

IBM Software Group

# Gerenciamento Integrado de zSeries

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**Tivoli** software

**ON DEMAND BUSINESS™**

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# SYSPLEX

## LPAR zOS

•Sistema Operacional

•CICS Regions

•IMS Control Regions

•DB2

•WAS

•MQSeries

•Storage

•TCP/IP



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•CICS Regions

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## LPAR zOS

•Sistema Operacional

•CICS Regions

•IMS Control Regions

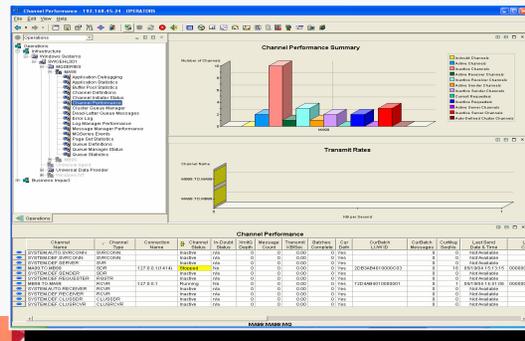
•DB2

•WAS

•MQSeries

•Storage

•TCP/IP



# Por que Gerenciamento Integrado ?

Visão de IT

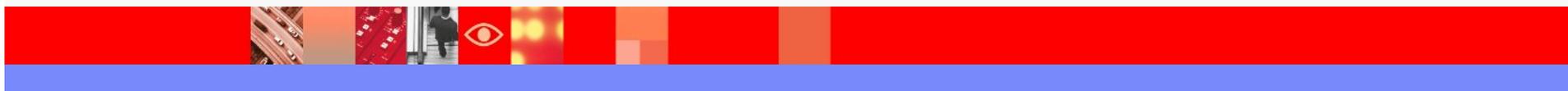
Usuário



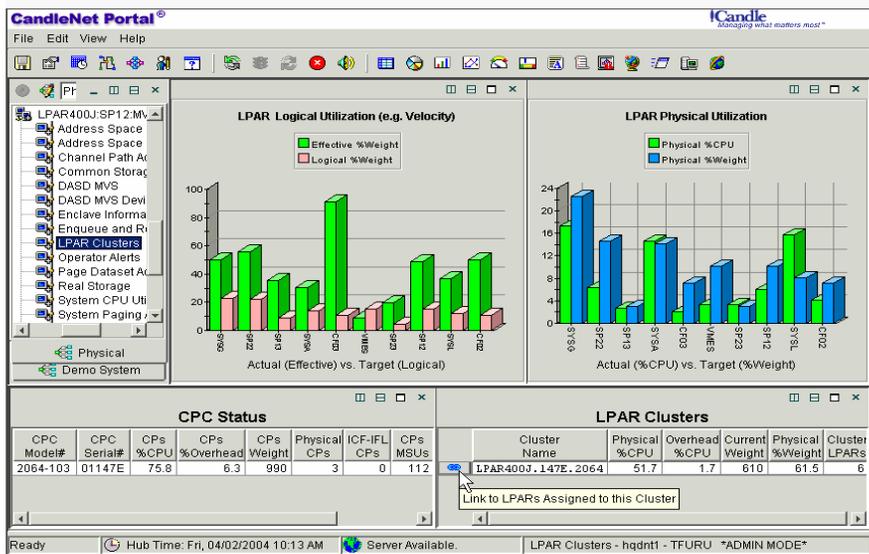
Cliente



74.0%



# Gerenciamento End-to-End



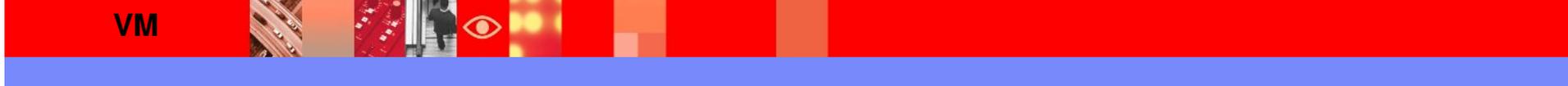
**Business Service Management**  
TDS/390, TBSM, Performance Modeler, InfoMan, Service Level Advisor

**Correlação e Automação**  
TEC, TWS, SA for z/OS, AF/OPERATOR, SA Multiplatform, NetView for z/OS

**Automação e Leitora de Eventos**

## Gerenciamento de Sistemas e Aplicativos

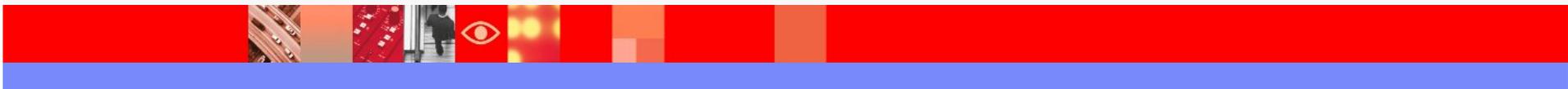
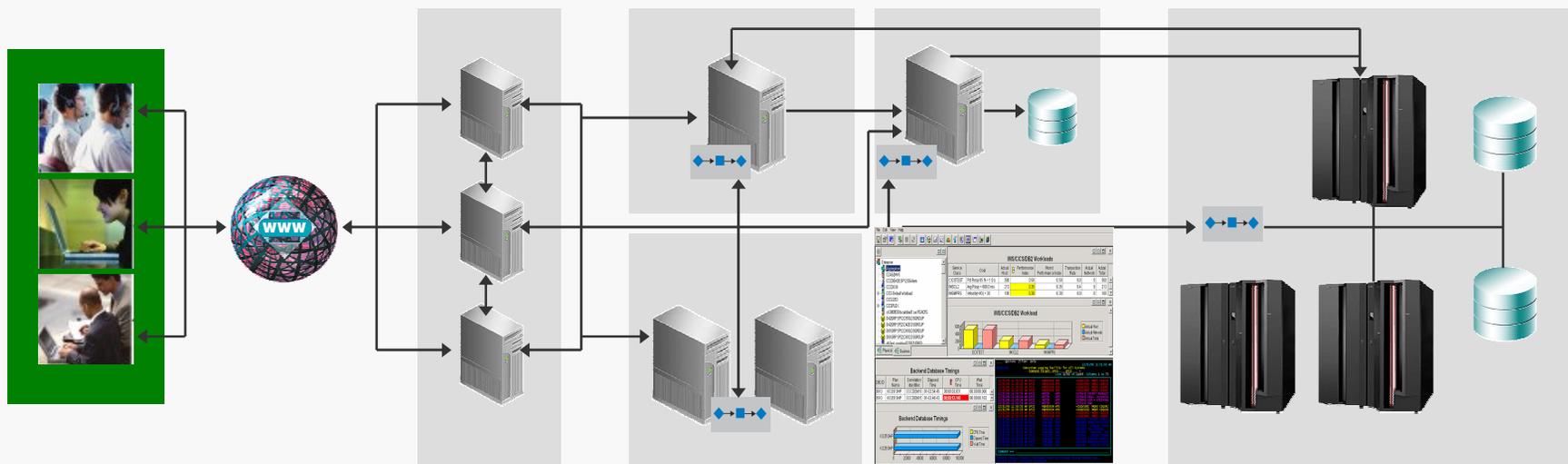
<b>z/Series</b> z/OS CICS DB2 IMS Storage Networks zLinux	<b>Databases</b> DB2 UDB Sybase Oracle SQL Server	<b>Middleware</b> WMQ WICS WBI IIS Apache	<b>OS</b> Windows AIX HP/UX Solaris OS/400 Linux	<b>J2EE</b> .Net	<b>Applications</b> PeopleSoft SAP R/3	<b>Groupware</b> Domino Exchange
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# Gerenciamento de Infra-estrutura IBM Tivoli On Demand

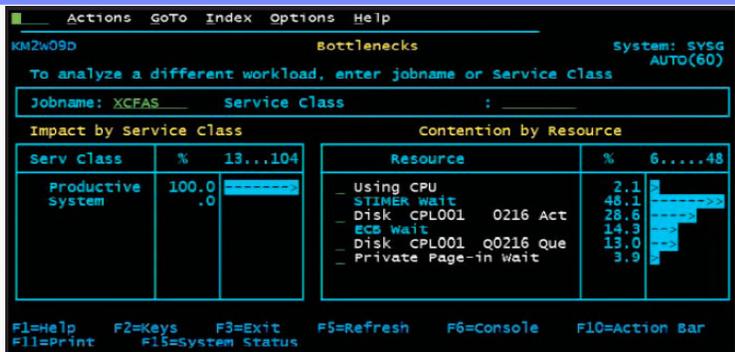
Um processo repetitivo que detecta e automaticamente responde, com serviços de TI, às mudanças necessárias dos negócios, resultando em alta performance das aplicações.

1. Detecta
2. Isola
3. Diagnostica
4. Toma Ações
5. Avalia

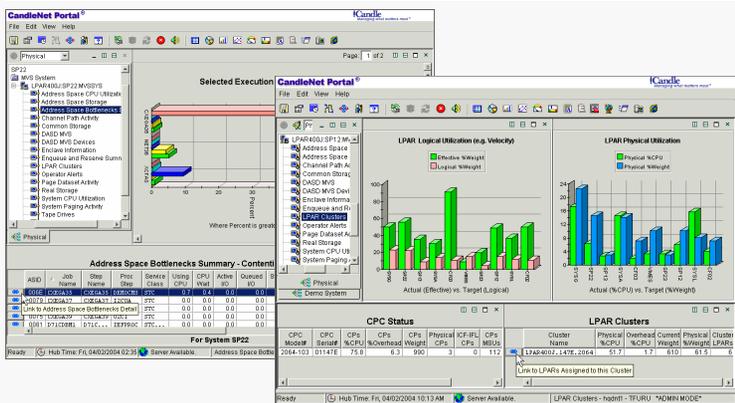


# Tivoli OMEGAMON®

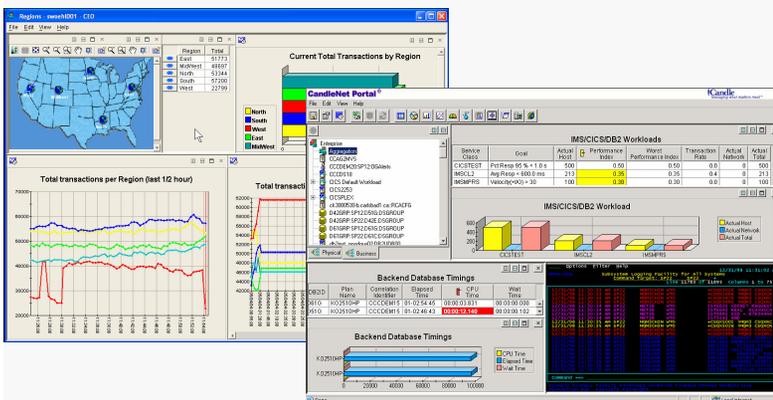
**OMEGAMON II** – Console 3270 para acesso direto a sistemas de mainframe. Navegação inteligente. Alertas com thresholds.



**OMEGAMON XE** – Interface Web browser de monitoração de múltiplos componentes e sistemas, com alertas lógicos e automação incluídos. Facilidades extras de notificação e expert advice. Dados real time, recent past e históricos

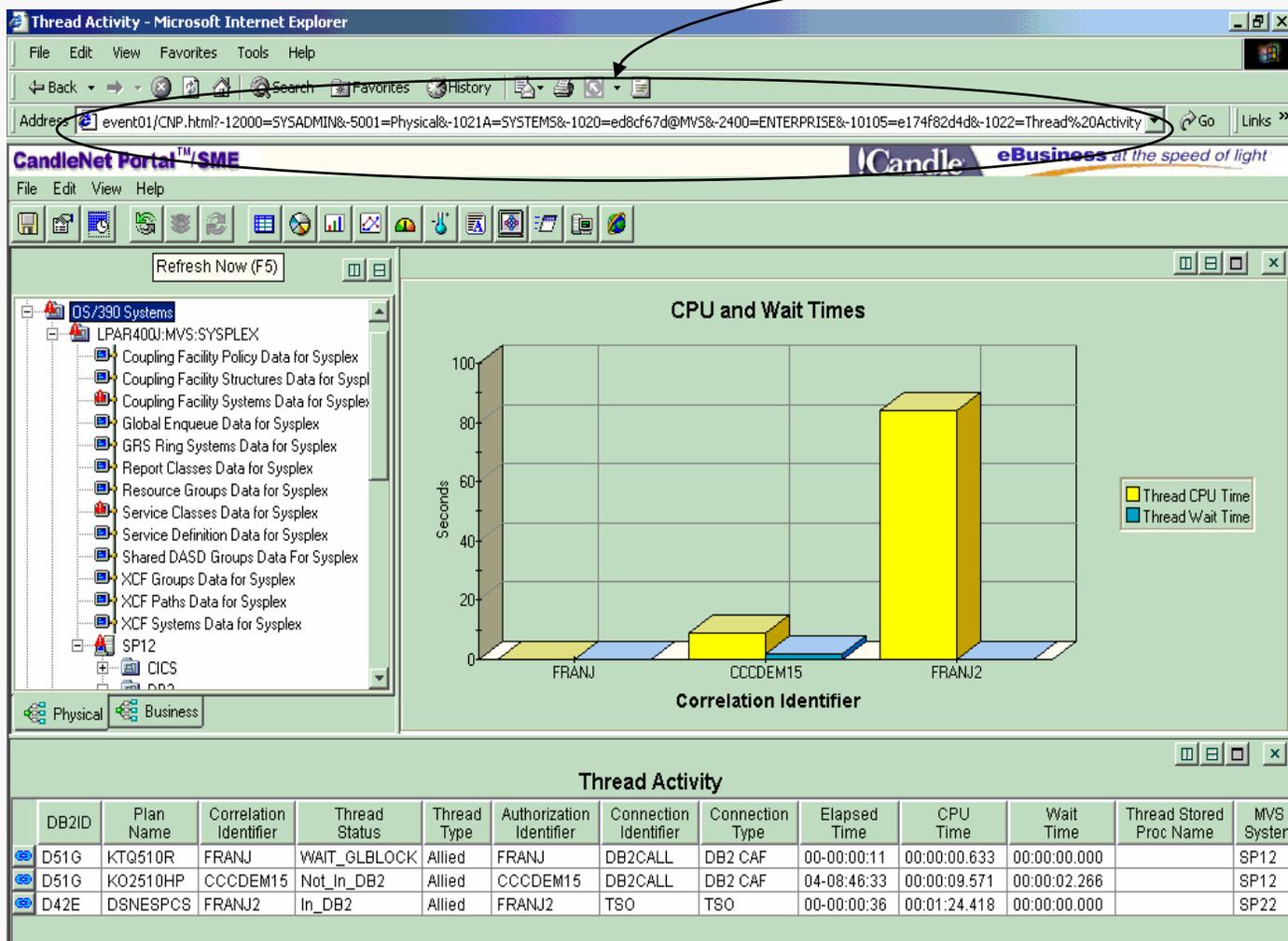


**OMEGAMON DE** – Integra múltiplos monitores OMEGAMON XE (inclusive legados), mostrando performance de aplicativos e uso de recursos em sistema heterogêneos



# Como é feita a visualização dos dados

Acesso WEB ou Cliente

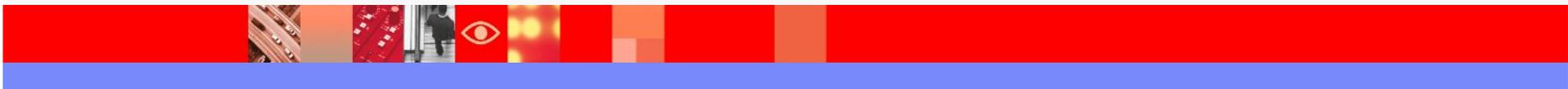


# Navegação Simplificada

Múltiplos Workspaces de Fácil Acesso

The screenshot displays the CandleNet Portal interface. On the left, a tree view under 'OS/390 Systems' lists various data sources for a Sysplex. A 3D bar chart titled 'CPU and Wait Times' compares 'Thread CPU Time' (yellow bars) and 'Thread Wait Time' (blue bars) across three correlation identifiers: FRANJ, CCCDEM15, and FRANJ2. The 'Thread CPU Time' for FRANJ2 is significantly higher than for the other two. Below the chart is a 'Thread Activity' table with the following data:

DB2ID	Plan Name	Correlation Identifier	Thread Status	Thread Type	Authorization Identifier	Connection Identifier	Connection Type	Elapsed Time	CPU Time	Wait Time	Thread Stored Proc Name	MVS System
D51G	KTQ510R	FRANJ	WAIT_GLBLOCK	Allied	FRANJ	DB2CALL	DB2 CAF	00-00:00:11	00:00:00.633	00:00:00.000		SP12
D51G	KO2510HP	CCCDEM15	Not_In_DB2	Allied	CCCDEM15	DB2CALL	DB2 CAF	04-08:46:33	00:00:09.571	00:00:02.266		SP12
D42E	DSNESPCS	FRANJ2	In_DB2	Allied	FRANJ2	TSO	TSO	00-00:00:36	00:01:24.418	00:00:00.000		SP22



Physical

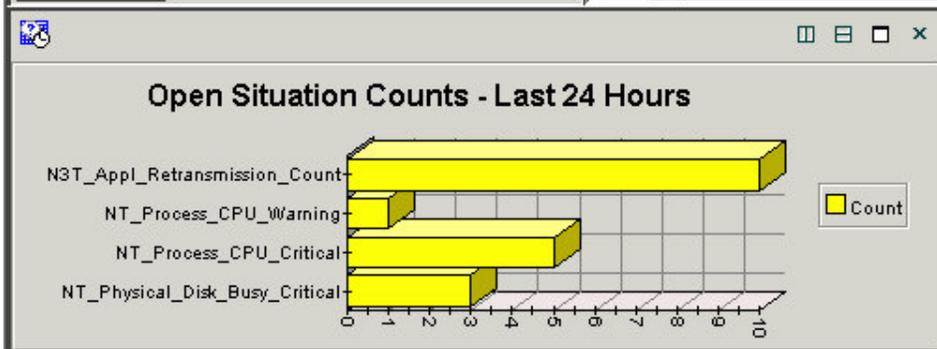
Enterprise

- Windows Systems
- OS/390 Systems

Enterprise Event Console

Total Events: 8 Item Filter: Enterprise

Status	Situation Name	Display Item	Source	Imp
<input checked="" type="checkbox"/> Acknowledged	MQSeries_MQ_Channel_Stopped		WMQA:MVSA:MQESA	MQSeries Even
<input type="checkbox"/> Open	MQSeries_Dead_Letter		WMQA:MVSA:MQESA	Dead-Letter Qu
<input type="checkbox"/> Open	N3T_Conn_Rnd_Trip_Time		TCP/IP:MVSA	Connections
<input type="checkbox"/> Open	IMS_MQ_Connection_Status		IMSB:MVSA:IMS	MQSeries Statu
<input type="checkbox"/> Open	IMS_MQ_Connection_Status		IMSA:MVSA:IMS	MQSeries Statu
<input type="checkbox"/> Open	NT_Invalid_Logon_Attempt	SYSTEM	Primary:HQDNT2:NT	System
<input type="checkbox"/> Open	NT_Log_Space_Low	Application	Primary:HQDNT2:NT	System
<input type="checkbox"/> Open	NT_Log_Space_Low	Security	Primary:HQDNT2:NT	System



Message Log

Status	Name	Display Item	Origin
Open	N3T_Conn_Rnd_Trip_Time		TCP/IP:MVSA
Open	IMS_MQ_Connection_Status		IMSB:MVSA:
Open	NT_Invalid_Logon_Attempt	SYSTEM	Primary:HQI
Acknowledged	MQSeries_MQ_Channel_Stopped		WMQA:MVSA
Open	NT_Log_Space_Low	Application	Primary:HQI
Open	NT_Log_Space_Low	Security	Primary:HQI

# Totalmente configurável pelo usuário

Thread Activity - Microsoft Internet Explorer

Address: event01/CNP.html?-12000=SYSADMIN&-5001=Physical&-1021A=SYSTEM5&-1020=ed8cf67d@MV5&-2400=ENTERPRISE&-10105=e174f82d4d&-1022=Thread%20Activity

CandleNet Portal™/SME | !Candle eBusiness at the speed of light

File Edit View Help

Opções Plug and Play

Refresh Now (F5)

OS/390 Systems

- LPAR400J:MVS:SYSPLEX
  - Coupling Facility Policy Data for Sysplex
  - Coupling Facility Structures Data for Sysplex
  - Coupling Facility Systems Data for Sysplex
  - Global Enqueue Data for Sysplex
  - GRS Ring Systems Data for Sysplex
  - Report Classes Data for Sysplex
  - Resource Groups Data for Sysplex
  - Service Classes Data for Sysplex
  - Service Definition Data for Sysplex
  - Shared DASD Groups Data For Sysplex
  - XCF Groups Data for Sysplex
  - XCF Paths Data for Sysplex
  - XCF Systems Data for Sysplex
- SP12
- CICS
- DB2

Physical Business

CPU and Wait Times

Correlation Identifier	Thread CPU Time (Seconds)	Thread Wait Time (Seconds)
FRANJ	~5	~2
CCCDEM15	~10	~2
FRANJ2	~85	~2

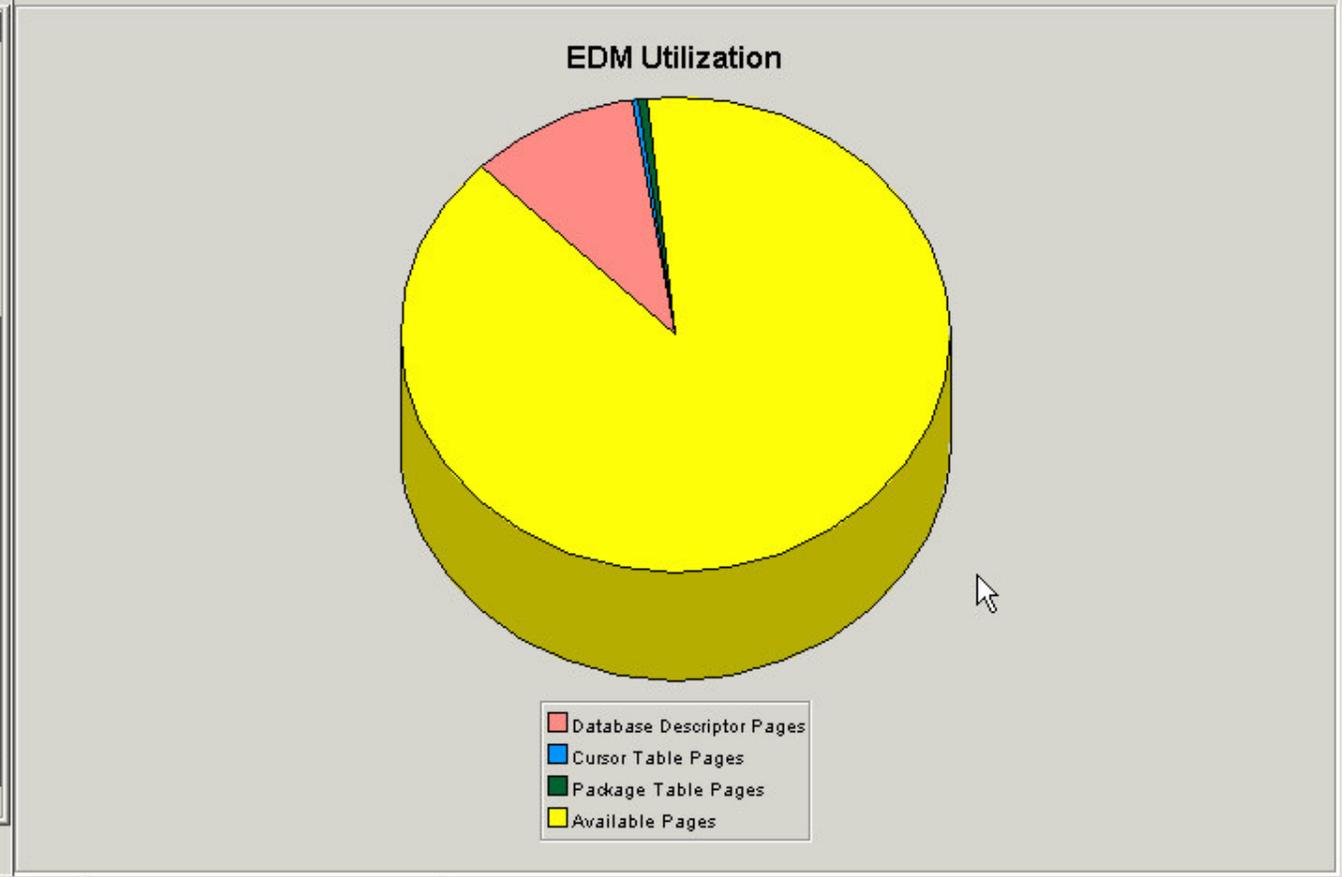
Thread Activity

DB2ID	Plan Name	Correlation Identifier	Thread Status	Thread Type	Authorization Identifier	Connection Identifier	Connection Type	Elapsed Time	CPU Time	Wait Time	Thread Stored Proc Name	MVS System
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D51G	KO2510HP	CCCDEM15	Not_In_DB2	Allied	CCCDEM15	DB2CALL	DB2 CAF	04-08:46:33	00:00:09.571	00:00:02.266		SP12
D42E	DSNESPCS	FRANJ2	In_DB2	Allied	FRANJ2	TSO	TSO	00-00:00:36	00:01:24.418	00:00:00.000		SP22





- XCF Systems Data for Sysplex
  - MVSA
    - CICS
    - DB2
      - DSNA:MVSA:DB2
        - System Status
        - Detailed Thread Excep...
        - Lock Conflicts
        - Subsystem Management
        - Log Manager
        - Utility Jobs
        - EDM Pool
        - Buffer Pool Management
        - Volume Activity
        - CICS Connections
        - IMS Connections
      - DSNB:MVSA:DB2
      - DSNC:MVSA:DB2
      - DSND:MVSA:DB2
    - IMSPLEX
    - Mainframe Networks
    - MQSERIES
    - OS/390 Unix (USS)
    - Partition MVSA Production
    - Storage Subsystem
    - WebSphere Application Server O...



# Acesso a 3270 e WebBrowser Incluídos

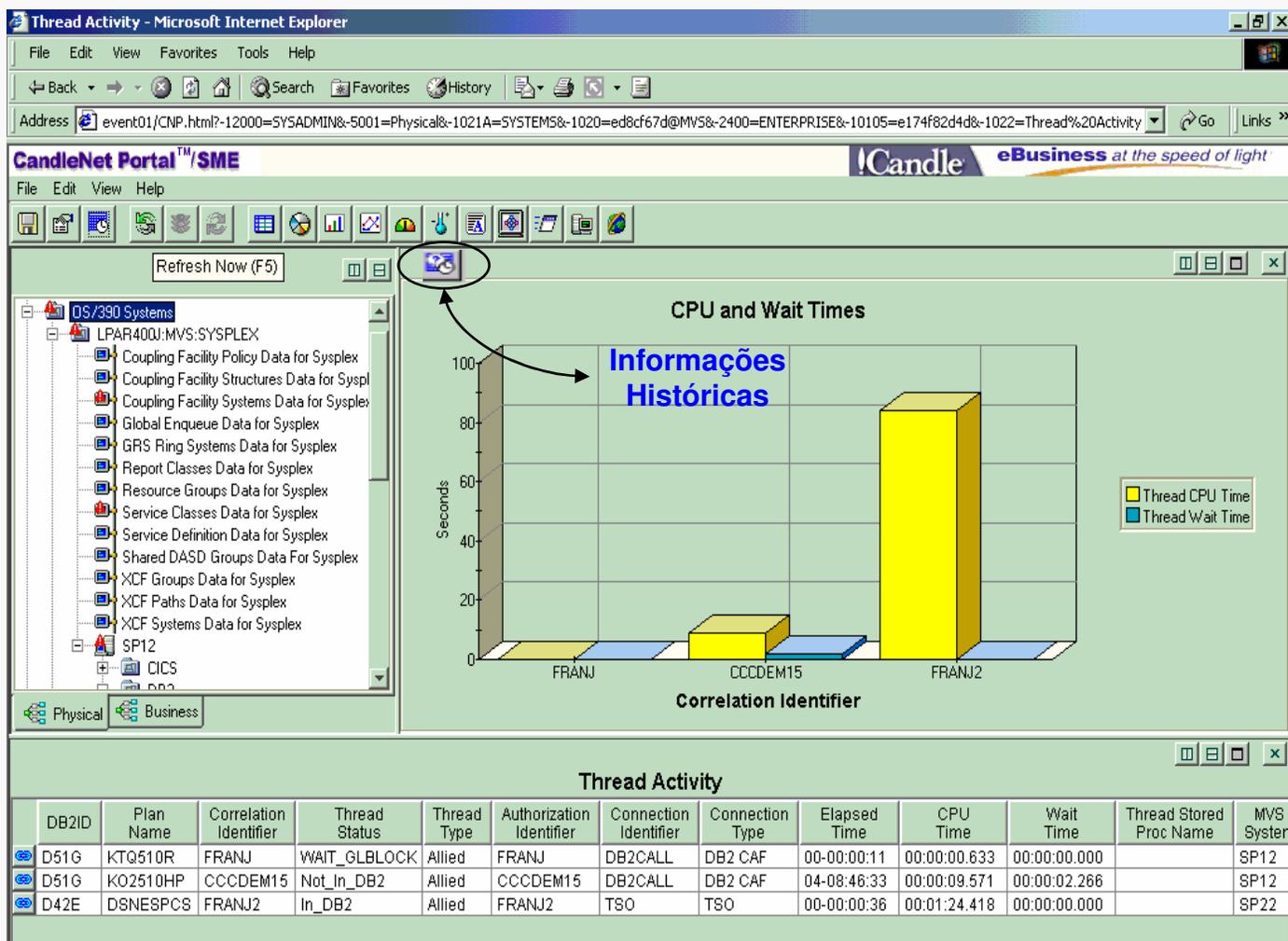
The screenshot displays a Windows desktop environment. The top window is the 'ENTERPRISE' console, which includes a file explorer on the left showing a tree structure under 'Windows NT' and an 'Event Console' on the right. The Event Console contains a table of system events.

Status	Situation Name	Node	Global Timestamp	Local Timestamp
Raised	Utilization_warning	HUB_EHALL	03/17/00 11:51:10	03/17/00 11:51:10
Raised	Free_space_warning	HUB_EHALL	03/17/00 11:51:07	03/17/00 11:51:06
Raised	00073_Driver_Test	HUB_EHALL	03/17/00 11:51:04	03/17/00 11:51:03

Below the Enterprise console is a terminal window running 'OMEGAVIEW Version 300'. It shows a menu with options like 'File', 'CCC-Reports', 'Switch', 'Tools', 'Samples', 'Options', and 'Help'. A table of system sessions is displayed, with columns for Session Name, Workload Status, Resource Status, and Alert Status. The sessions listed include CMSCON, Enterprise, CCCDS18, CCCDS19, CCCDS20, DB2PROD, DB2TEST, DB61, D61D, IMSDBCTL, IMSPROD, IMSSYSG, SP12DASD, and SP12MVS.

To the right of the terminal is a web browser window displaying the 'Candle' website. The page features the 'eBusiness at the speed of light' slogan, navigation links for 'Login', 'About Candle', and 'News', a 'Quick Search' box, and a 'News Desk' section with links to 'Internet Response Time', 'Business Integration Solutions', and 'eBusiness Assurance'.

# Dados em Tempo Real e Histórico



**System Resource Manager (EDM) - Microsoft Internet Explorer**

File Edit View Favorites Tools Help

Address [http://hqdnt2.demopkg.ibm.com:1920///cnp/kdh/lib/cnp.html?-12000=DNET546&-5001=MOPHYSICAL&-1021A=REPORT&-1020=DSNA:MVSA:DB2@zDB2\\_050\\_SRM\\_EDM&-2400=p@D](http://hqdnt2.demopkg.ibm.com:1920///cnp/kdh/lib/cnp.html?-12000=DNET546&-5001=MOPHYSICAL&-1021A=REPORT&-1020=DSNA:MVSA:DB2@zDB2_050_SRM_EDM&-2400=p@D) Go

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Managing what matters most™

File Edit View Help

Physical

- XCF Systems Data for Sysplex
- MVSA
  - CICS
  - DB2
    - DSNA:MVSA:DB2
      - System Status
      - Detailed Thread Exceptio
      - Lock Conflicts
      - Subsystem Management
      - Log Manager
      - Utility Jobs
      - EDM Pool**
      - Buffer Pool Management
      - Volume Activity
      - CICS Connections
      - IMS Connections
    - DSNB:MVSA:DB2
    - DSNC:MVSA:DB2
    - DSND:MVSA:DB2
  - IMSPLEX
  - Mainframe Networks
  - MQSERIES
  - OS/390 Unix (USS)
  - Partition MVSA Production
  - Storage Subsystem
  - WebSphere Application Server O

### EDM Pool Utilization

Time Interval	Available Pages	Cursor Table Pages	Database Descriptor Pages	Package Table Pages
05/30/05 18:15:02	7200	1000	500	300
05/30/05 18:20:02	7200	1000	500	300
05/30/05 18:25:02	7200	1000	500	300
05/30/05 18:30:02	7200	1000	500	300
05/30/05 18:35:02	7200	1000	500	300
05/30/05 18:40:02	7200	1000	500	300
05/30/05 18:45:02	7200	1000	500	300
05/30/05 18:50:02	7200	1000	500	300
05/30/05 18:55:02	7200	1000	500	300
05/30/05 19:00:02	7200	1000	500	300
05/30/05 19:05:02	7200	1000	500	300
05/30/05 19:10:02	7200	1000	500	300
05/30/05 19:15:02	7200	1000	500	300
05/30/05 19:20:02	7200	1000	500	300
05/30/05 19:25:02	7200	1000	500	300
05/30/05 19:30:02	7200	1000	500	300
05/30/05 19:35:02	7200	1000	500	300
05/30/05 19:40:02	7200	1000	500	300
05/30/05 19:45:02	7200	1000	500	300
05/30/05 19:50:02	7200	1000	500	300
05/30/05 19:55:02	7200	1000	500	300
05/30/05 20:00:02	7200	1000	500	300
05/30/05 20:05:02	7200	1000	500	300
05/30/05 20:10:02	7200	1000	500	300

Physical

Ready Hub Time: Mon, 05/30/2005 08:10 PM Server Available. System Resource Manager (EDM) - hqdnt2.demopkg.ibm.com - DNET546

Opening [http://hqdnt2.demopkg.ibm.com:1920///cnp/kdh/lib/classes/com/kg/jclass/util/resources/LocaleInfo\\_en\\_US.properties](http://hqdnt2.demopkg.ibm.com:1920///cnp/kdh/lib/classes/com/kg/jclass/util/resources/LocaleInfo_en_US.properties) Internet

Start Address 99% 22:11

2:06:17 - AT&T Network ... System Resource Man...



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# Tivoli OMEGAMON for the zSeries Operating System



**Tivoli** software

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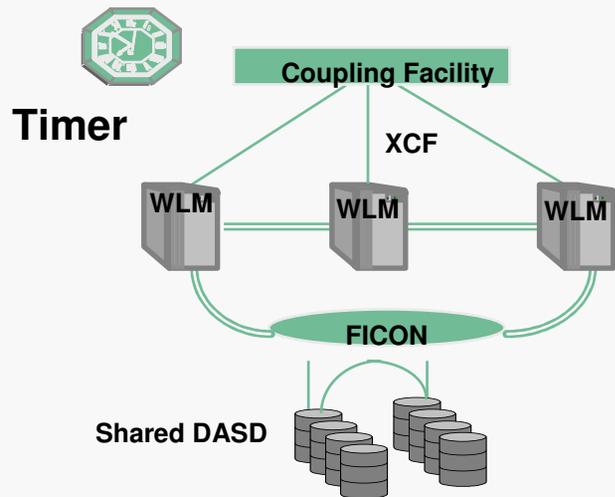
© 2004 IBM Corporation

## Algumas das mais importantes features

- **Suporte IRD para CPU e I/O subsystem** – Visualiza as métricas que o WLM está usando para gerenciar CPU e I/O subsystem quando o IRD está ativo
- **Análise de Bottleneck** – Capacidade de monitorar um address space e o percentual de utilização de recursos o percentual de “delay” por falta de recursos
- **Análise de Impacto** – Analisa como os outros jobs que estão no sistema estão impactando o address space sendo investigado
- **Suporte para Enclaves** – Visualiza todo uso de enclaves tanto no nível de sistema como no nível de address space
- **Análise de Enqueues** – Visualização de quem está prendendo um recurso, e quem está esperando
- **Informações de WLM** – Analisa se os Goals estão sendo atingidos
- **Acesso à discos** – Informações importantes sobre acessos aos subsistemas de I/O de discos



# Componentes Principais de um Sysplex



## Problemas com discos Shared

- Contenção (GRS) – onde todos os dados residem
- Impacto de outros sistemas (LPARS)

## Problemas com XCF

- Disponibilidade do XCF entre as LPARS é crítico para o bom funcionamento do Sysplex
- Fatores de performance:
  - Aplicações faltantes na configuração do XCF
  - Numero de tentativas devido a erros no Path
  - Demora das mensagens em função de buffer indisponível
  - Demora das mensagens devido a Path muito concorrido

## Problemas com Coupling Facility

- **Alta Utilização de Memória:** Pode ser causado por uma super alocação de memória para o CF
- **Alta Utilização de CPU:** Pode indicar que o CF foi criado abaixo do necessário para suportar as estruturas definidas
- Quando requisições síncronas estão abaixo dos thresholds definidos, eles **são convertidos em requisições não-síncronas...isto implica em atraso na aplicação**
- Número excessivo de “rebuilds” são indicativos de problemas de perda de conexão ou ineficiência na alocação de memória
- **Failed/Persistent structures** will continue to occupy Coupling Facility storage until deleted.
- **False Lock Contention:** Can be caused by under-sizing lock structures

## Problemas com WLM

- Metas que não estão sendo atingidas
- Workloads sendo impactados dentro de um Service Class
- Metas inapropriadas impactando em processos críticos
- Aplicações críticas com metas inferiores ao necessário
- Workloads associados à Service Class errados



**Address Space Real Storage - Microsoft Internet Explorer**

File Edit View Favorites Tools Help

Address [http://hqdnt2.demopkg.ibm.com:1920///cnp/kdh/lib/cnp.html?-12000=DNET546&-5001=MOPHYSICAL&-1021A=REPORT&-1020=DEMOPLX:MVSA:MVSSYS@Address\\_Space\\_Real\\_Storage](http://hqdnt2.demopkg.ibm.com:1920///cnp/kdh/lib/cnp.html?-12000=DNET546&-5001=MOPHYSICAL&-1021A=REPORT&-1020=DEMOPLX:MVSA:MVSSYS@Address_Space_Real_Storage)

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File Edit View Help

Physical

- Partition MVSA Production
  - DEMOPLX:MVSA:MVSSYS
    - Address Space CPU Util
    - Address Space Storage**
    - Address Space Bottleneck
    - Channel Path Activity
    - Common Storage
    - DASD MVS
    - DASD MVS Devices
    - Enclave Information
    - Enqueue and Reserve St
    - LPAR Clusters
    - Operator Alerts
    - Page Dataset Activity

Page: 1 of 3

### Central Storage Frame Counts

Where frame counts are greater than 0

Page: 1 of 3

### Fixed Storage

Page: 1 of 3

### Address Space Real Storage

Address Space Name	Swap Status	Management Status	Central Frame Count	Fixed Frame Count	Expanded Frame Count	Hiperspace Frame Count	Non-virtual I/O Slot Count	User Key Dataspace
*MASTER*	InNSW	NonSwap	3839	2366	0	0	0	0
AESTCMD5	InNSW	NonSwap	7814	108	0	0	0	0

Page: 1 of 3

### For System MVSA

Ready | Hub Time: Mon, 05/30/2005 08:03 PM | Server Available. | Address Space Real Storage - hqdnt2.demopkg.ibm.com - DNET546

Opening [http://hqdnt2.demopkg.ibm.com:1920///cnp/kdh/lib/classes/candle/km3/resources/help//attr\\_ASVIRTSTOR.properties](http://hqdnt2.demopkg.ibm.com:1920///cnp/kdh/lib/classes/candle/km3/resources/help//attr_ASVIRTSTOR.properties)

Address  Go 99%

1:59:06 - AT&T Network ... | Address Space Real St...





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# OMEGAMON XE for the CICS Environment



**Tivoli** software

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## Principais Features

- ▲ Análise extensiva das memórias: DSA, EDSA e OSCOR
- ▲ Atividades de AID/ICE (incluindo KILL)
- ▲ Uso das TS/TD (incluindo deleção de TS)
- ▲ Análise links MRO/ISC
- ▲ Análise de enqueue de recursos
- ▲ Análise dos objetivos do WLM definidos para o CICS
- ▲ Detecta e analise “Storage Violations”
- ▲ Suporte a NATURAL e ADABAS
- ▲ Application Trace Facility
- ▲ Informações de socket TCP/IP
  - Detalhes de conexões IP
  - Tasks usando a exit de sockets
- ▲ Dados de transações CICS WEB
- ▲ Modificação de dados de memória



# Múltiplos Regions - Detalhes

CICSPLEX - DDLABG2H00b:14708 - SYSADMIN

File Edit View Help

Enterprise

- Change
  - CICSPLEX**
    - SYSG.CICSMH53
    - SYSG.CICSR40L
  - DDLABG2H00B:Warehouse
  - HP\_OpenView\_ITO\_Messages
  - HUB\_DDLABG2H00B
  - Primary:DDLA2S0P101:NT

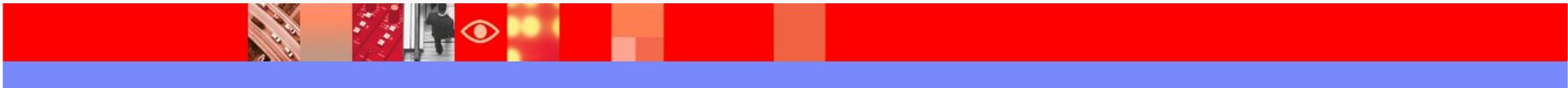
Physical Business

### Transaction Analysis

System ID	CICS Region Name	CICS SYSIDNT	Transaction ID	User ID	Terminal ID	Task Number	Wait Type	Elapsed Time	CP Tim
SYSG	CICSMH53	MH53	CSNE	N/A	N/A	00027	Terminal	11:00:20.36	00:00:
SYSG	CICSMH53	MH53	CSHQ	N/A	N/A	00025		11:00:20.94	00:00:
SYSG	CICSMH53	MH53	CEX2	N/A	N/A	00024	Database	11:00:21.25	00:00:
SYSG	CICSMH53	MH53	CSNC	N/A	N/A	00021	MRO	11:00:24.86	00:00:
SYSG	CICSMH53	MH53	CFQR	N/A	N/A	00020	File	11:00:30.72	00:00:
SYSG	CICSMH53	MH53	CFQS	N/A	N/A	00019	File	11:00:30.74	00:00:
SYSG	CICSMH53	MH53	CSTP	N/A	N/A	00008	Terminal	11:00:31.86	00:00:
SYSG	CICSMH53	MH53	CSSY	N/A	N/A	00006	Interval	11:00:31.74	00:00:
SYSG	CICSMH53	MH53	CSSY	N/A	N/A	00005	Interval	11:00:31.77	00:00:
SYSG	CICSMH53	MH53	CSOL	N/A	N/A	00004		11:00:33.33	00:00:

### Transaction Analysis

System ID	CICS Region Name	CICS SYSIDNT	Transaction ID	User ID	Terminal ID	Task Number	Wait Type	Elapsed Time	CPU Time	Program ID	Exceeds MAXR Threshold
SYSG	CICSR40L	CS40	CSNE	N/A	N/A	00019	Terminal	00:18:20.28	00:00:00.00	DFHZNAC	No
SYSG	CICSR40L	CS40	CSNC	N/A	N/A	00018	MRO	00:18:26.46	00:00:00.00	DFHCRNP	No
SYSG	CICSR40L	CS40	CSTP	N/A	N/A	00007	Terminal	00:18:31.38	00:00:00.03	DFHZCSTP	No
SYSG	CICSR40L	CS40	CSSY	N/A	N/A	00005	Interval	00:18:31.51	00:00:00.00	DFHAPATT	No
SYSG	CICSR40L	CS40	CSSY	N/A	N/A	00004	Interval	00:18:31.51	00:00:00.00	DFHAPATT	No



# Enqueue Waiters

The screenshot displays the 'Enqueue Conflicts' tool interface. The left pane shows a tree view with 'Enqueue Analysis' selected under the 'SYSG.CICSMH53' region. The main area is divided into two sections:

### Tasks Queued to Resource: DLGTEST

System ID	CICS Region Name	Transaction ID	Task Number	Task Status	Resource Type	Resource Name
SYSG	CICSMH53	CECI	00123	Waiting	ENQUEUE	DLGTEST
SYSG	CICSR77L	CECI	00031	Owning	ZCLOWAIT	DFHZARQ1

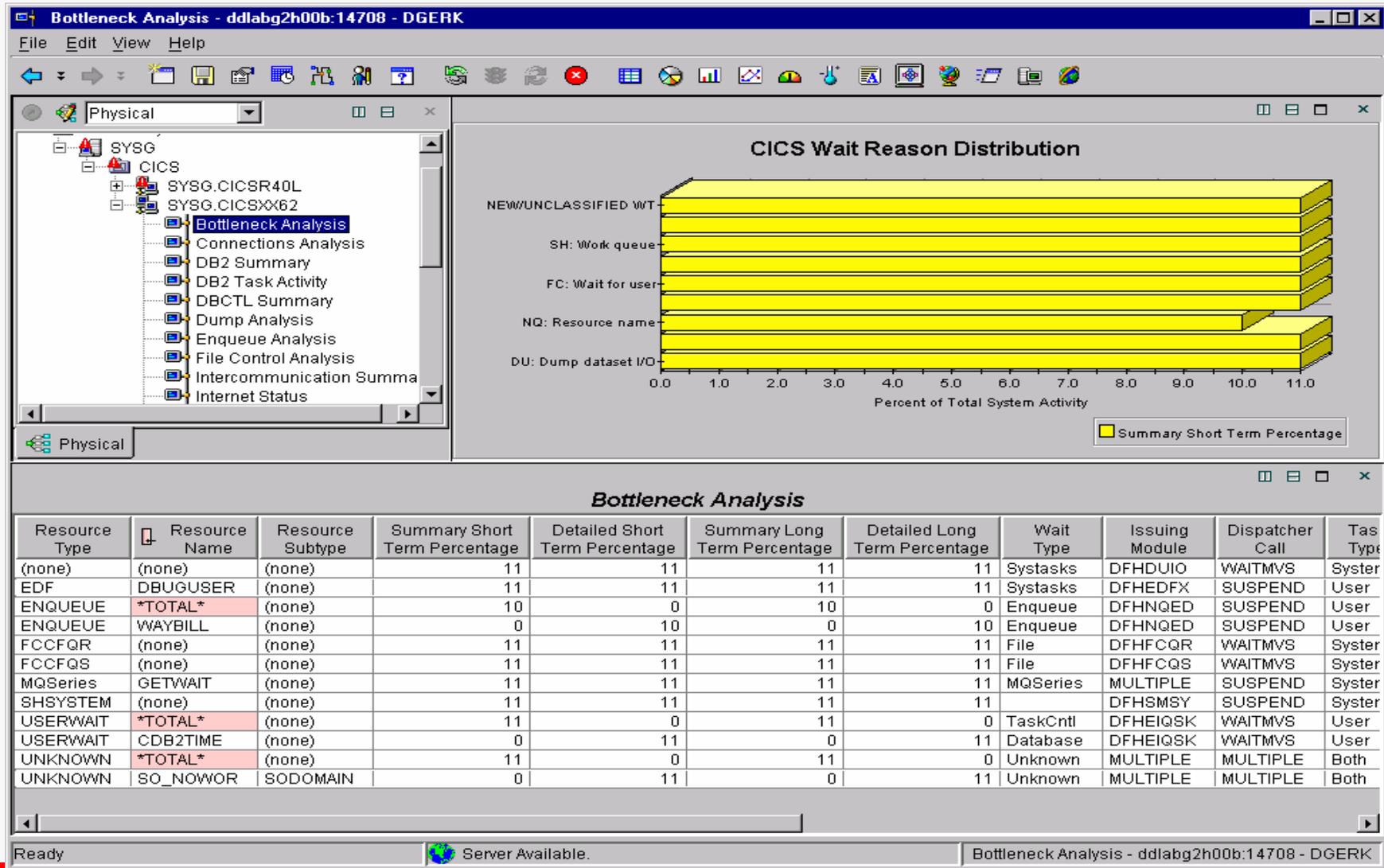
  

### CICS Enqueue Analysis

Sysplex Name	System ID	CICS Region Name	Enqueue Resource	Resource Length	Resource Type	Wait Count	Enqueue Scope	Scope Name	Owning System ID	Owning Region Name	Queue Element	Enqueue Resource (hex)
LPAR400J	SYSG	CICSMH53	DLGTEST	7	Variable	1	Sysplex	DLG	SYSG	CICSR77L	d940440	C4D3C7E3C5E2E3



# Wait Reason Distribution



# Análise das Conexões

Address [=Physical%201021A=REPORT%201020=5d12ba85@zkc.p.Connections\\_Analysis%202400=4ee9931e@SYSG.CICSMH53%2010105=zkc.p.Connections\\_Analysis%201022=Connections%20Analysis](#) Go

**CandleNet Portal/SME** **Candle** eBusiness at the speed of light

File Edit View Help

OS/390 Systems

- SYSG
  - SYSG.CICSMH53
    - Connections Analysis**
    - DB2 Summary
    - DB2 Task Activity
    - DBCTL Summary
    - Dump Analysis
    - Enqueue Analysis
    - File Control Analysis
    - Intercommunication Summary
    - Internet Status
    - Journal Analysis
    - LSR Pool Status
    - Message Queuing Analysis

### Link Utilization

Watch critical ISC links, thresholds by connection name

- Percent of Links in Use
- Percent of Secondary Links in Use
- Percent of Primary Links in Use

Physical
Business

### Connections Analysis

Connection Name	Connected System VTAM Applid	Connected System Name	Connection Type	Connection Status	Link Allocation Rate	Link Allocate Percentage on Connection	Link Allocate Count from Originating Region	AIDs Queued to this Connected System	Link
CI39	SYSGS39	Unknown	BC_LU62	REL_INS	0	0	0	0	
CS27	CICSR27	Unknown	BC_LU62	REL_INS	0	0	0	0	
C852	CICSMH52	Unknown	BC_LU62	REL_INS	0	0	0	0	
GG53	CICSGG53	Unknown	IRC_XM	ACQ_INS	0	0	0	0	
L153	CICSL153	Unknown	ISC_LU62	ACQ_INS	0	0	0	0	
L253	CICSL253	Unknown	ISC_LU62	ACQ_INS	0	0	0	0	
ML141	CICSM141	Unknown	ISC_XM	REL_INS	0	0	0	0	



# WLM - Service Levels

Service Level Analysis - ddlabg2h00b:14708 - SYSADMIN

File Edit View Help

Physical

- DBCTL Summary
- Dump Analysis
- Enqueue Analysis
- File Control Analysis
- Intercommunication Summary
- Internet Status
- Journal Analysis
- LSR Pool Status
- Message Queuing Analysis
- Region Overview
- Service Level Analysis**
- Shared TS Queues
- Storage Analysis
- Task Class Analysis

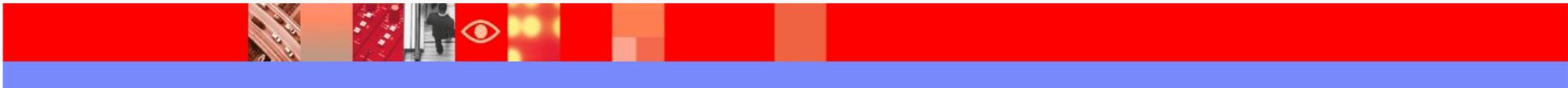
Physical Business

### Event Log

Status	Situation Name	Display Item	Origin Node	Global Timestamp	Local Timestamp	Node	Type
Reset	SLASit		OTRANS	03/06/02 09:18:23	03/06/02 09:18:23	CP1	Sam
Raised	SLASit		OTRANS	03/06/02 09:15:26	03/06/02 09:15:23	CP1	Sam
Raised	SLASit		CTRANS	03/06/02 09:15:23	03/06/02 09:15:23	CP1	Sam
Raised	SLASit		CTRANS	03/06/02 09:15:23	03/06/02 09:15:23	CP1	Sam

### Service Level Analysis

Workload Name	Service Class Name	Interval End Timestamp	System ID	Response Time Goal	Transactions Total	Transaction Rate	Average Response Time	Performance Index %	% Wait on MRO	% on Jour
DFLTWORK	CTRANS	03/06/02 09:12:53	SYSG	00:00:01.000	16	3	<b>00:13:07.705</b>	78770	0	
DFLTWORK	OTRANS	03/06/02 09:12:53	SYSG	00:00:01.000	2	0	<b>00:27:18.078</b>	163807	0	



# Por que não integrar ainda mais ?



# Customize sua Monitoração

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File Edit View Help

IT Applications

- eSupport
  - CRM
    - Siebel Application
      - APX Unix System
      - End User Experience
      - Oracle Database for Siebel
      - Siebel Thin Client Server
      - NT IIS Support
      - Windows System
      - URL Availability & Performance
    - Entitlement
      - Brook Application
      - Single Signon
      - Single Signon EUE
        - Server Log Information by User
        - Web-Based End User Response
      - Universal User Authentication
    - www.candle.com
      - DMZ
        - Unix Cluster
        - WebSphere
          - Solaris Unix System
          - URL Availability & Performance
        - www.candle.com EUE
          - Server Log Information by User
          - Web-based End User Response

**Monitored DB2 Systems and Groups**

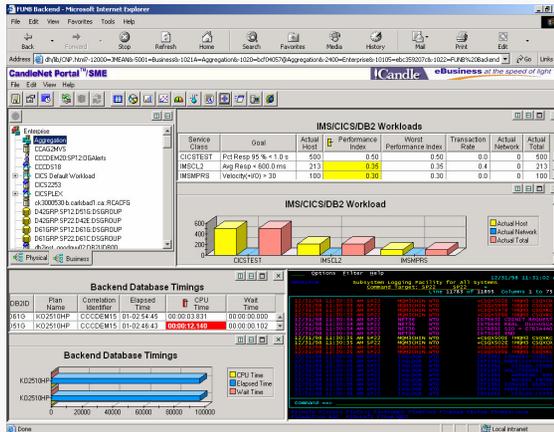
Subsystem or Group Name	DB2 Count	Lock Conflict Count	Thread Count	GBP Connections Count	Object Analysis DB Count	Object Analysis Status	Subsystem or Group Type	Status	Timestamp
DSNBD0A	2	0	1	3	0	No	DSGRP	Online	04/08/02 15:55:09
DSNH00A	1	0	20	1	0	No	DSGRP	Online	04/08/02 15:55:09
DSNH00T	1	0	22	1	0	No	DSGRP	Online	04/08/02 15:55:09
RD1T	1	0	6	0	0	No	DB2	Online	04/08/02 15:55:09
DSNTD0T	2	0	50	2	0	No	DSGRP	Online	04/08/02 15:55:09

**Storage Groups with Free Space % < 10**

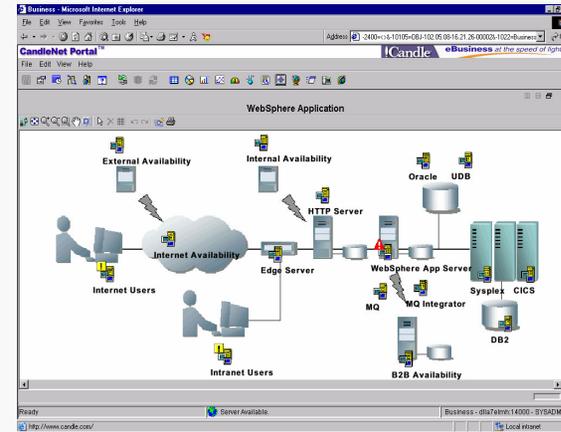
**Data Sharing Groups**

Ready | Server Available. | Enterprise Monitoring Status - ebxapp3:19999 - TSOKE

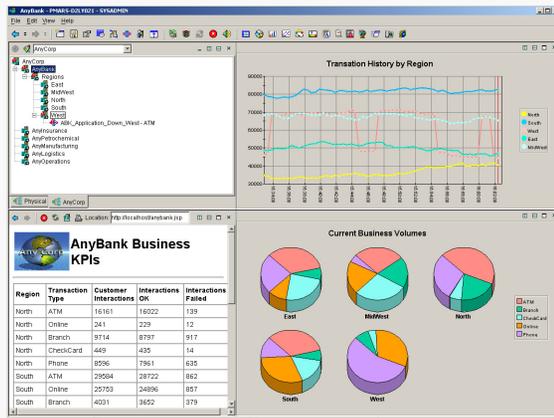
# Tivoli Enterprise Portal (TEP): Múltiplas Visões



Infra-estrutura



Aplicações



Nível de Serviço



Negócios



# Visão Integrada de Recursos

**DB2 Threads**

DB2ID	Plan Name	Correlation Identifier	Thread Status	Thr
D71G	TRANSPLX	POOLDB210001	Not_In_DB2	Alli
D71G	KO2520HP	CMGDS03	Not_In_DB2	Alli
D61G	KO2510HP	CCCDEM15	Not_In_DB2	Alli
D51G	DSNTEP51	FRANJ2	In_DB2	Alli
D51G	KO2510HP	CCCDEM15	Not_In_DB2	Alli

**DB2**

**IMS Transaction Performance**

Transaction Name	Transaction Count	R0 Time Average	R0 Time Maximum	CPU Time	DLI Time Average	DLI Time Maximum	[ C Ave
DLETPART	1	0.10	0.10	0.00	0.00	0.00	
ADDPART	2	0.05	0.10	0.00	0.00	0.00	

**Take Action**

Action Name:  Command:

**Ações**

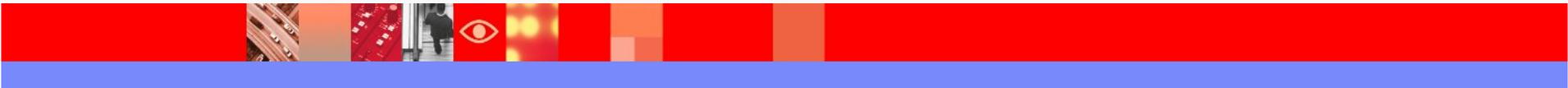
**OMEGAMON 3270**

**IMS**

**OMS/390 Systems**

- LPAR400J:MVS:SYSPLEX
  - Coupling Facility Policy Data for Sysplex
  - Coupling Facility Structures Data for Sysplex
  - Coupling Facility Systems Data for Sysplex
  - Global Enqueue Data for Sysplex
  - GRS Ring Systems Data for Sysplex
  - Report Classes Data for Sysplex
  - Resource Groups Data for Sysplex
  - Service Classes Data for Sysplex
  - Service Definition Data for Sysplex

**Combina Informações Em uma Única Tela**



# Visão Integrada de Recursos

JF\_M3\_C3\_D3 - Microsoft Internet Explorer

Address: http://jfran:1920///cnp/kdh/lib/CNP.html?-12000=SYSADMIN&-5001=Business&-1021A=Aggregation&-1020=Enterprise&-2400=<>&-10105=ec3fa6809e&-1022=JF\_M3\_C3\_D3

**CandleNet Portal™/SME** !Candle eBusiness at the speed of light

File Edit View Help

Enterprise

- Amazonia Applications
- ASP12\_SEV1
- Brasilia Applications
- D42E:SP22:DB2
- D42GRP:SP12.D51G:DSGROUP
- D42GRP:SP22.D42E:DSGROUP
- D51A:SP22:DB2

Physical Business

**Batch, Online, and TSO Performan**

**DB2 - D71G**

Pool Thread Utilization

67

**Enqueue Conflicts: Max. Wait Time**

**LPAR CPU Utilization**

**CICS CCCDS18 Storage**

**MVS Operator Alerts**

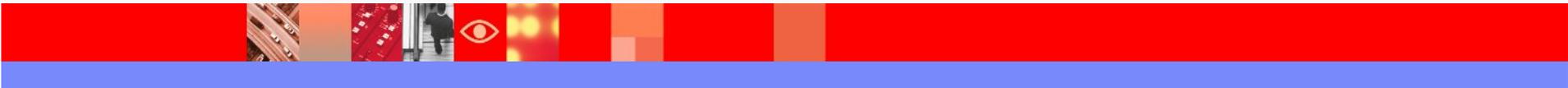
Managed System	RMF Not Active	SMF Not Recording	WTO Buffers Remaining	Outstanding Operator Replies
LPAR400J:SP12:MVS...	False	False	4983	2

**CICS Transactions**

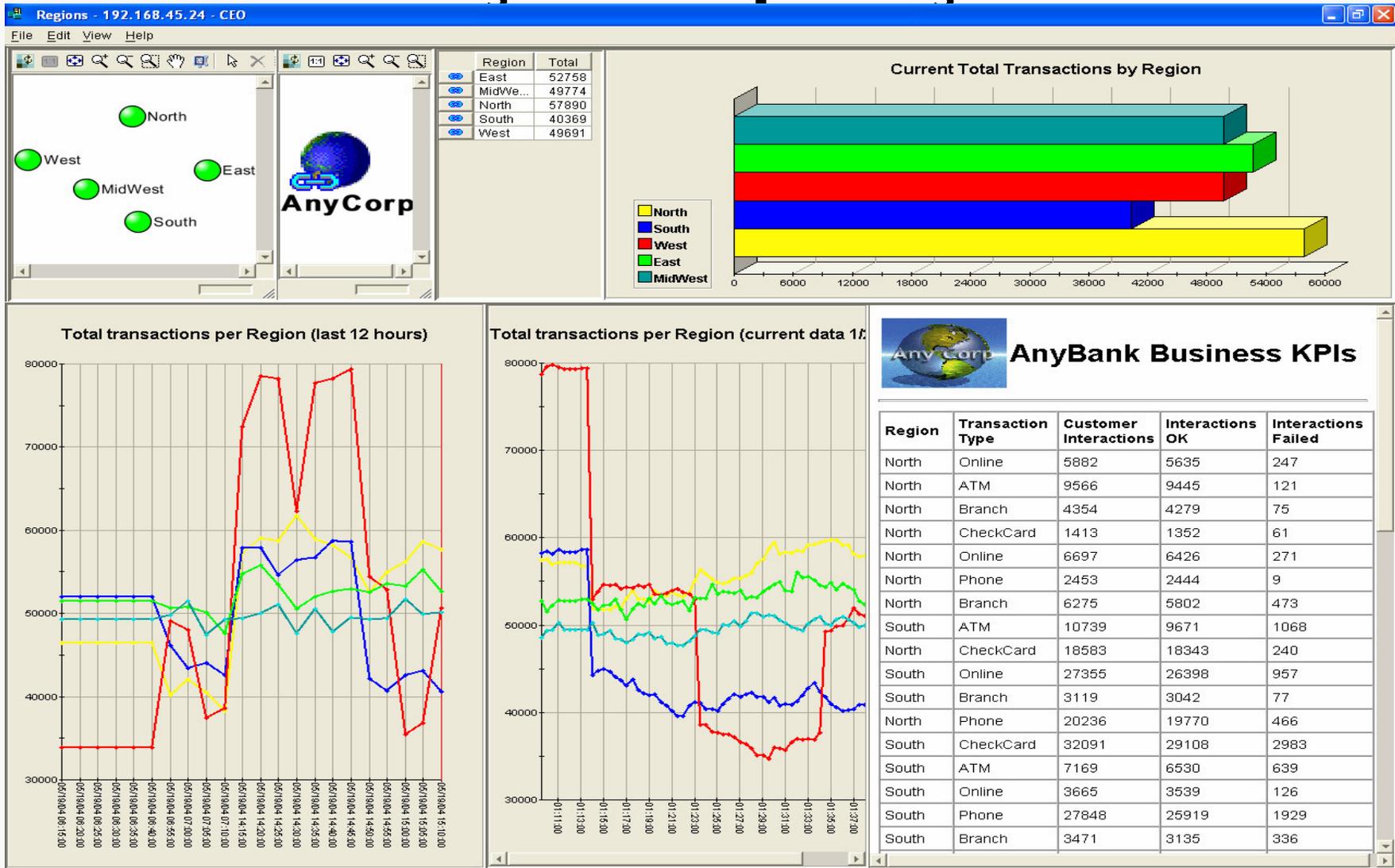
Ready Server Available. JF\_M3\_C3\_D3 - jfran:14000 - SYSADMIN

Applet started Local intranet

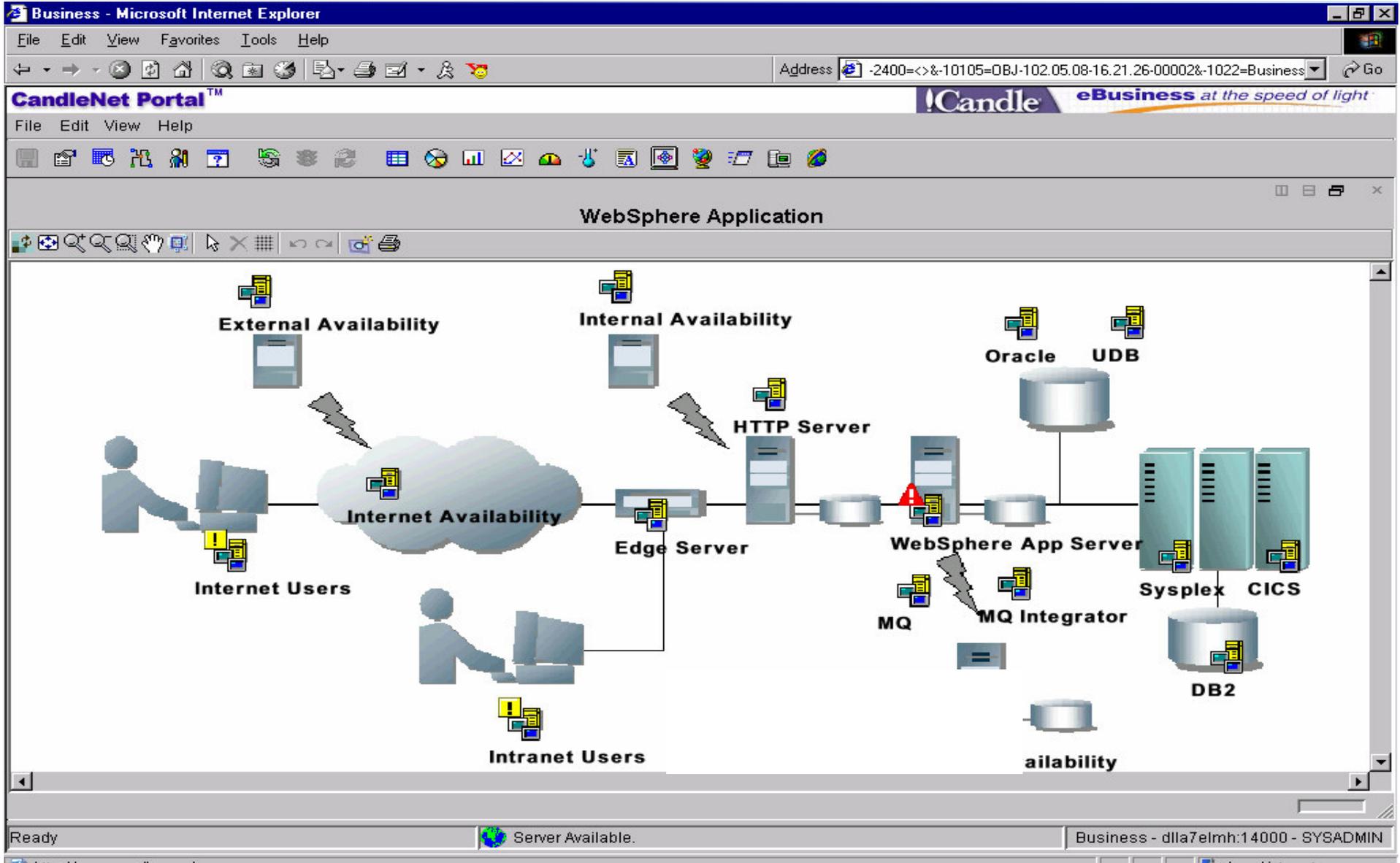
Start New Memo - Lotus N... SP12 - EXTRA!@ Ent... JF\_M3\_C3\_D3 - Mi... 8:23 PM



# Nível de Serviço da Aplicação



# Visão da Aplicação



# A Visualização dos Eventos...



Physical

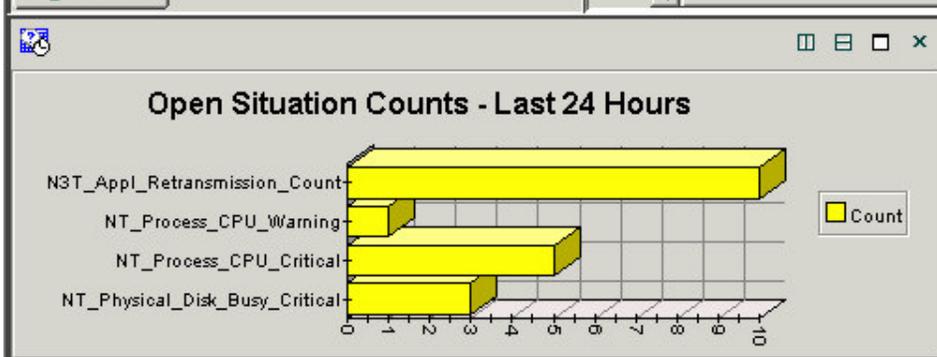
Enterprise

- Windows Systems
- OS/390 Systems
  - DEMOPLX:MVS:SYSPLEX

Total Events: 8 Item Filter: Enterprise

### Enterprise Event Console

Status	Situation Name	Display Item	Source	Imp
<input checked="" type="checkbox"/> Acknowledged	MQSeries_MQ_Channel_Stopped		WMQA:MVSA:MQESA	MQSeries Even
<input type="checkbox"/> Open	MQSeries_Dead_Letter		WMQA:MVSA:MQESA	Dead-Letter Qu
<input type="checkbox"/> Open	N3T_Conn_Rnd_Trip_Time		TCP/IP:MVSA	Connections
<input type="checkbox"/> Open	IMS_MQ_Connection_Status		IMSB:MVSA:IMS	MQSeries Statu
<input type="checkbox"/> Open	IMS_MQ_Connection_Status		IMSA:MVSA:IMS	MQSeries Statu
<input type="checkbox"/> Open	NT_Invalid_Logon_Attempt	SYSTEM	Primary:HQDNT2:NT	System
<input type="checkbox"/> Open	NT_Log_Space_Low	Application	Primary:HQDNT2:NT	System
<input type="checkbox"/> Open	NT_Log_Space_Low	Security	Primary:HQDNT2:NT	System



### Message Log

Status	Name	Display Item	Origin
Open	N3T_Conn_Rnd_Trip_Time		TCP/IP:MVSA
Open	IMS_MQ_Connection_Status		IMSB:MVSA:
Open	NT_Invalid_Logon_Attempt	SYSTEM	Primary:HQI
Acknowledged	MQSeries_MQ_Channel_Stopped		WMQA:MVSA
Open	NT_Log_Space_Low	Application	Primary:HQI
Open	NT_Log_Space_Low	Security	Primary:HQI

# Com Alertas....

The screenshot shows the IBM Tivoli Enterprise console interface. The main window displays a diagram of the system architecture with components like External Availability, Internal Availability, HTTP Server, Windows NT, and Universal Database. A critical alert is displayed in a pop-up window, listing the following details:

CRITICAL			
JNDI_Delay	Default_Server:DLLA12HF301:KWEB	10/24/02	19:09:10
App_Response_Time	Default_Server:DLLA12HF301:KWEB	10/24/02	19:05:12

Select workspace link button to view event results.

DB2 Availability

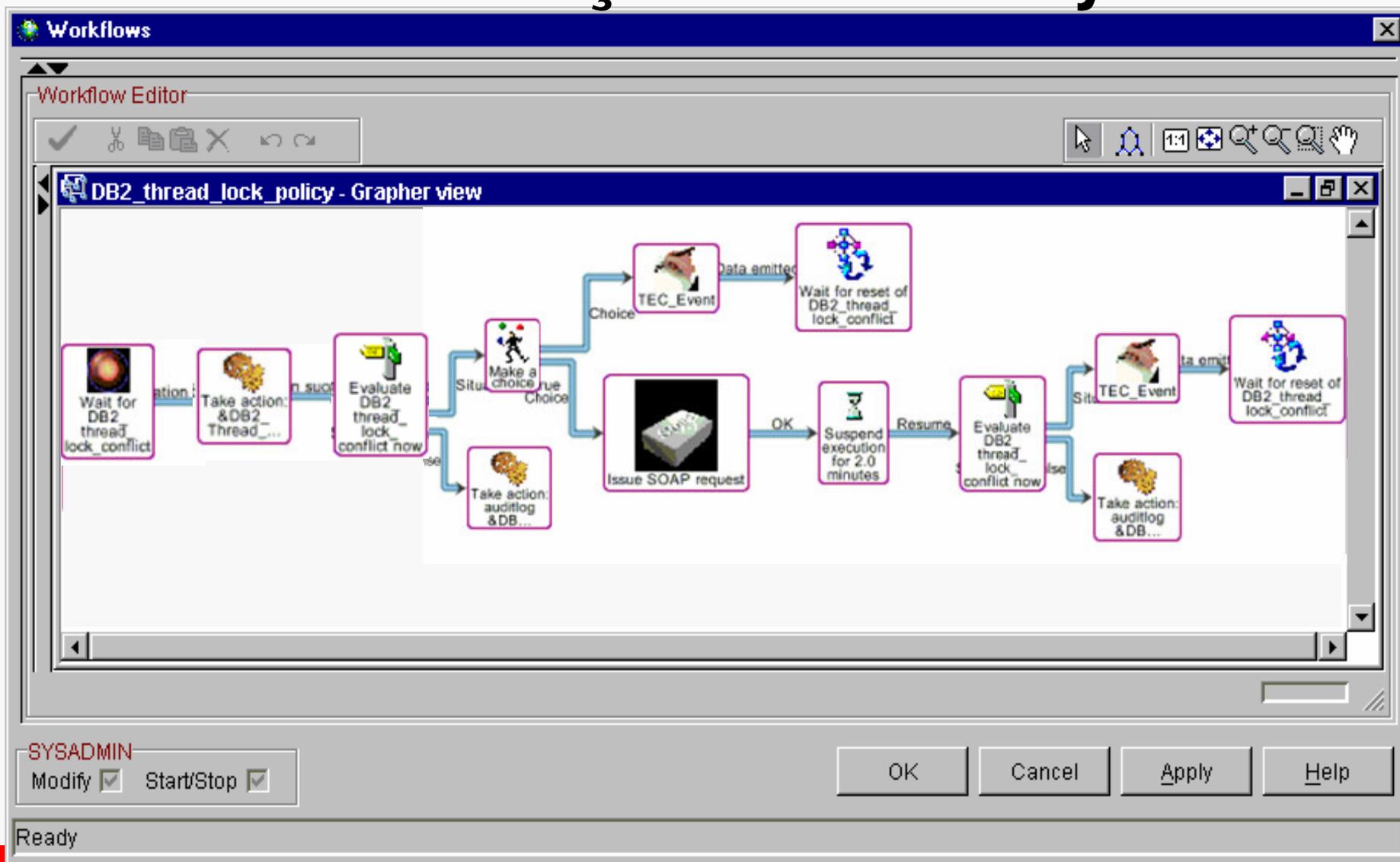
Physical Business

Ready Server Available. Enterprise - dlla12hf301:14000 - SYSADMIN

# Com automação incluída...

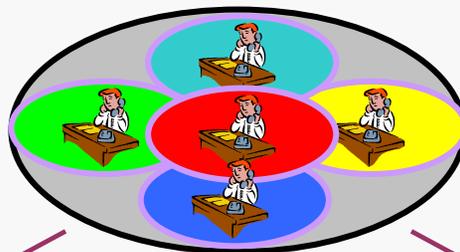


# Automação com Policy



# Resumindo....

## Melhores resultados, melhor produtividade



- ▲ Tempo para determinação de problemas reduzido (isola e automatiza)
  - ▲ Elimina gargalos de comunicação
  - ▲ Suporta todas as necessidades de gerenciamento: dos negócios ao técnico
- ▲ Unifica o conhecimento em todas as áreas
  - ▲ Permite respostas rápidas aos problemas prioritários
  - ▲ Integra todo o complexo de gerenciamento



# Arquitetura Tivoli OMEGAMON

