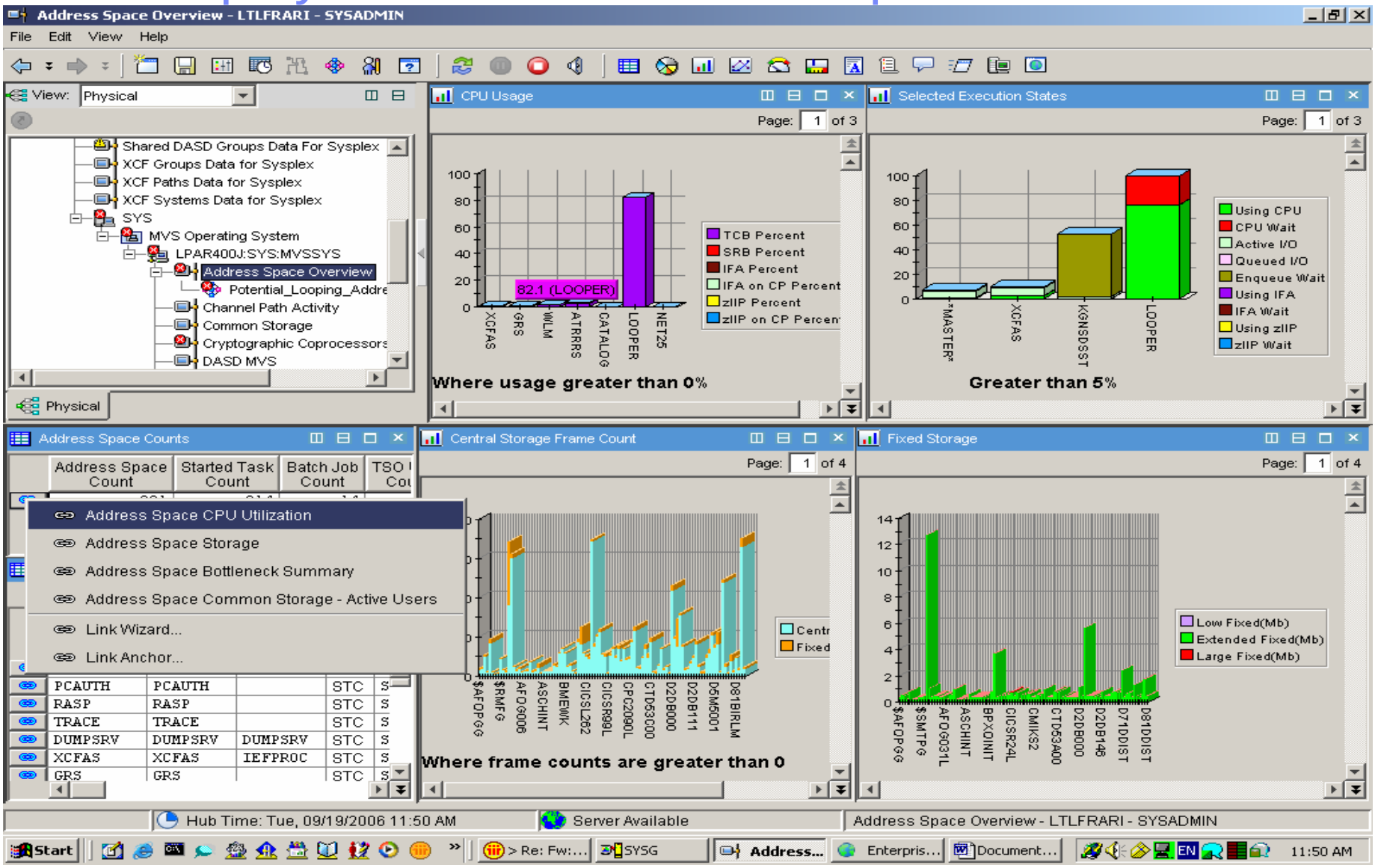
Display Links from Address Space Overview



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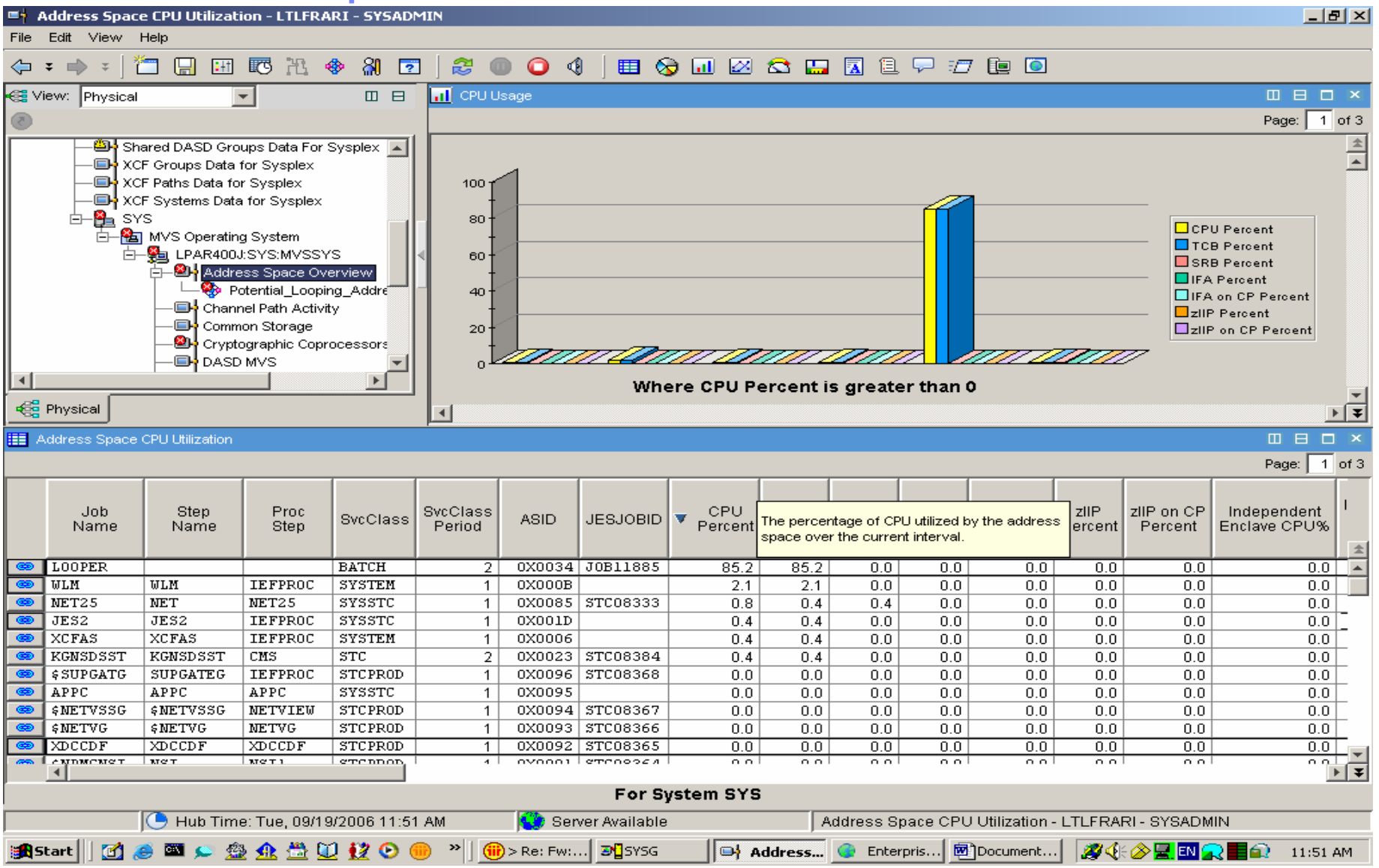
Address Space CPU Utilization Shows LOOPER



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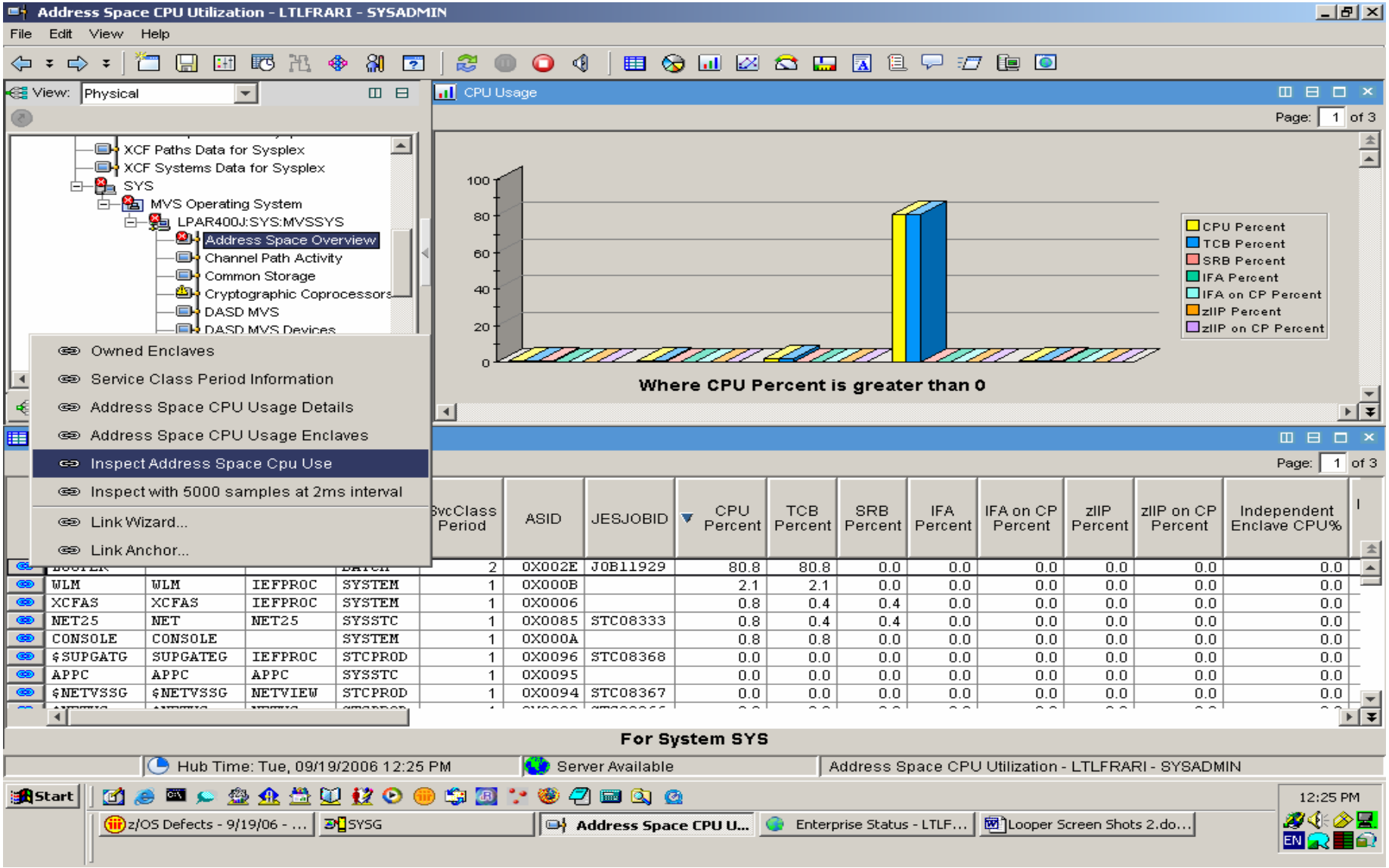
Display Links from Address Space CPU Utilization



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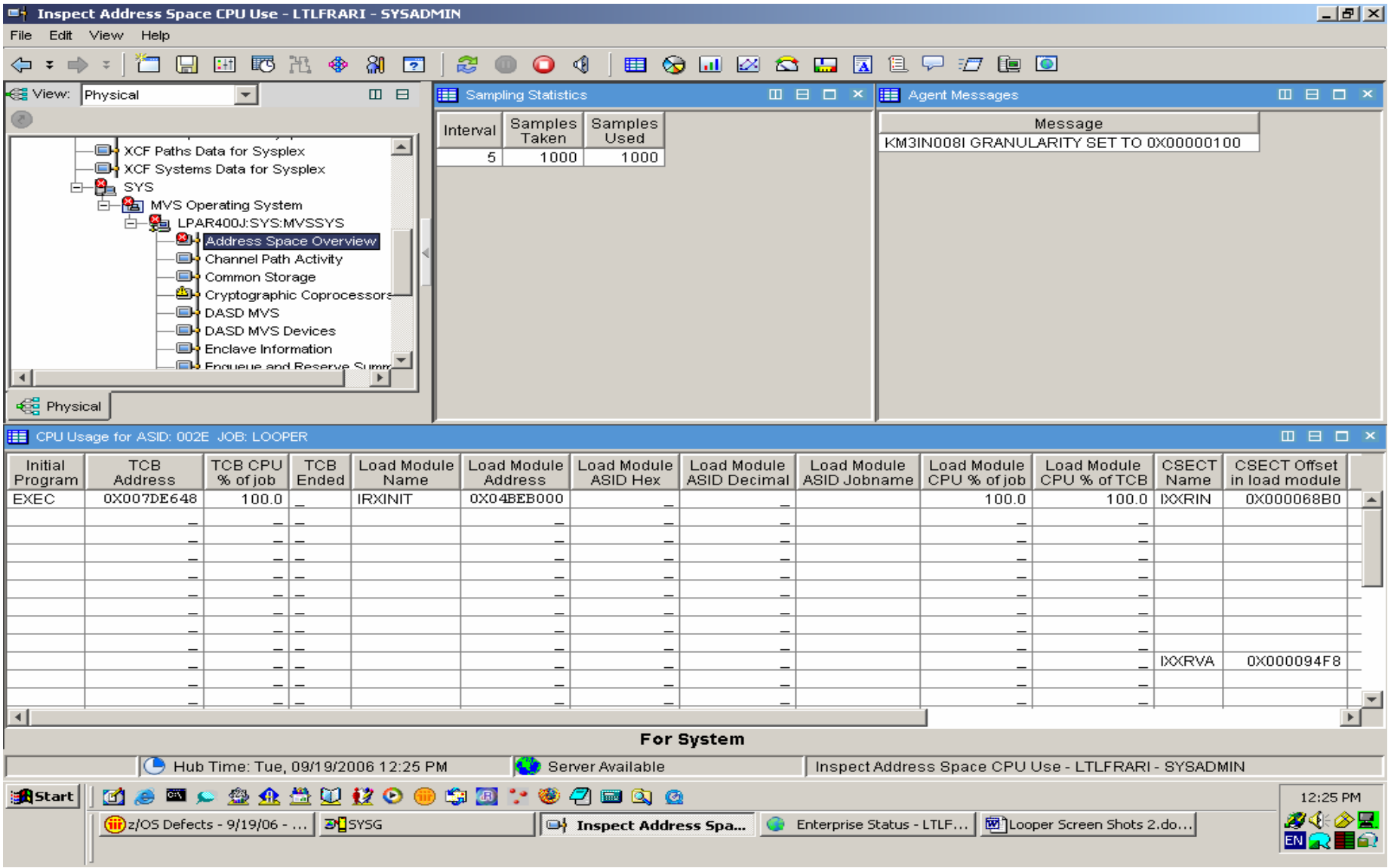
Link to Inspect Data Shows Hot Spot Offsets



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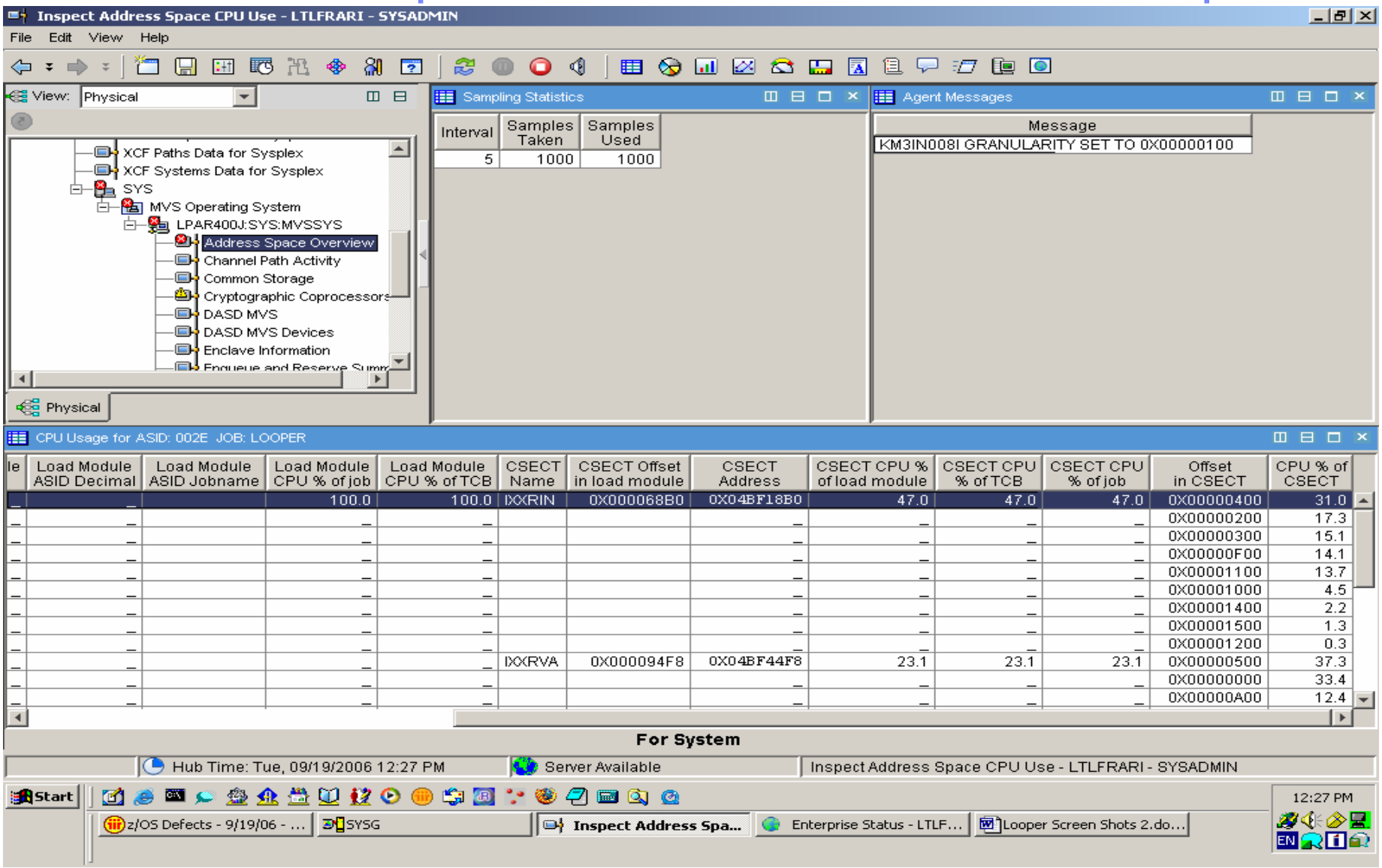
Additional Inspect Data Shows CSECT Hot Spots



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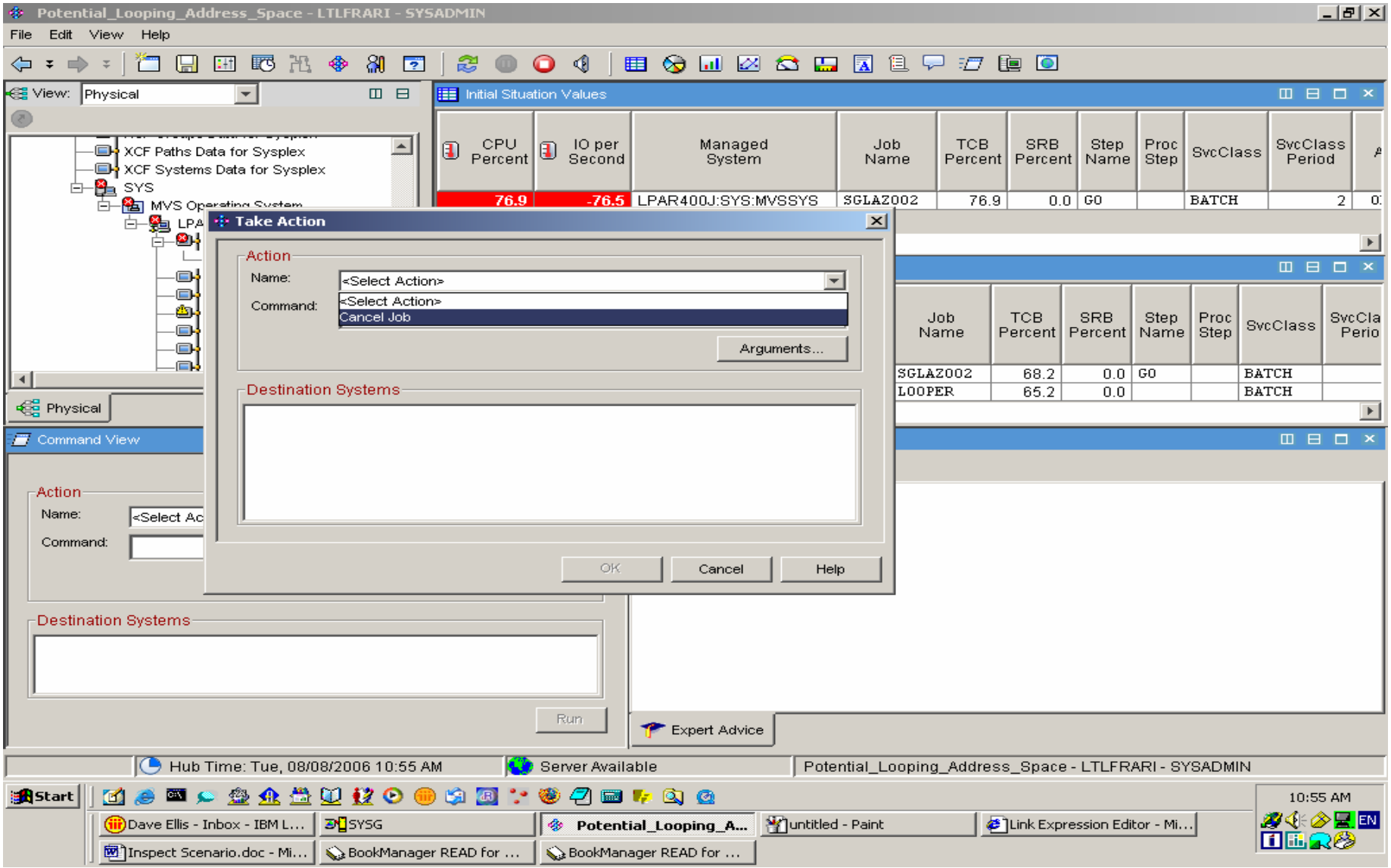
You take action to cancel LOOPER



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IBM OMEGAMON z/OS Management Console (zMC) Version 4.1.0

What is zMC?

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IBM OMEGAMON® z/OS Management Console

- Available at no charge for z/OS 1.4 and above
- Status of z/OS sysplexes and systems displayed using Tivoli® Enterprise Portal
- Integrated Health Checker reports
- Powerful features:
  - Event notification
  - Drill-down to problem details and expert advice
- Easy upgrade to comprehensive Tivoli Monitoring Services products
- Foundation for the future

Learn more at: http://www.ibm.com/servers/eserver/zseries/zos/zmc/

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Managing Situations Using the zMC

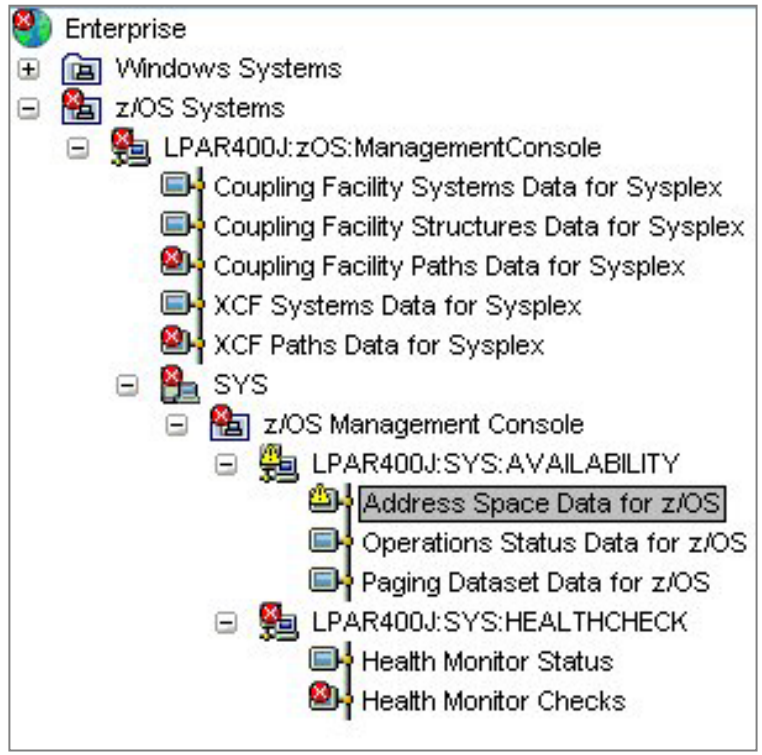
Sequence of events:

- **z/OS agents monitor for situations**
  - **14 pre-defined situations shipped**
  - **Customers can create more**
- **If situation triggers, alert is raised**

  Alert indicators:

  Critical, Warning, or Informational
- **User opens Event Workspace**
  - **Gets more details about situation**
  - **Reads expert advice (if provided)**
  - **Takes action (optionally)**

Alerts appear in TEP Navigator:



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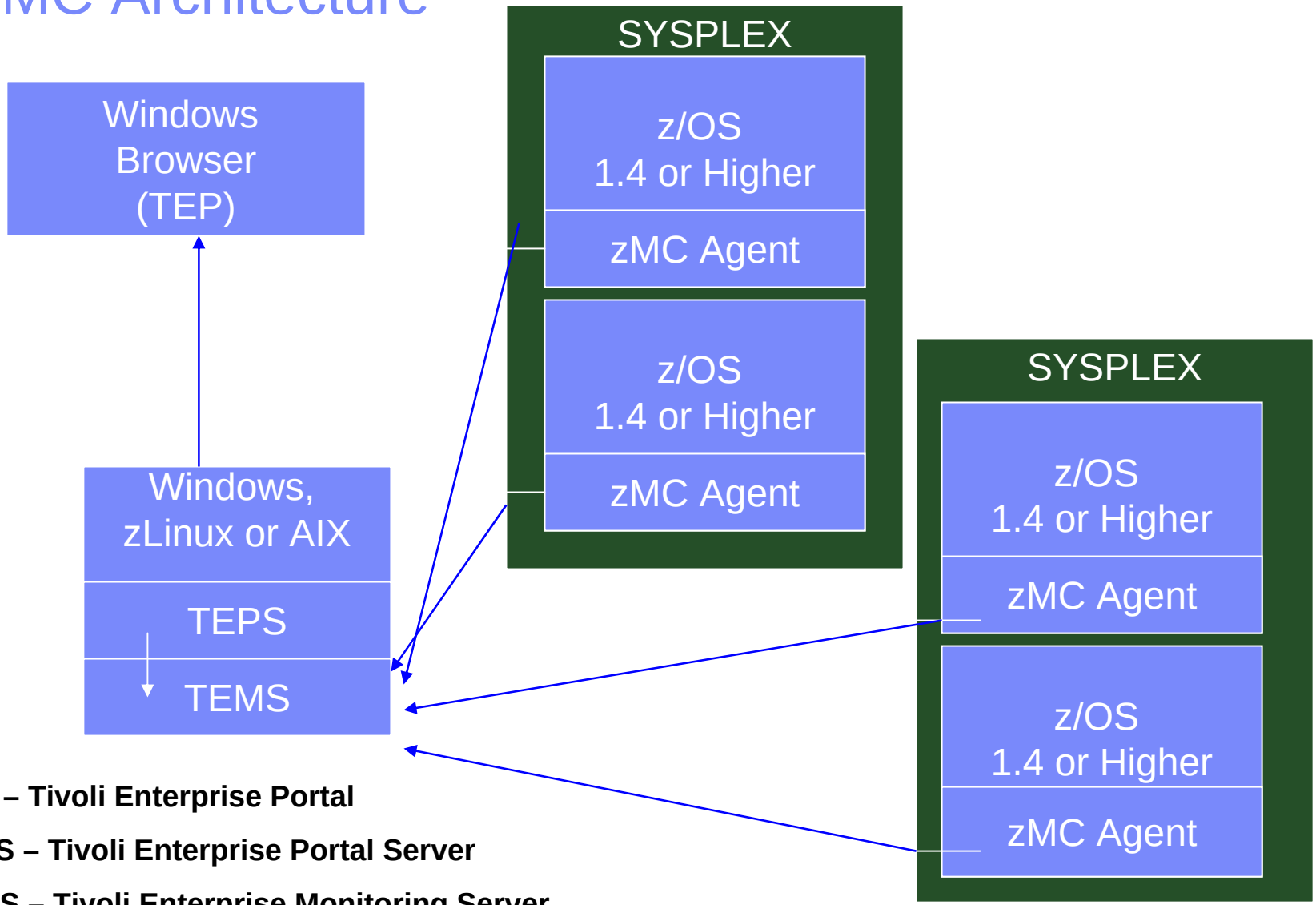
zMC Architecture



TEP – Tivoli Enterprise Portal

TEPS – Tivoli Enterprise Portal Server

TEMS – Tivoli Enterprise Monitoring Server

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zMC 4.1.0 – new release

GA complete in January 2007:

More Sysplex Level – CF details,duplex, policy

More Availability Information – USS Processes/Users

Lpar Cluster information

Dynamic Workspace Linking – OMEGAMON XE for z/OS

Translation: Chinese Simplified, Chinese Traditional, French, German, Italian, Japanese, Korean, Brazilian Portuguese, and Spanish

ISA Plug-In for product support

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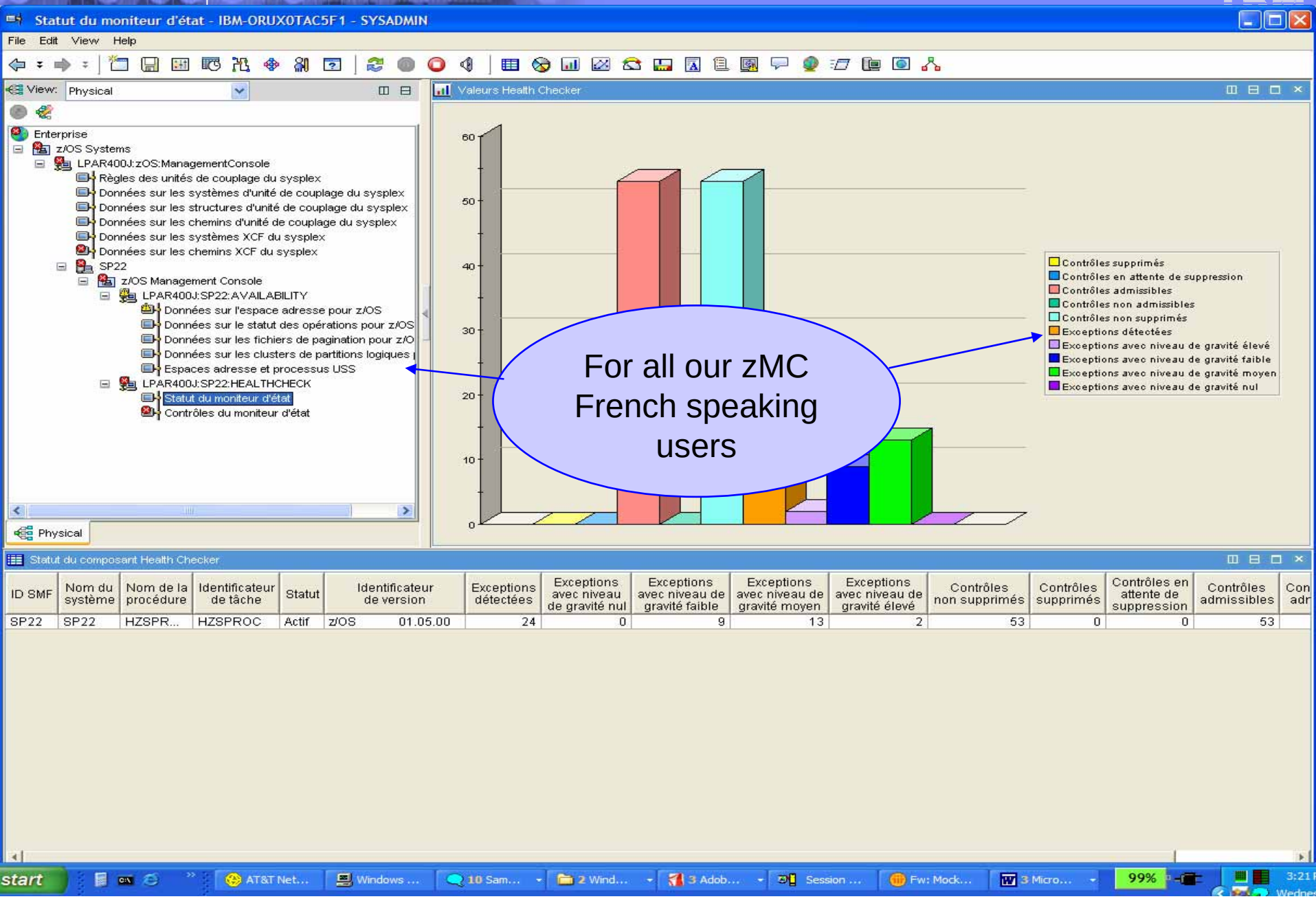

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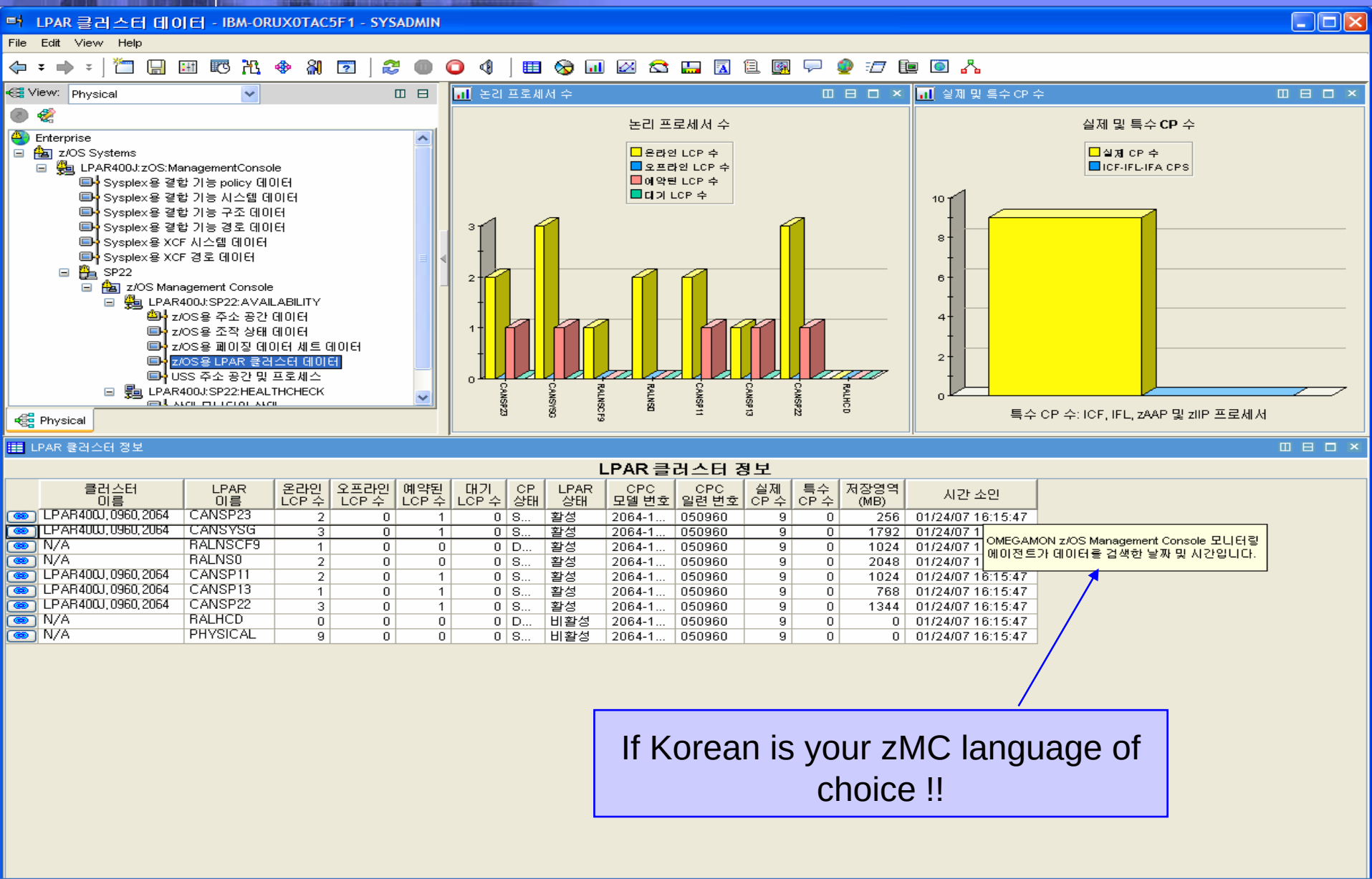

클러스터 이름	LPAR 이름	온라인 LCP 수	오프라인 LCP 수	예약된 LCP 수	대기 LCP 수	CP 상태	LPAR 상태	CPC 모델 번호	CPC 일련 번호	실제 CP 수	특수 CP 수	저장영역 (MB)	시간 소인
LPAR400J,0960,2064	CANSP23	2	0	1	0	S...	활성	2064-1...	050960	9	0	256	01/24/07 16:15:47
LPAR400J,0960,2064	CANSYSG	3	0	1	0	S...	활성	2064-1...	050960	9	0	1792	01/24/07 1
N/A	RALNSCF9	1	0	0	0	D...	활성	2064-1...	050960	9	0	1024	01/24/07 1
N/A	RALNS0	2	0	0	0	S...	활성	2064-1...	050960	9	0	2048	01/24/07 1
LPAR400J,0960,2064	CANSP11	2	0	1	0	S...	활성	2064-1...	050960	9	0	1024	01/24/07 16:15:47
LPAR400J,0960,2064	CANSP13	1	0	1	0	S...	활성	2064-1...	050960	9	0	768	01/24/07 16:15:47
LPAR400J,0960,2064	CANSP22	3	0	1	0	S...	활성	2064-1...	050960	9	0	1344	01/24/07 16:15:47
N/A	RALHCD	0	0	0	0	D...	비활성	2064-1...	050960	9	0	0	01/24/07 16:15:47
N/A	PHYSICAL	9	0	0	0	S...	비활성	2064-1...	050960	9	0	0	01/24/07 16:15:47

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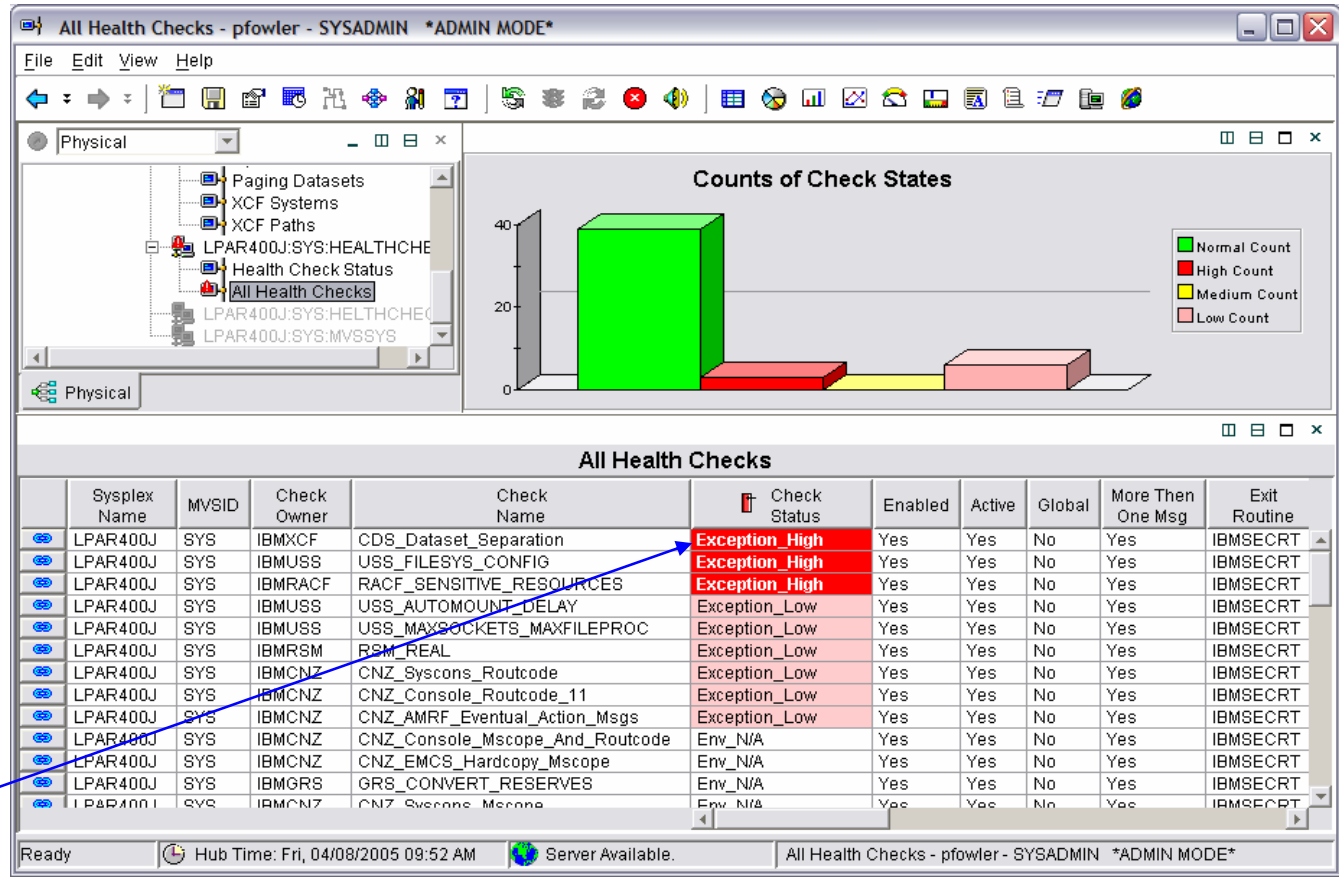
z/OS Health Checks in TEP with zMC 4.1.0

zMC provides TEP based Health Checker

- Health Checker provides z/OS elements and products to check on configuration values and report what may be a deviation from best practices
- Displays health check statistics on the TEP
- Highlights check status
- Health Checker in SDSF is more text based (web download before z/OS 1.7)



This feature is unique to the IBM OMEGAMON z/OS Management Console (zMC)

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IBM OMEGAMON z/OS Management Console Version 4.1.0

New LPAR Availability Information

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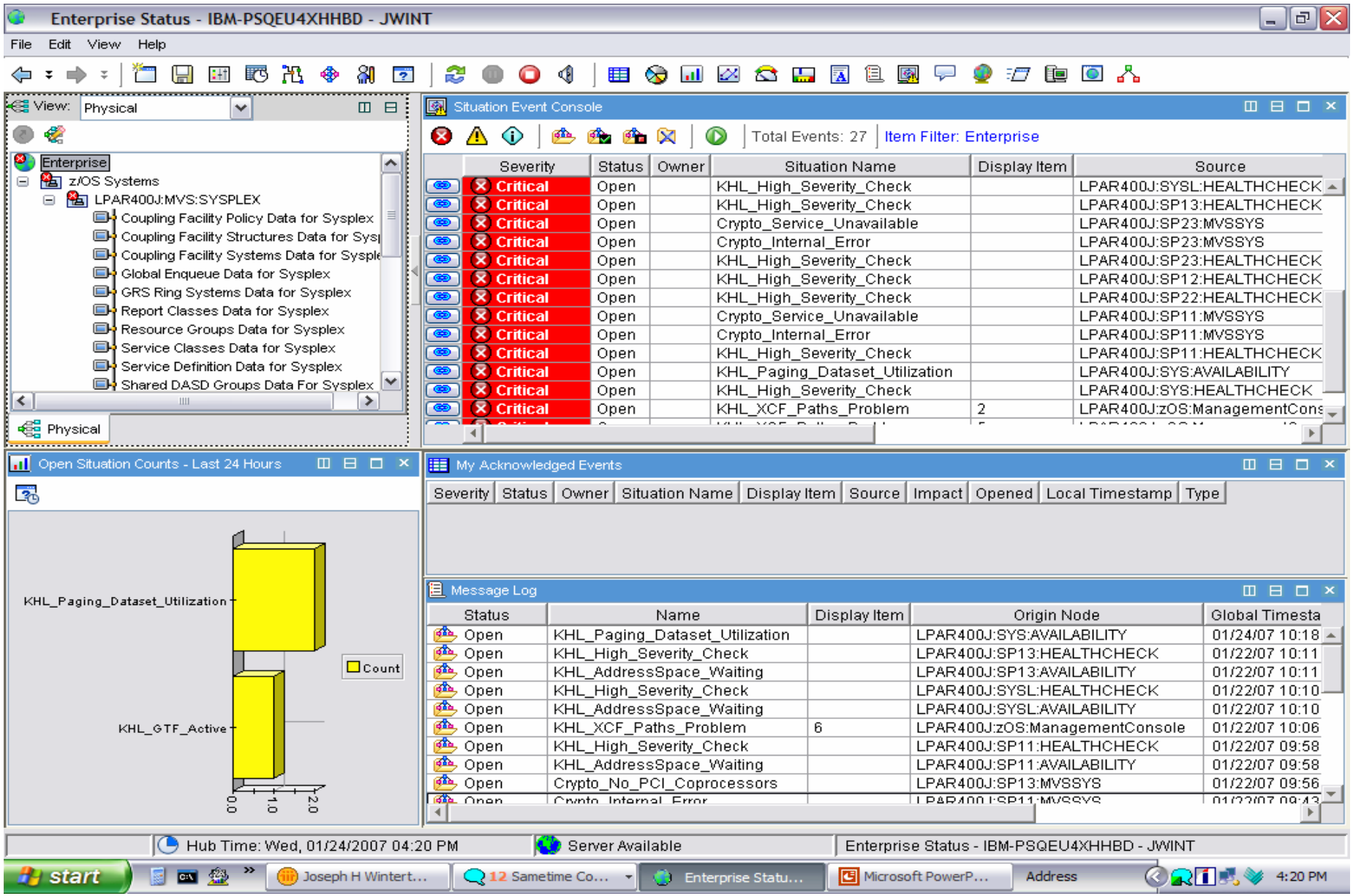

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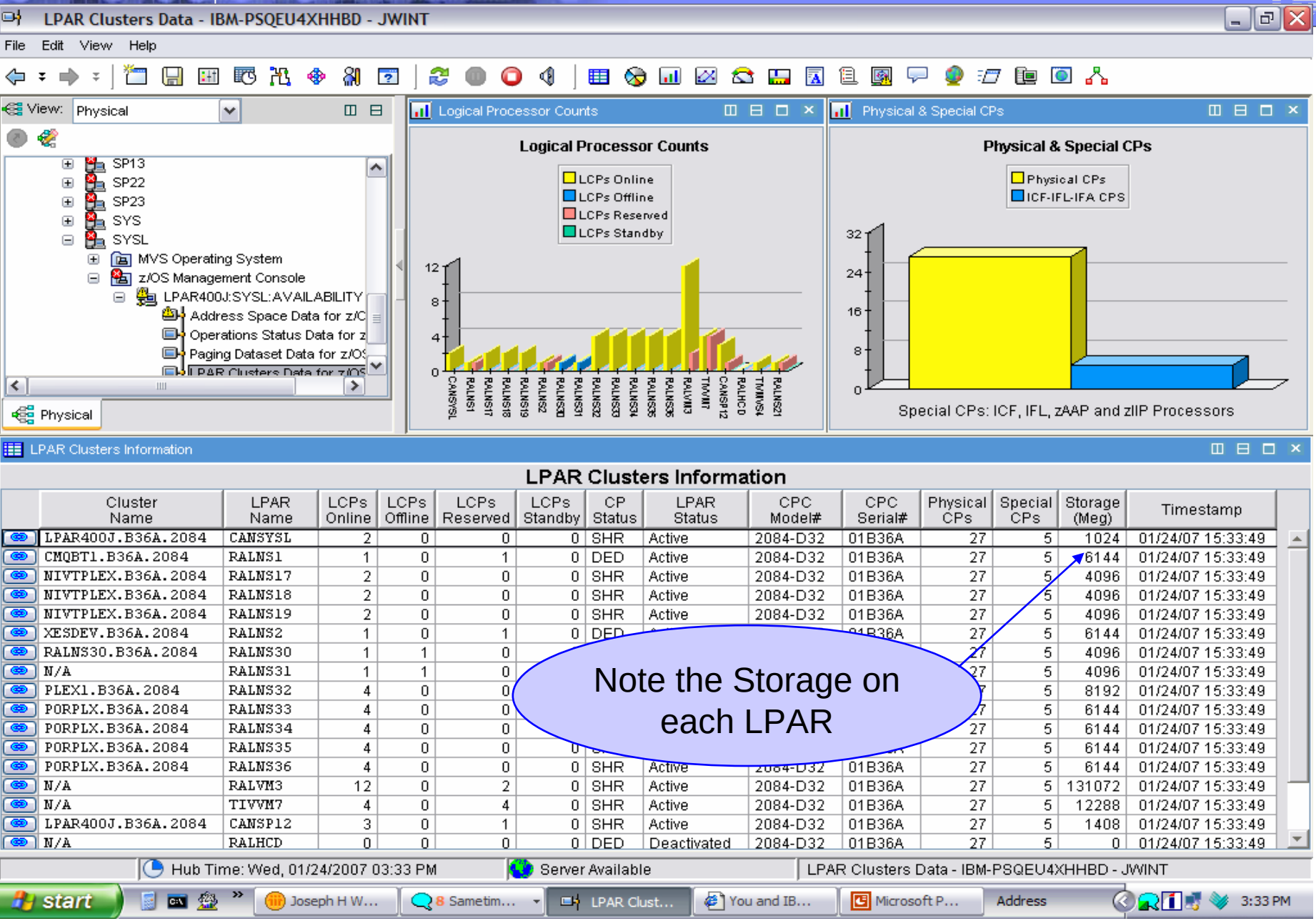

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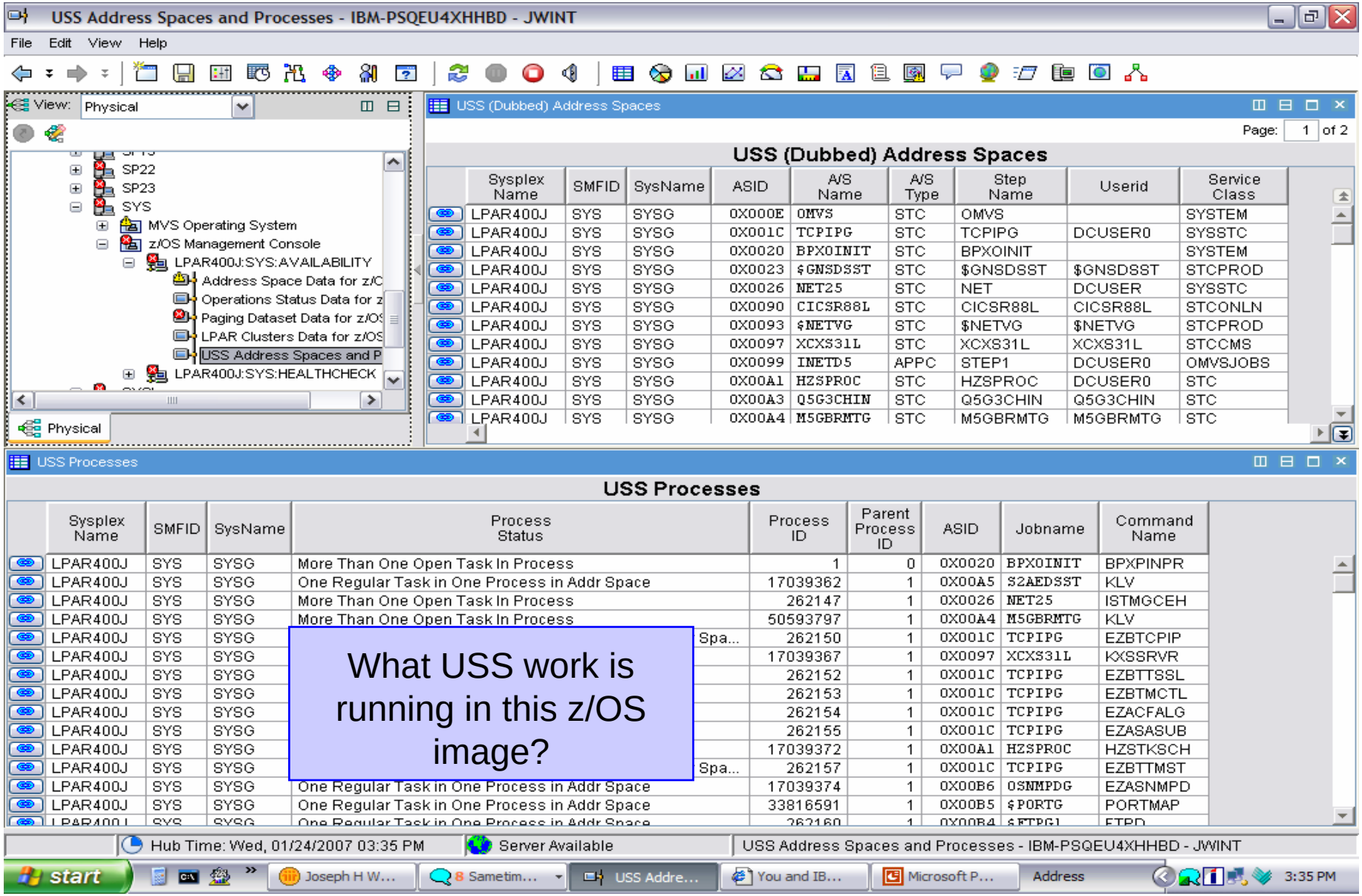

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New Sysplex Availability Information

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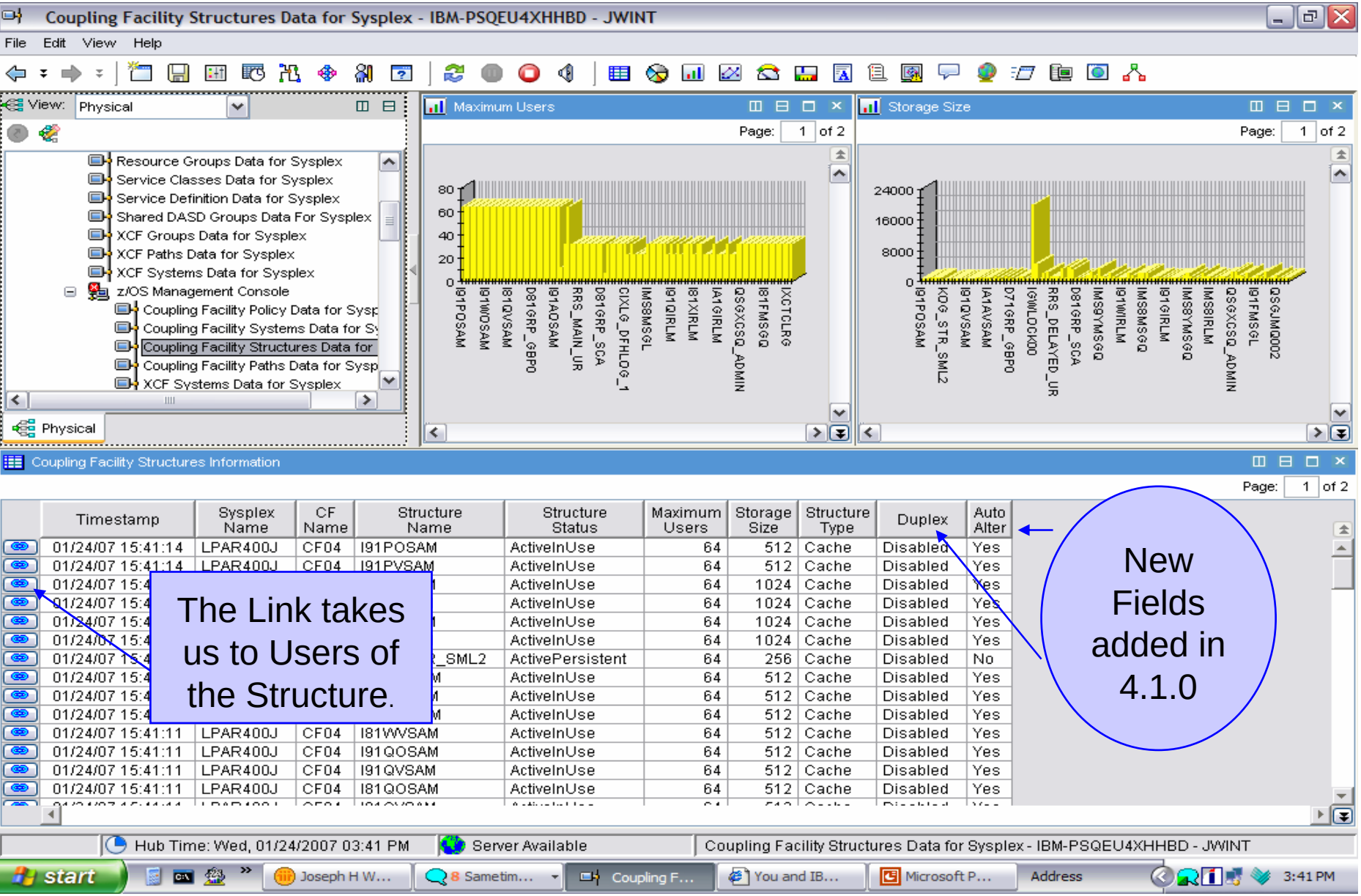

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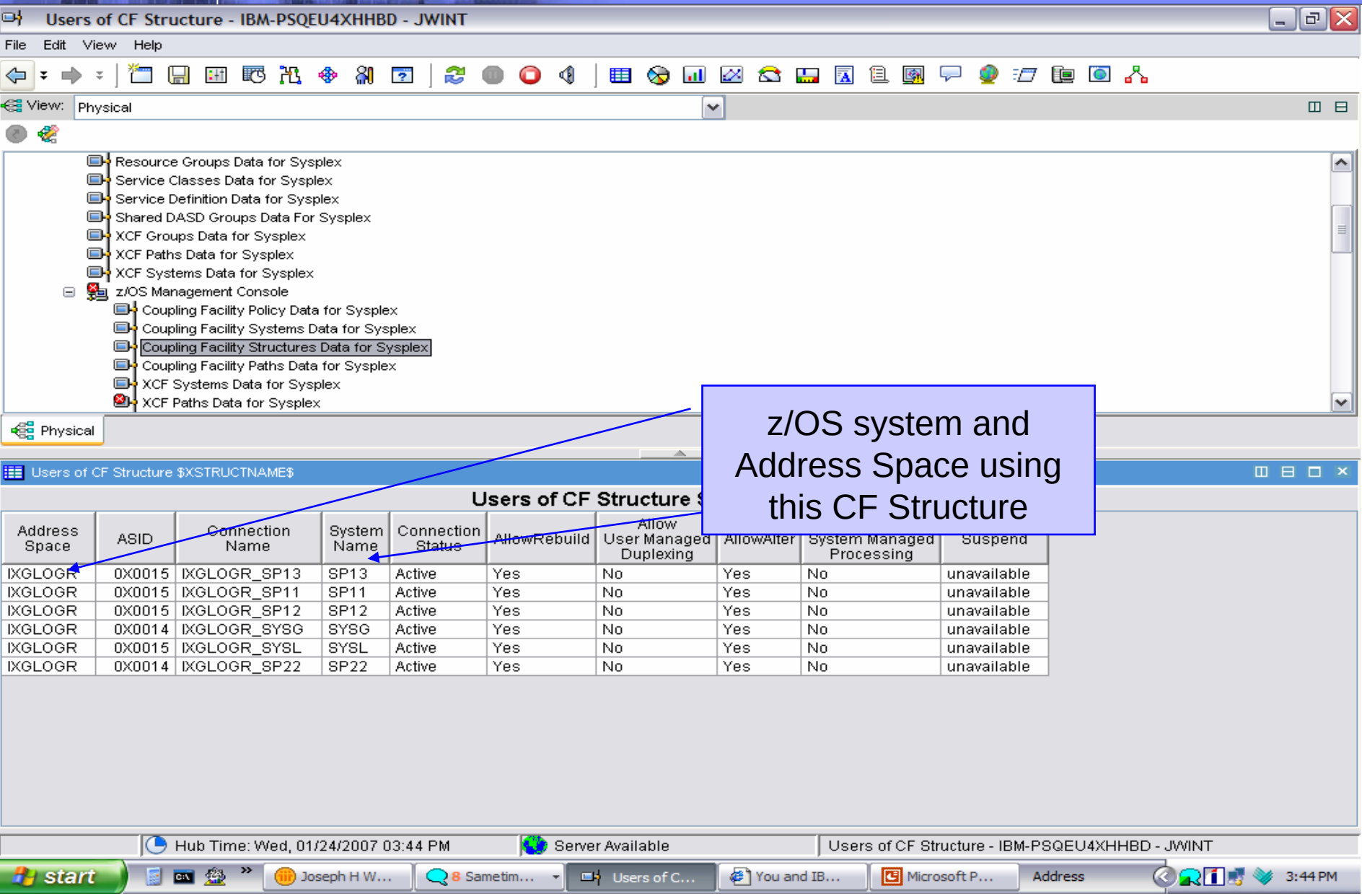

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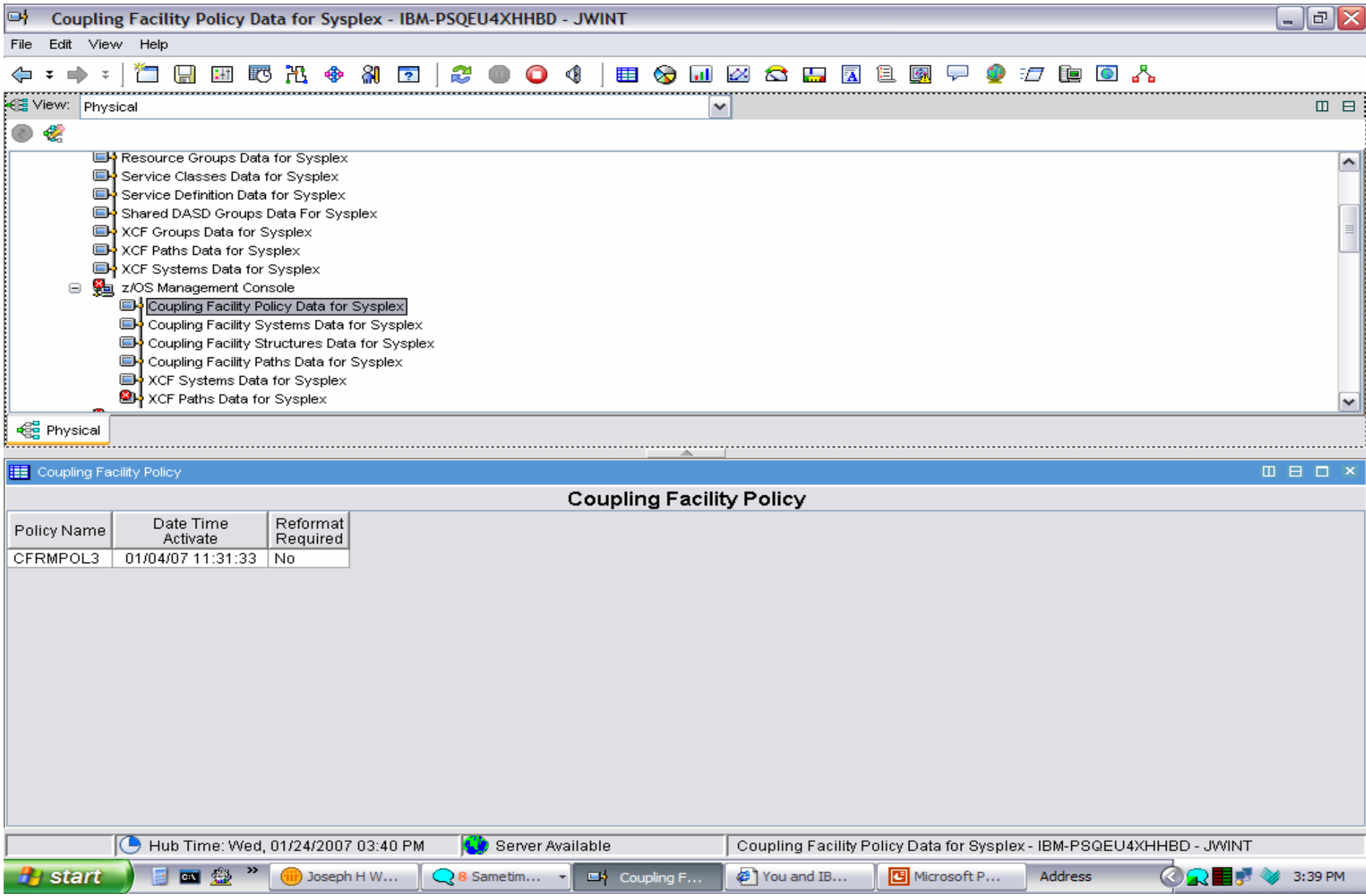

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Who may be a good candidate for zMC?

1)Small z Shop with need of some availability monitoring – use to get them use to new interface

2)Current OMEGAMON XE for z/OS site that wants to add in z/OS Health Checker information and use z/MC for some availability alerting

3) Large z Shop training Distributed skilled people on z/OS

4) Any z Shop looking to run an application on System z9 on Linux on z. Put your TEMS, TEPS over on Linux on z.

5) New interface for Health Checker information for any shop.

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IBM OMEGAMON z/OS Management Console Version 4.1.0

Installation and Publications

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Platform Support and Pre-Reqs

http://www-03.ibm.com/servers/eserver/zseries/zos/downloads/

- z/OS 1.4 and Higher z/OS systems
- Supporting components required by and supplied with the Management Console package:
  - Installation/Configuration Assistance Tool (ICAT) Version 310
  - Tivoli Enterprise Monitoring Server (TEMS) Version 610 with FP4 or higher
  - Tivoli Enterprise Portal (TEP) Version 610 with FP4 or higher
  - Tivoli Enterprise Portal Server (TEPS) Version 610 FP4 or higher
- Other required components:
  - DB2/UDB 8.2
  - At least one PC or server running Windows XP Pro w/SP1 or higher or Windows 2000 w/SP3

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Publications- “Please use the Planning, Installation and Configuration Guide”

- V4.1.0 z/MC Pubs available at :

http://publib.boulder.ibm.com/infocenter/tivihelp/v15r1

- **Planning, Installation, and Configuration Guide (GC32-1954-00)**

  Provides instructions for Planning, Installation and configuring the product on all supported platforms. It includes:
  - a list of prerequisite steps to complete before configuring the product.
  - an overview of the process for configuring the product.
  - instructions for configuring the monitoring agent in a new or existing ITM 6.1 environment.

- **Program Directory V4.1.0: (GI10-3381-00)**

  Provides instructions for Installation of the z/OS side.

- **OMEGAMON z/OS Management Console User’s Guide (GC32-1955-00)**

  This book tells how to use the product to monitor z/OS systems. It also presents several product-specific monitoring scenarios and explains product messages.

  The online help contains most of the information found in this book.

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Follow the Program Directory for z/OS zMC

From the web site:

z/OS Downloads – TEMS and zMC Agent

Read Me – HL410.README.txt

OMEGAMON z/OS Mgt Console V4.1.0 in pax format

Maintenance – PTF's

Program Directory

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Workstation Downloads

- **IBM OMEGAMON z/OS Management Console Data Files for z/OS CD-ROM electronic image in .zip format**
  LCD7-6690-00.zip (65.5MB)

- **IBM OMEGAMON z/OS Management Console Data Files for z/OS CD-ROM electronic image in .tar format**
  LCD7-6690-00.tar (497.4MB)

- **IBM Tivoli Monitoring CD-ROM Vol 1. w/FP4 (Windows) electronic image**
  LCD7-0789-06.zip (397.7MB)

- **IBM Tivoli Monitoring CD-ROM Vol 5. w/FP4 (Linux on zSeries - Red Hat and SuSE) electronic image**
  LCD7-0836-06.tar (564.1MB)

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DB2/UDB Download

- **DB2 UDB Enterprise Server Edition 8.2: Windows CD-ROM electronic image**
  LCD7-0901-00.zip (424.4MB)

- **DB2 UDB Enterprise Server Edition 8.2: Linux for OS/390 (32-bit) CD-ROM electronic image**
  LCD7-0889-00.tar (360.8MB)

- **DB2 UDB Enterprise Server Edition 8.2: Linux for zSeries (64-bit) CD-ROM electronic image**
  LCD7-0890-00.tar (344.8MB)

DB2/UDB is included as part of the zMC product use for your zMC use.

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What you need for TEP/TEPS on Windows:

1)DB2 UDB Enterprise Server Edition 8.2: Windows CD-ROM electronic image
LCD7-0901-00.zip (424.4MB) unzip then use setup.exe

2) IBM Tivoli Monitoring CD-ROM Vol 1. w/FP4 (Windows) electronic image
LCD7-0789-06.zip (397.7MB) unzip and use in windows directory – setup.exe

3) IBM OMEGAMON z/OS Management Console Data Files for z/OS CD-ROM electronic image in .zip format
LCD7-6690-00.zip (65.5MB) unzip and use setupwin32.exe

Please do the Install/Configure in this order using the manual

Remember to Register for Product Support

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Using zMC and OMEGAMON XE together

Problem solving with zMC and XE

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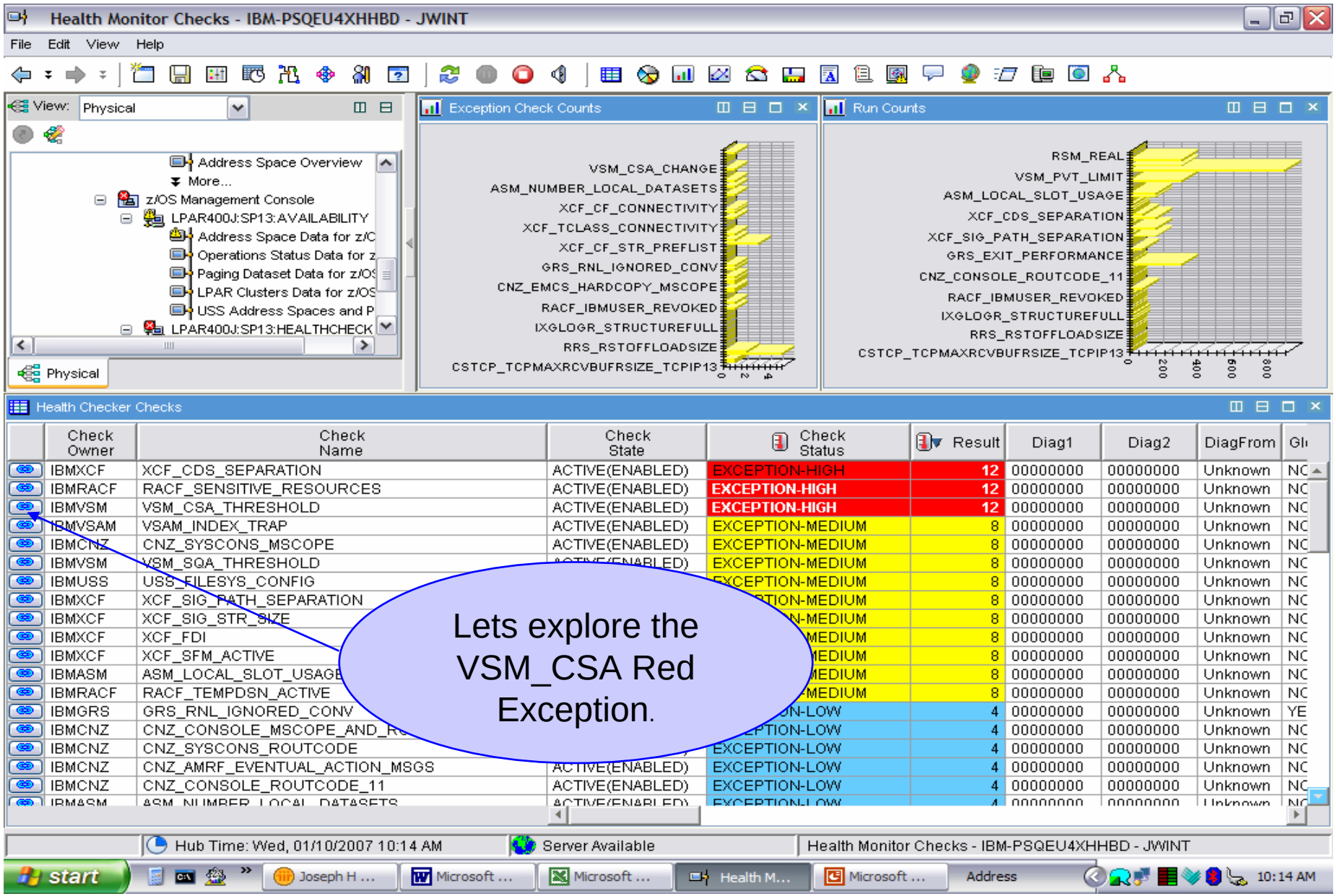

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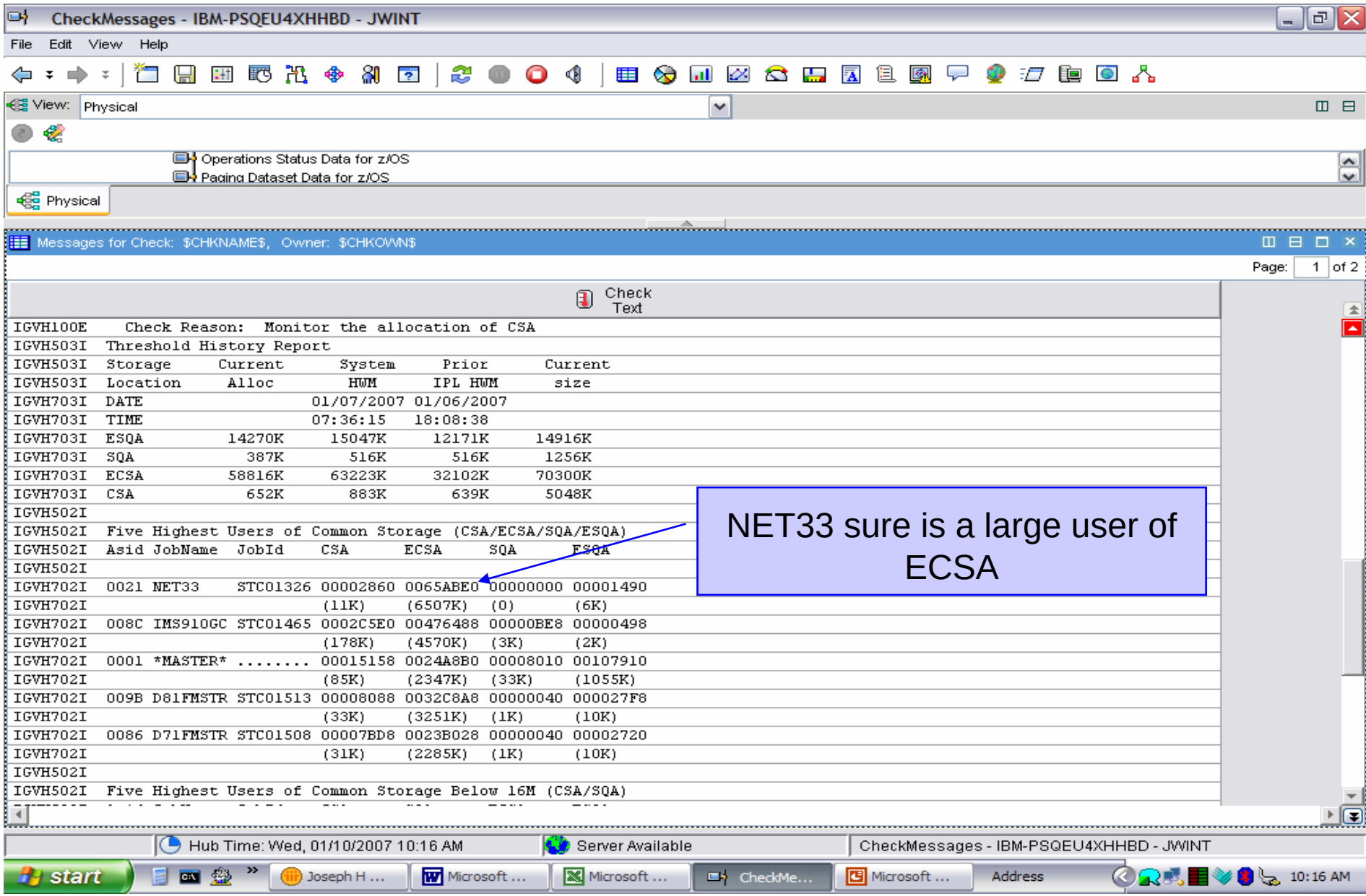

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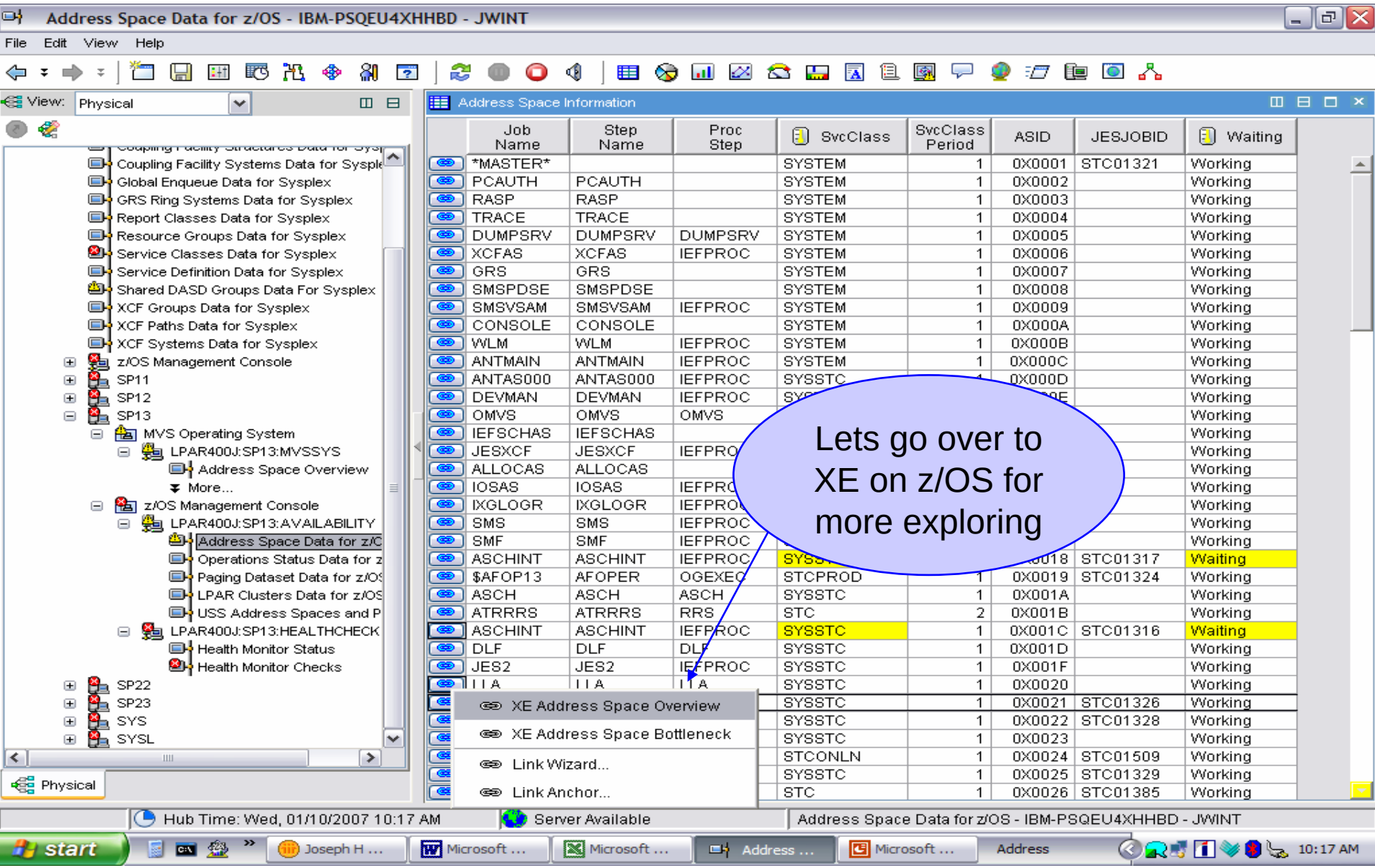

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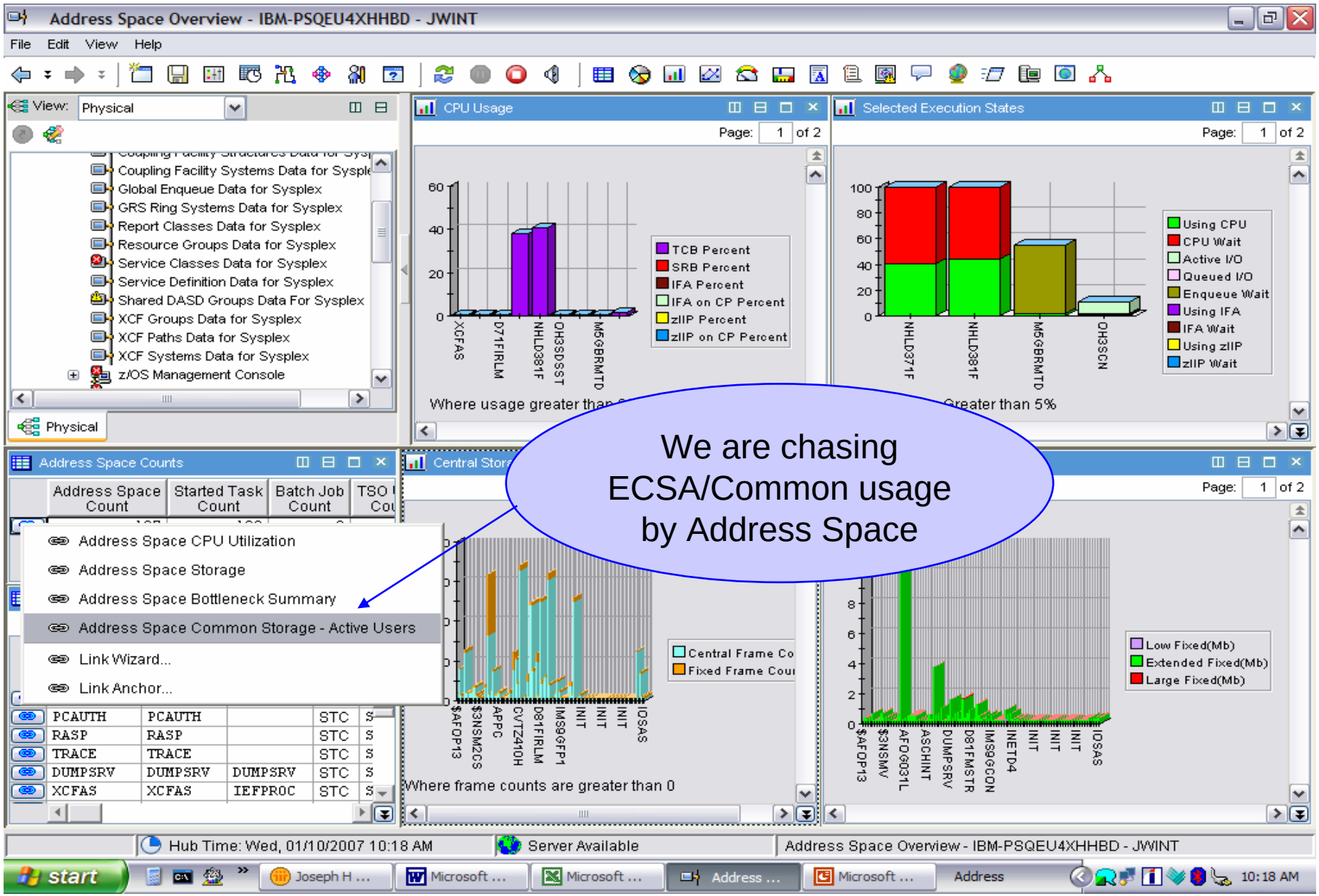

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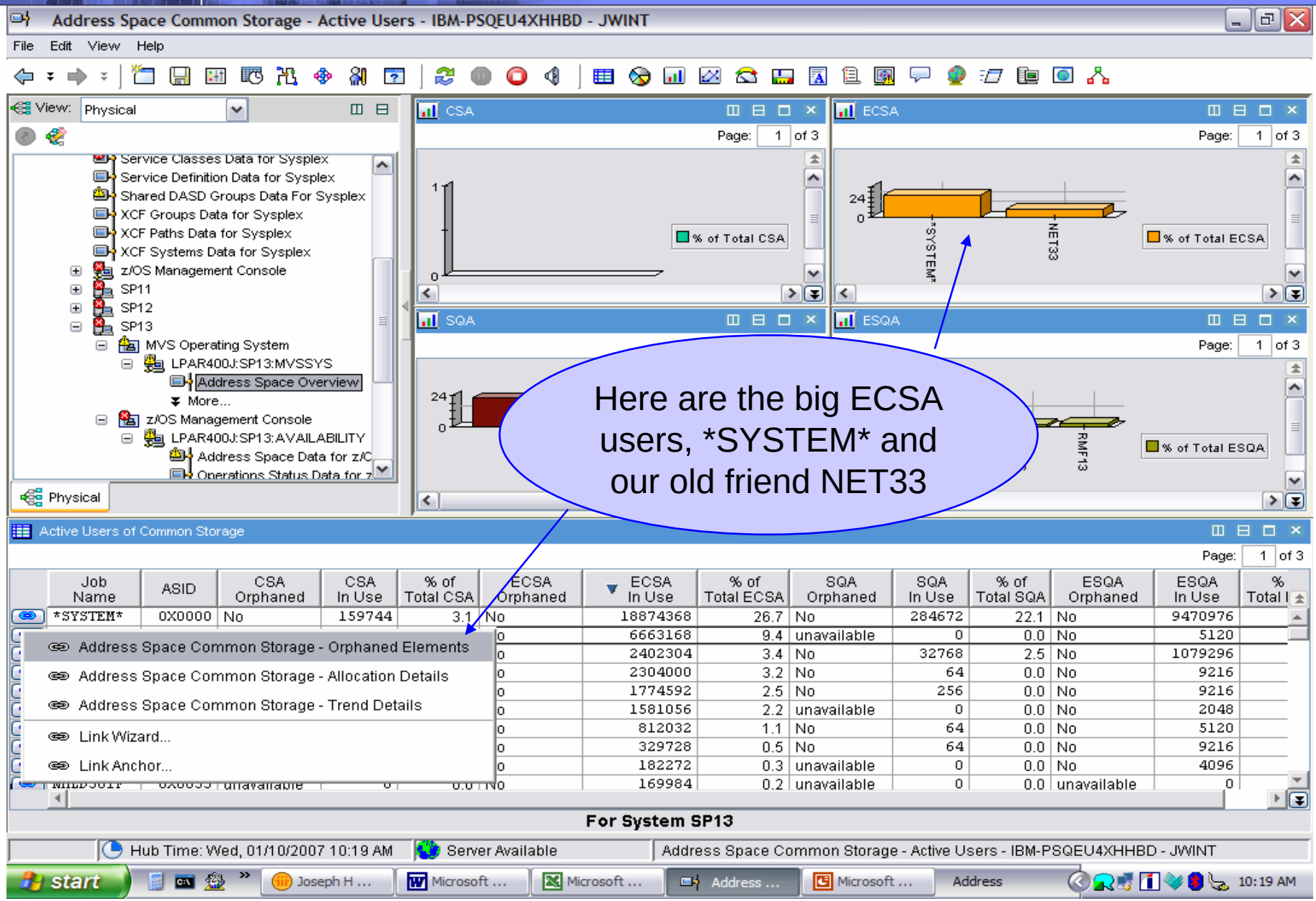

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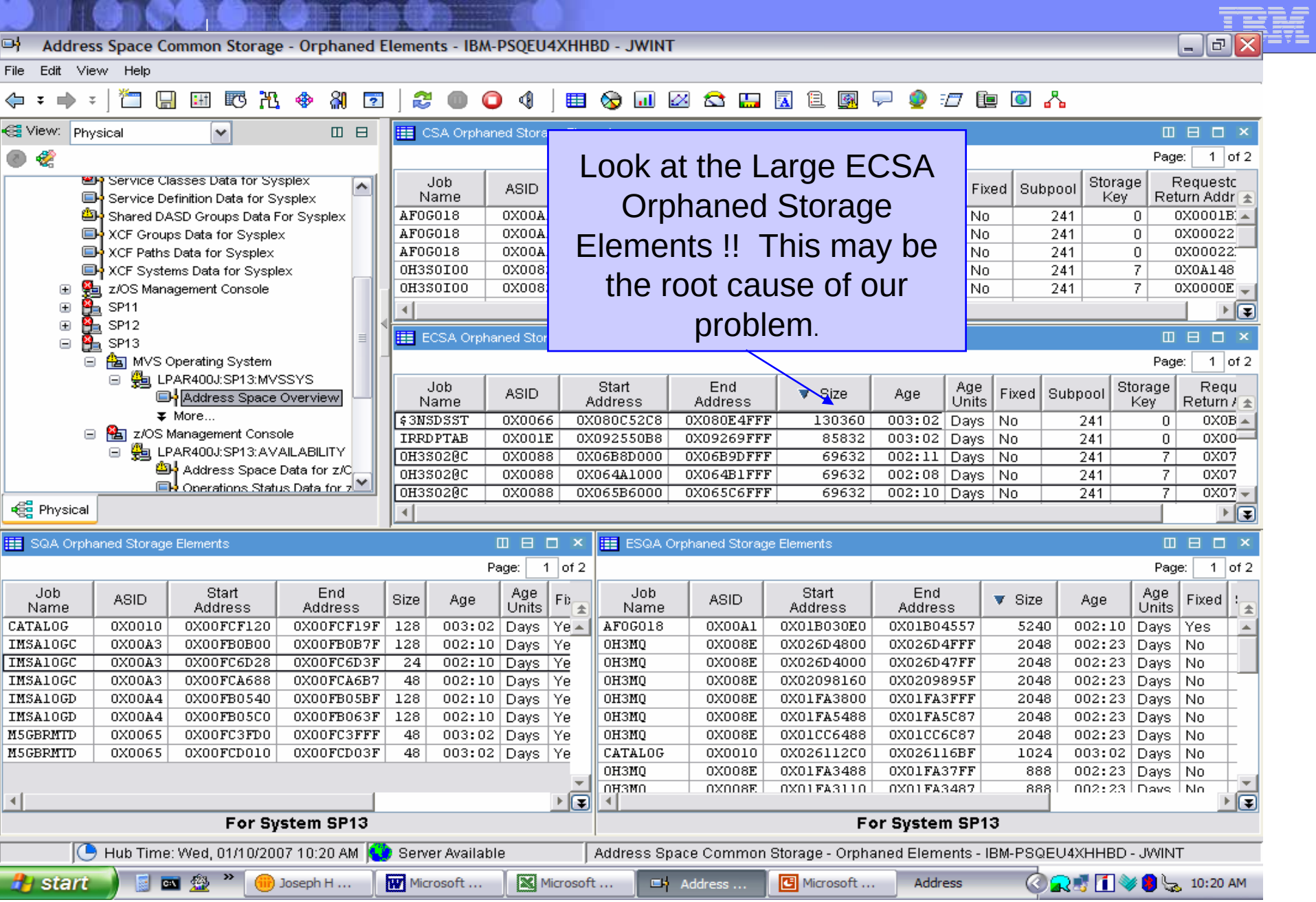

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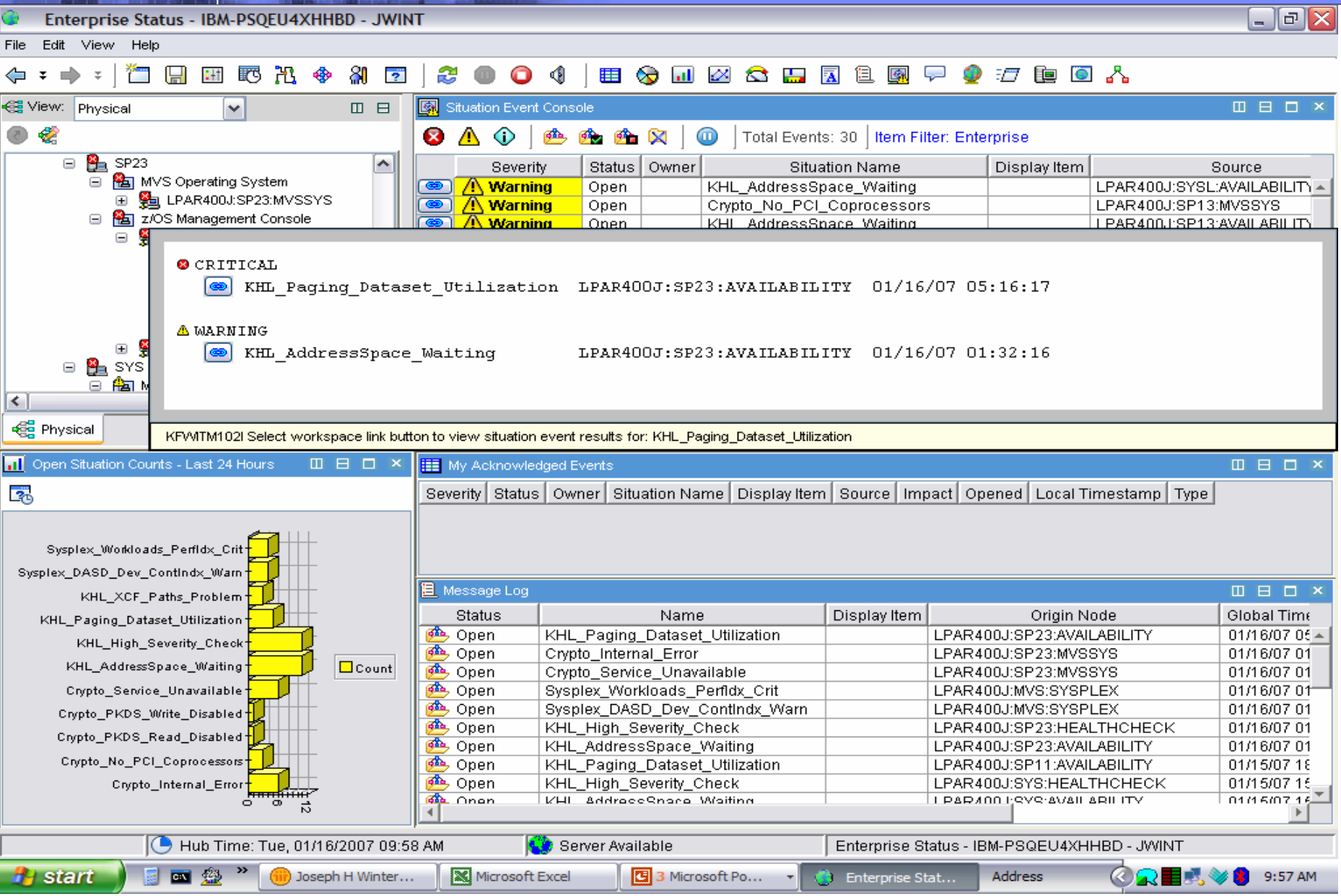

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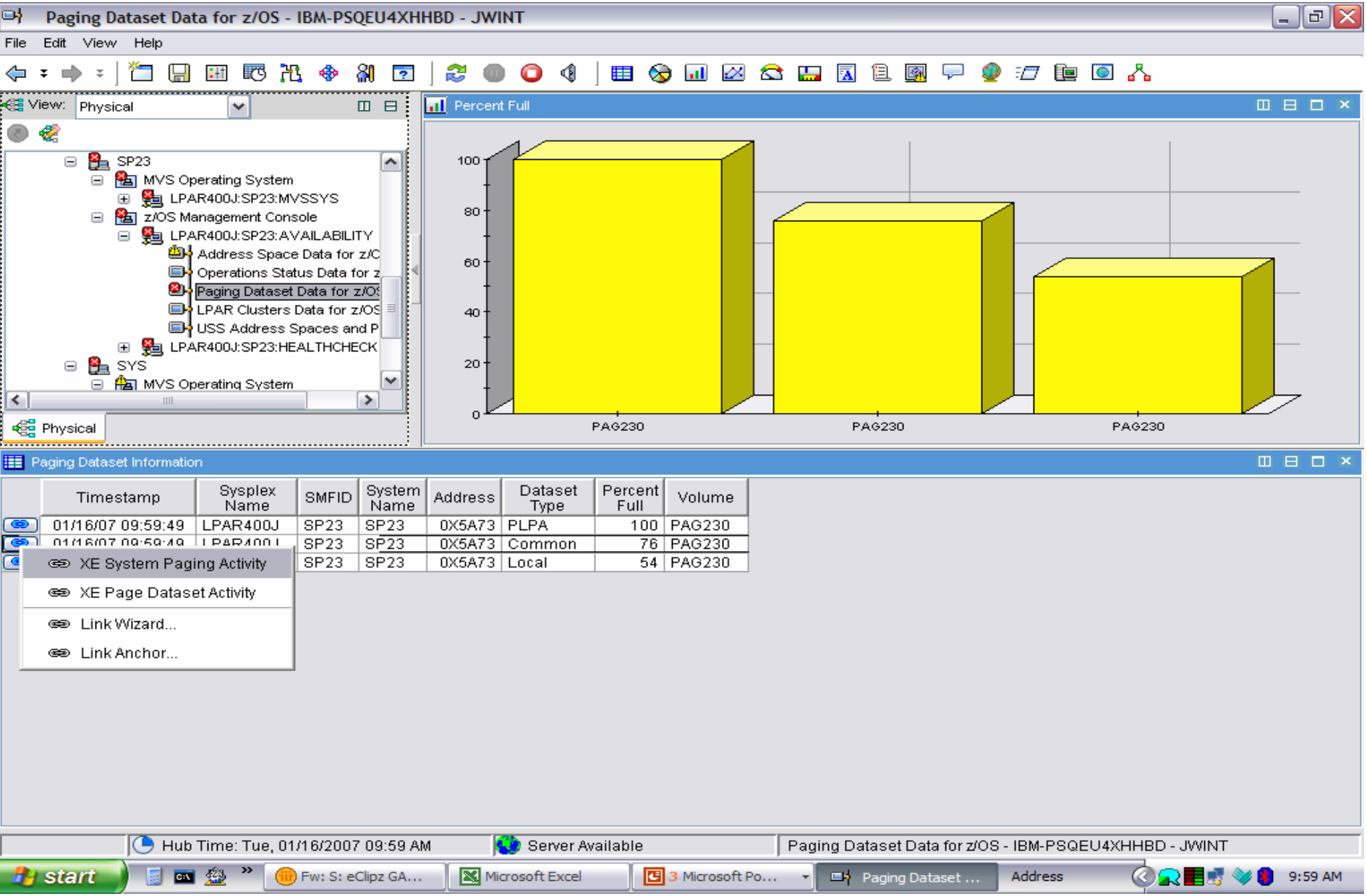

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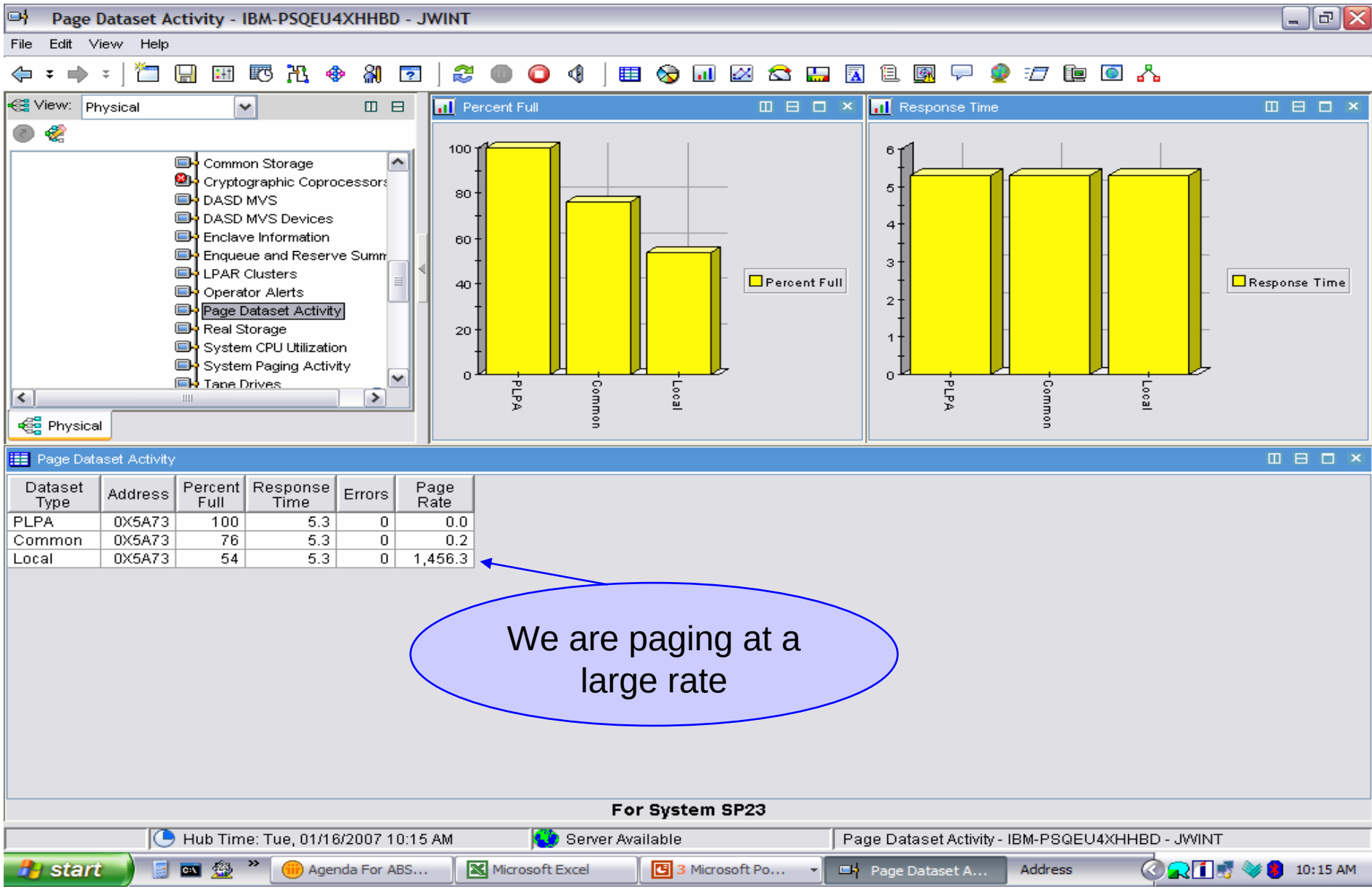

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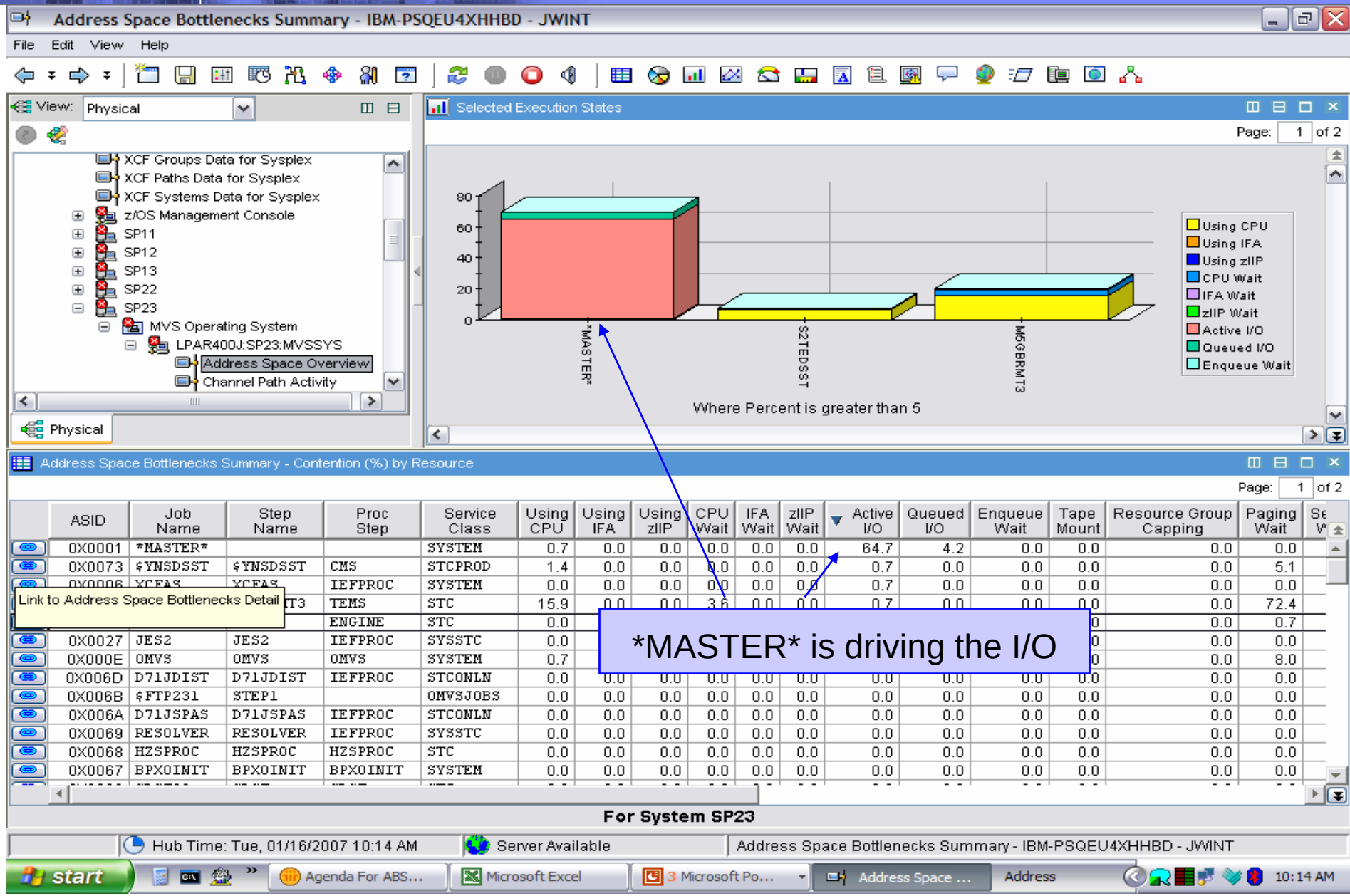

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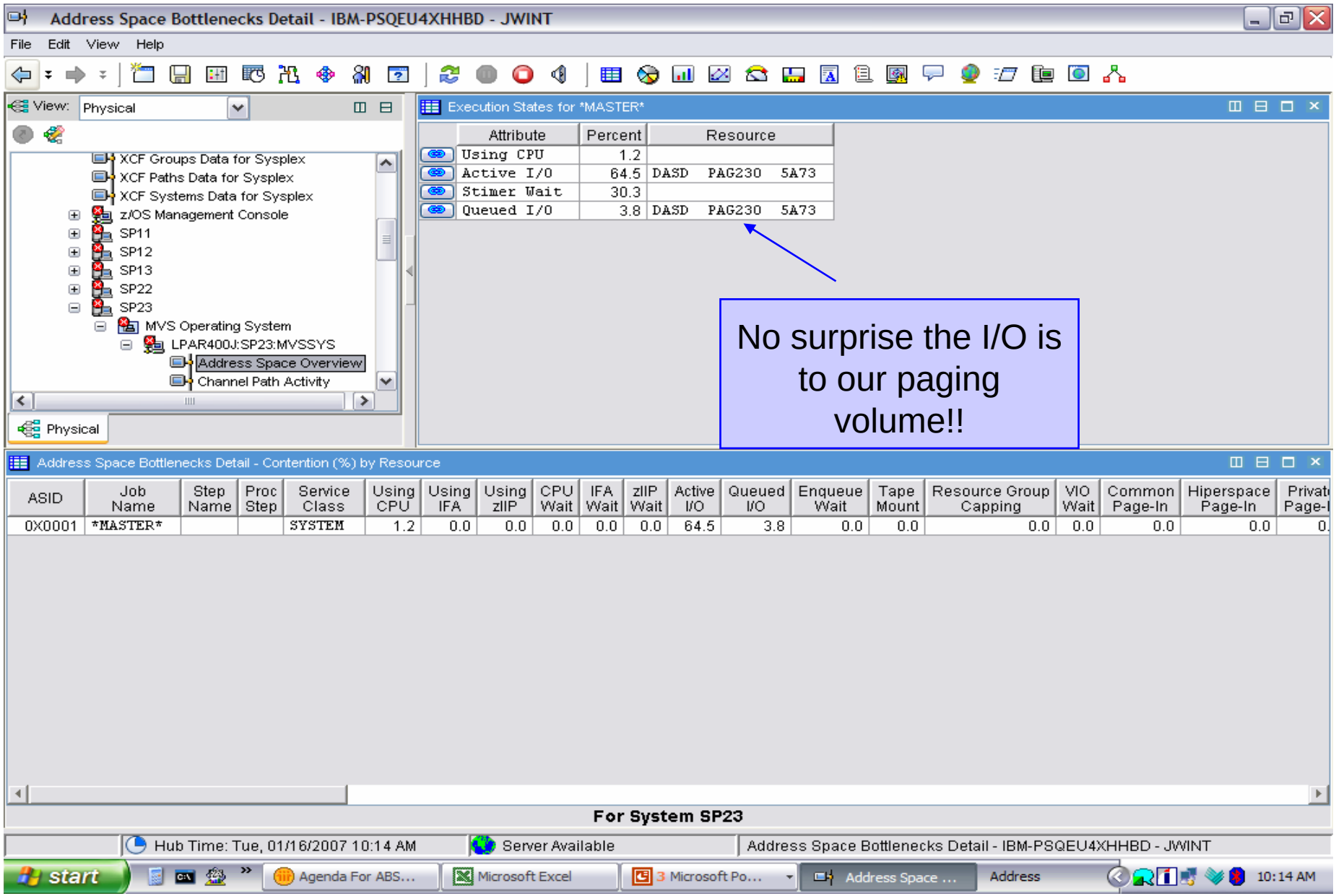

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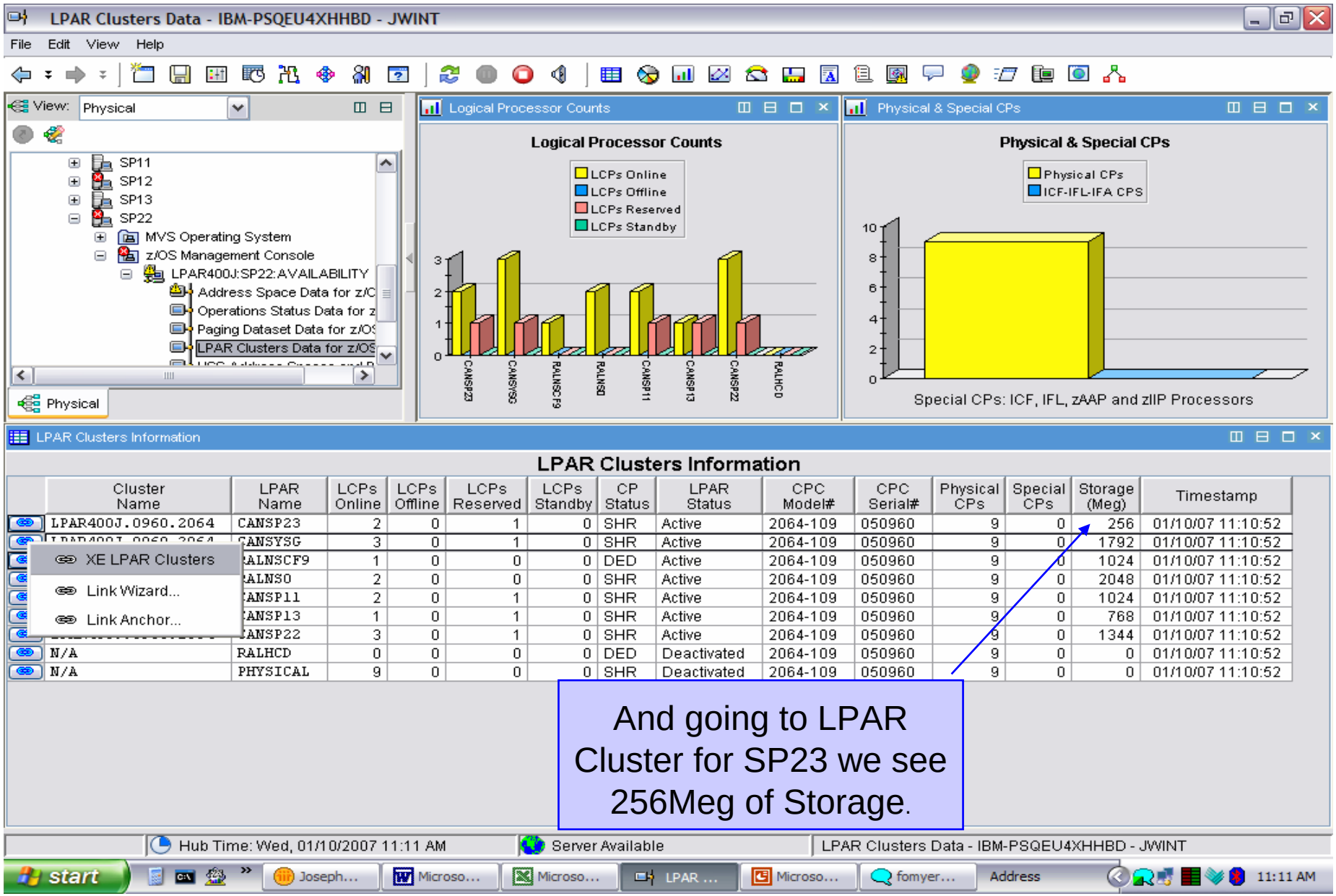

Cluster Name	LPAR Name	LCPs Online	LCPs Offline	LCPs Reserved	LCPs Standby	CP Status	LPAR Status	CPC Model#	CPC Serial#	Physical CPs	Special CPs	Storage (Meg)	Timestamp
LPAR400J.0960.2064	CANSP23	2	0	1	0	SHR	Active	2064-109	050960	9	0	256	01/10/07 11:10:52
[illegible]	CANSYSG	3	0	1	0	SHR	Active	2064-109	050960	9	0	1792	01/10/07 11:10:52
[illegible]	RALNSCF9	1	0	0	0	DED	Active	2064-109	050960	9	0	1024	01/10/07 11:10:52
[illegible]	RALNSO	2	0	0	0	SHR	Active	2064-109	050960	9	0	2048	01/10/07 11:10:52
[illegible]	CANSP11	2	0	1	0	SHR	Active	2064-109	050960	9	0	1024	01/10/07 11:10:52
[illegible]	CANSP13	1	0	1	0	SHR	Active	2064-109	050960	9	0	768	01/10/07 11:10:52
[illegible]	CANSP22	3	0	1	0	SHR	Active	2064-109	050960	9	0	1344	01/10/07 11:10:52
N/A	RALHCD	0	0	0	0	DED	Deactivated	2064-109	050960	9	0	0	01/10/07 11:10:52
N/A	PHYSICAL	9	0	0	0	SHR	Deactivated	2064-109	050960	9	0	0	01/10/07 11:10:52

And going to LPAR Cluster for SP23 we see 256Meg of Storage.

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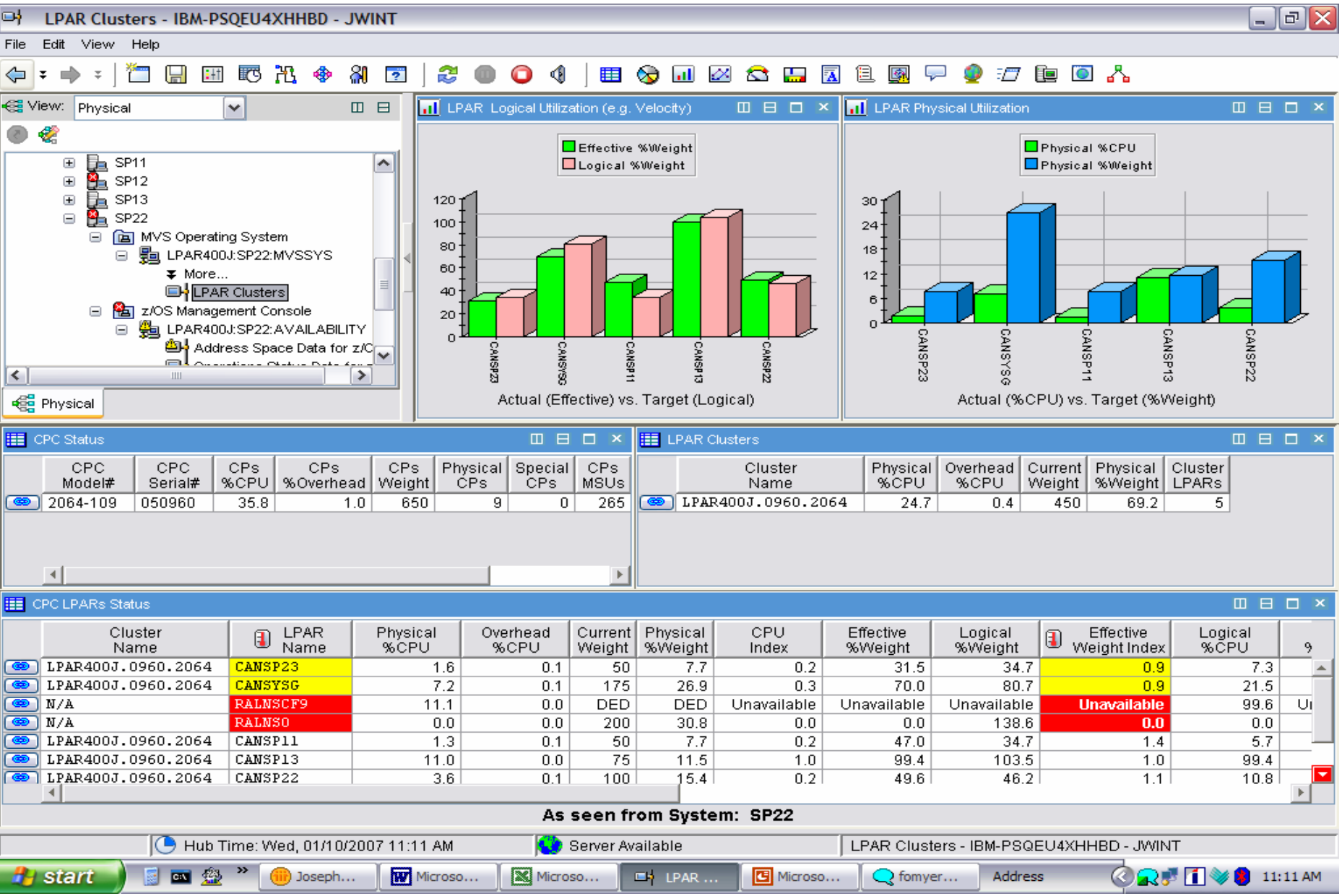

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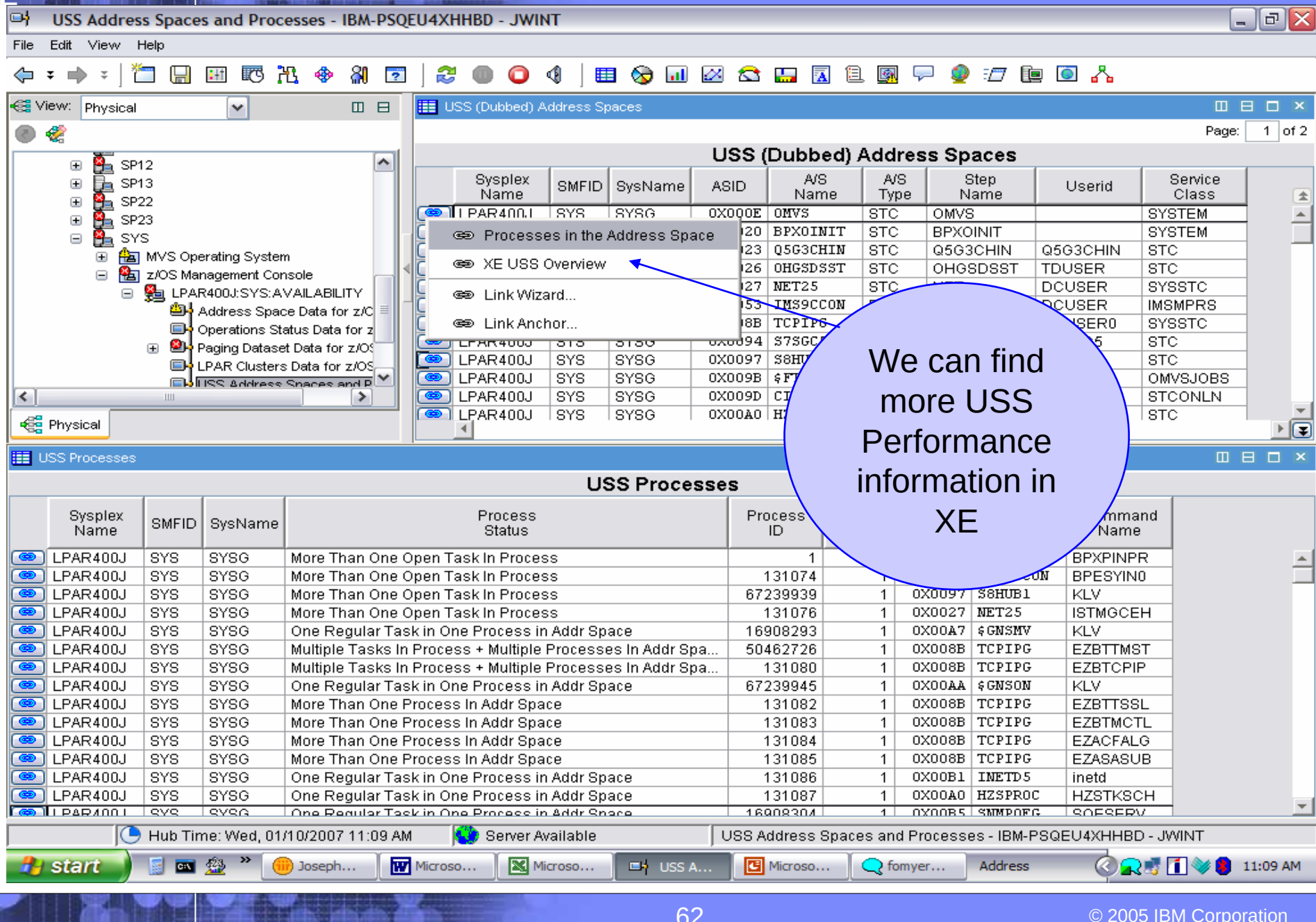

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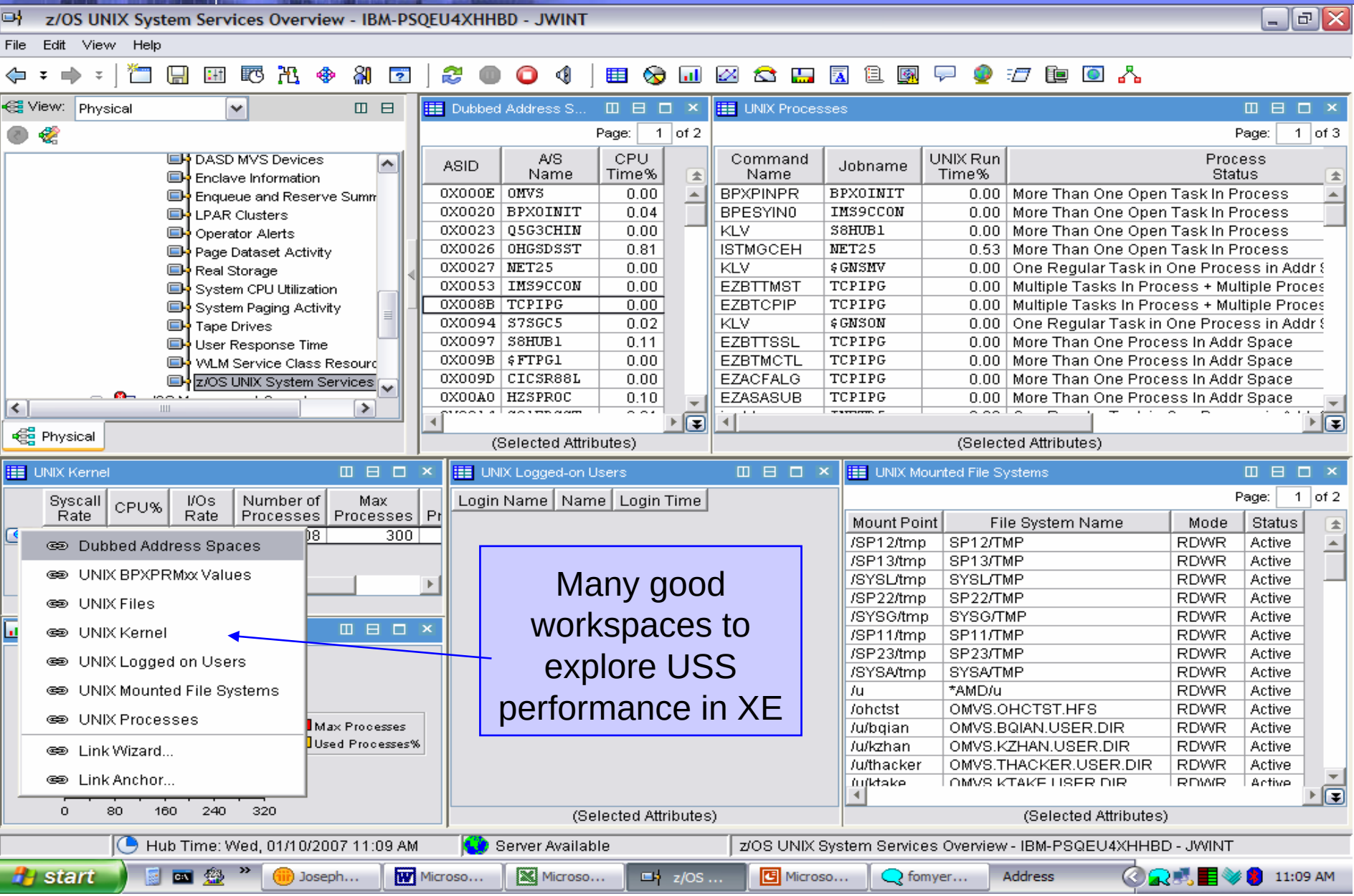

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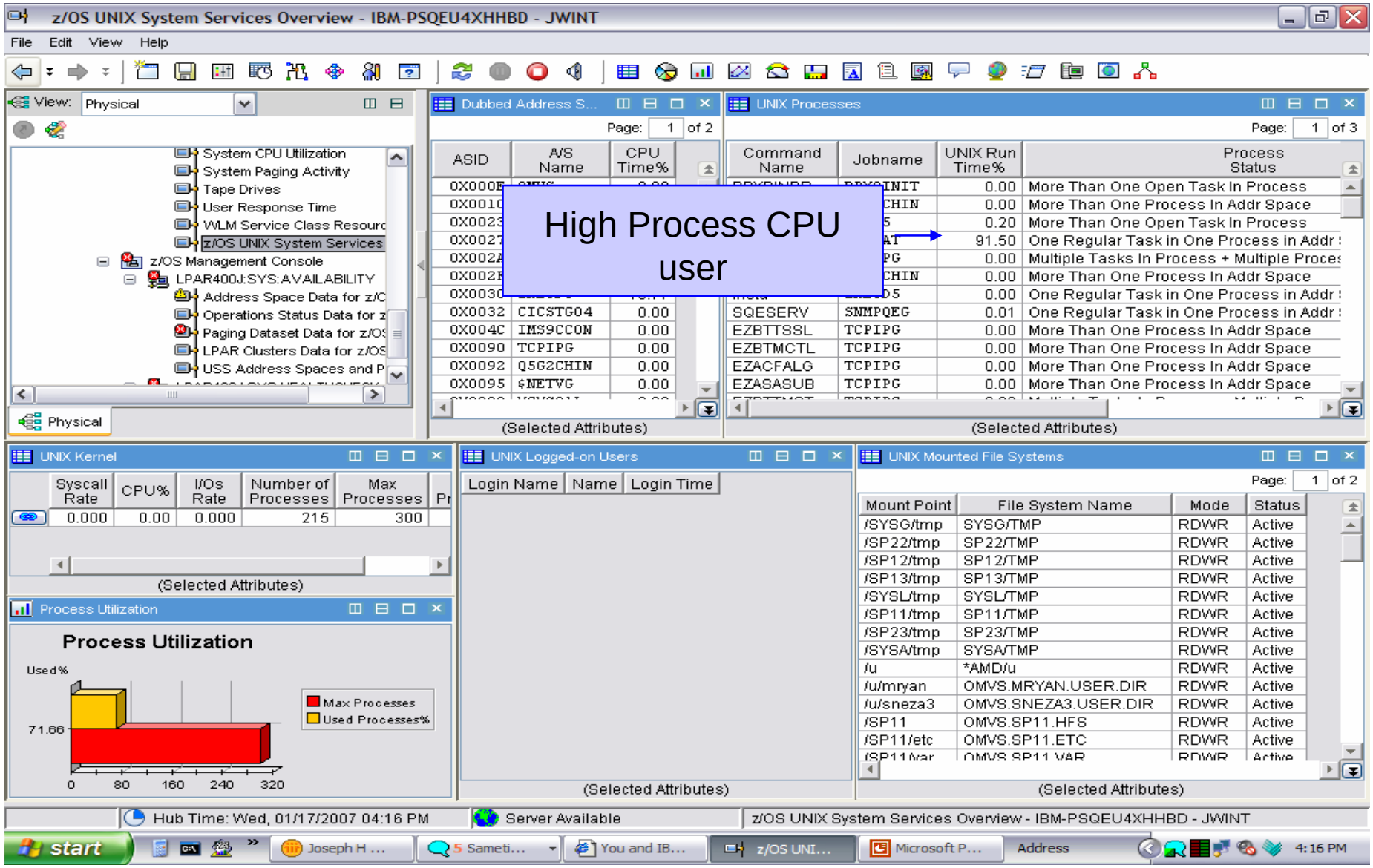

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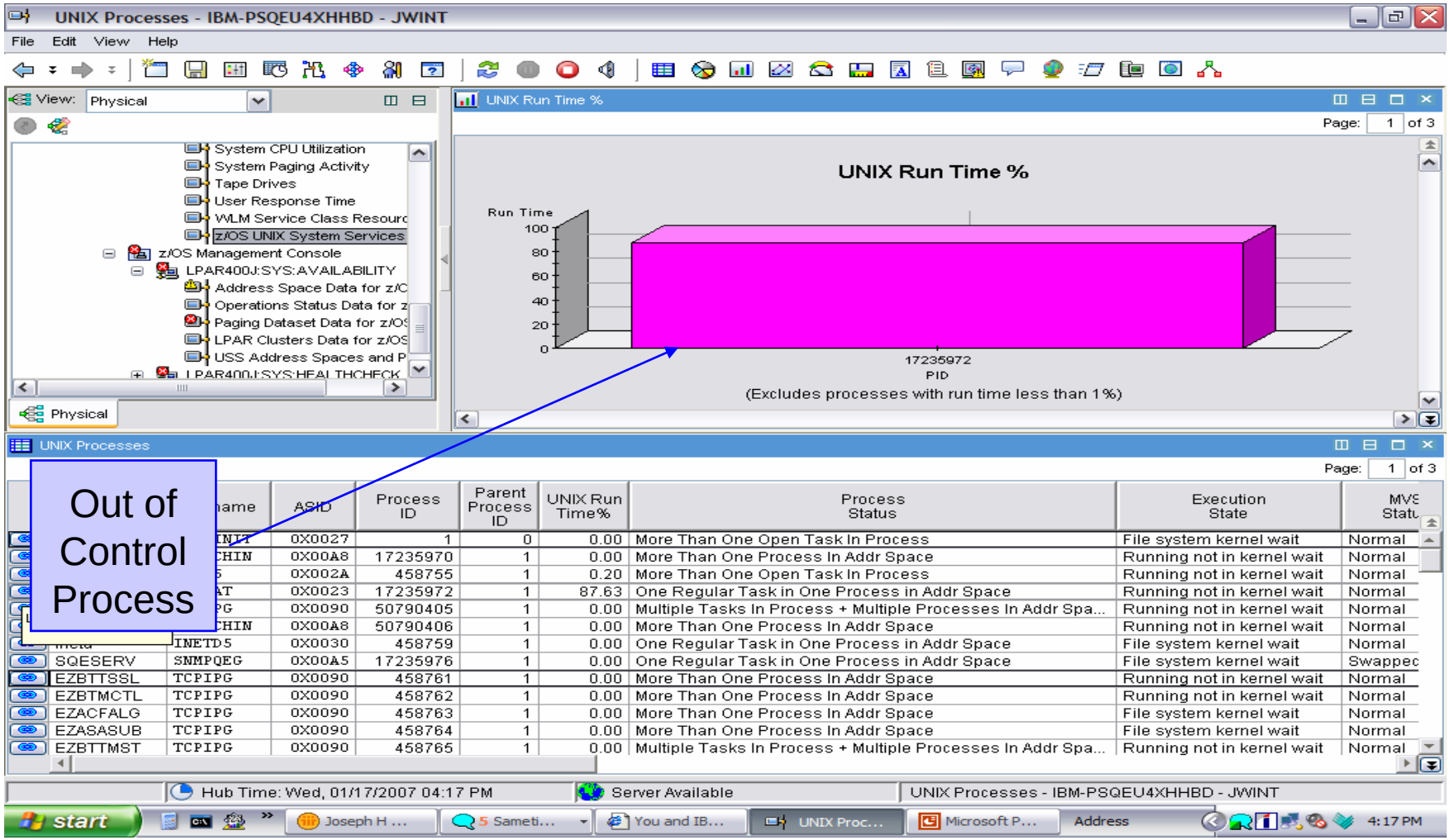

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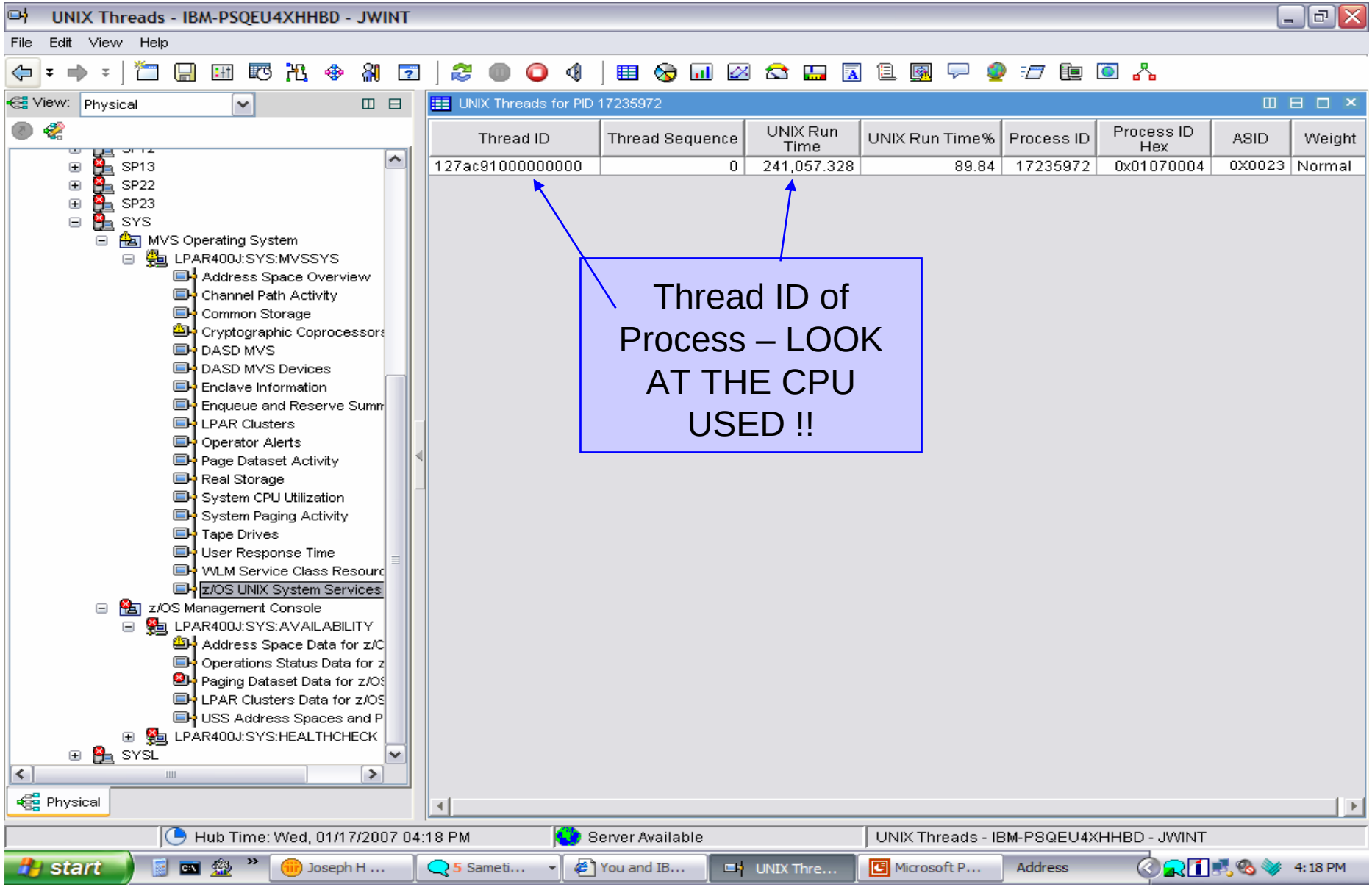

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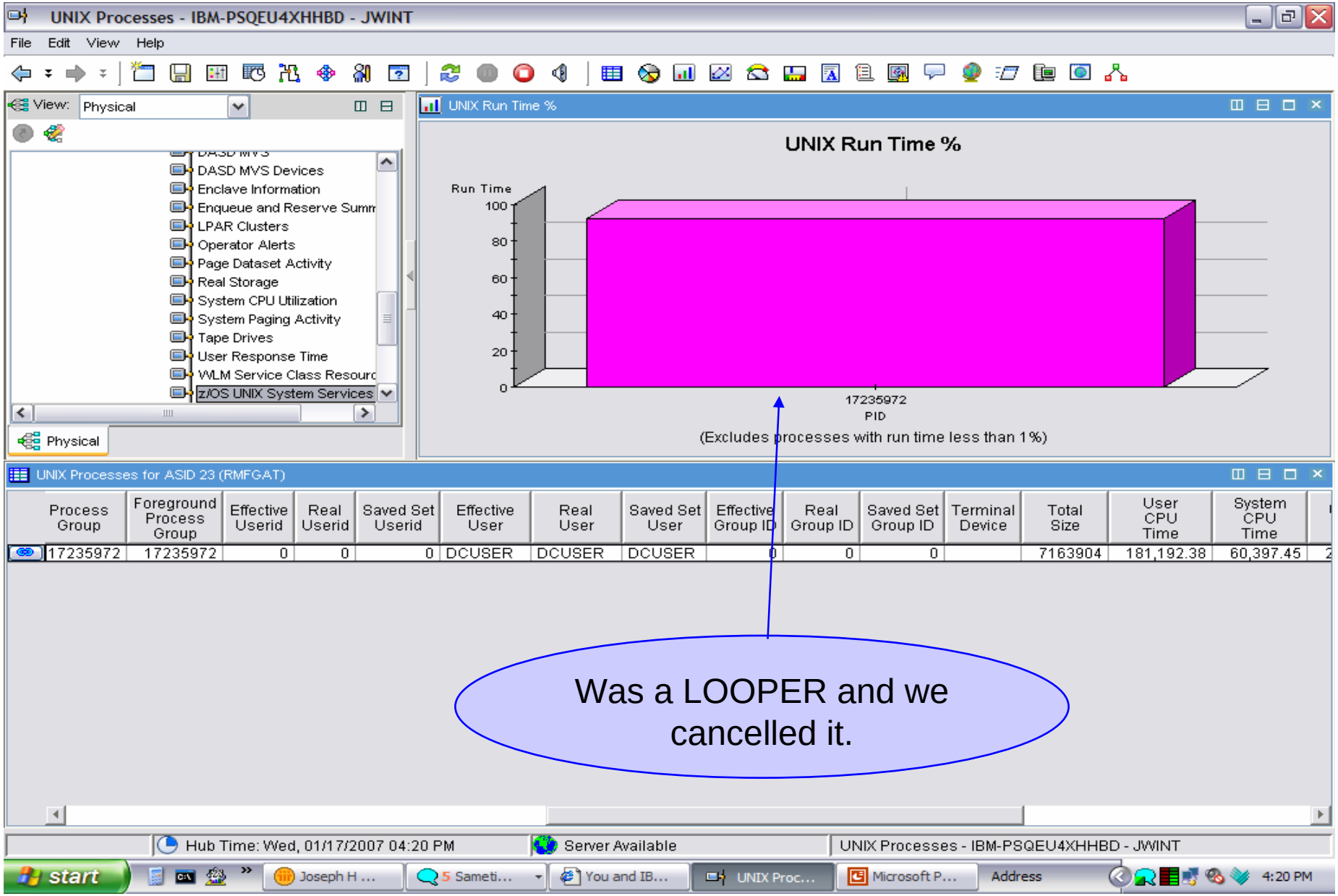

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Summary

- z/OS Systems Management
  - New Face on z/OS
- Tivoli OMEGAMON XE on z/OS 4.1.0
  - What is new in XE on z/OS 4.1.0
  - DWL - OMEGAMON z/OS
  - Problem Solving with XE
- zMC use with Tivoli OMEGAMON XE on z/OS 4.1.0
  - What is zMC?
  - DWL to XE
  - Using zMC and OMEGAMON XE together

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