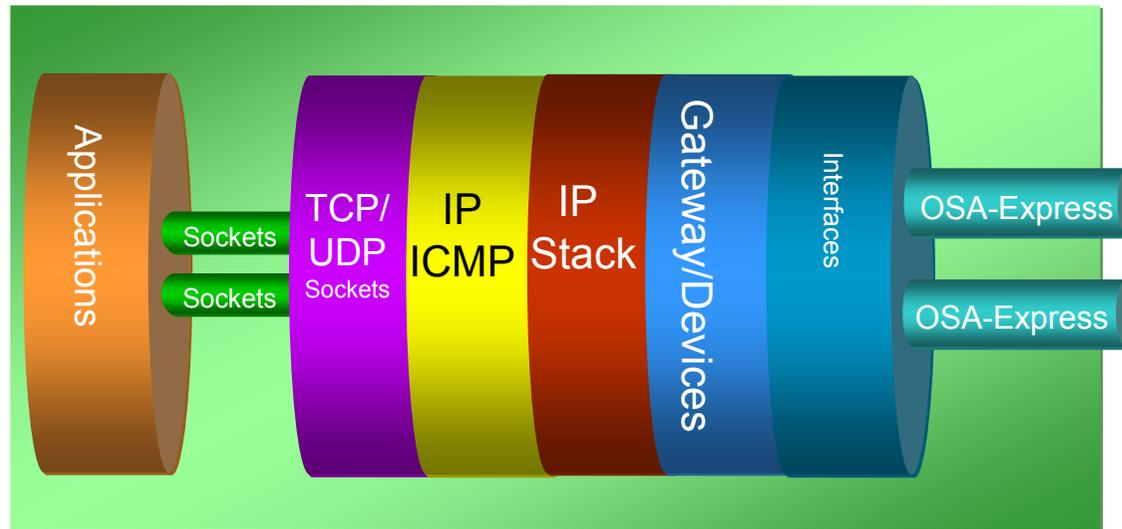




# **OMEGAMON XE for Mainframe Networks**

**\* \* \***

## **Networks Extended Navigator Workspaces**



- Soluciones IBM que monitorizan el rendimiento de la red z/OS
- **IBM OMEGAMON XE for Mainframe Networks V4R2**
  - Performance monitoring
  - FP3 añadió cientos de nuevas métricas
- **IBM NetView for z/OS V6R1**
  - Muestra información en el TEP
  - DVIPA – Monitorización extensa
  - TCP/IP Connection – detalles de las conexiones
    - Conexiones Inactivas con código de terminación
  - Real Time Packet y OSA Traces con “on the fly analysis”

### OMEGAMON XE for Mainframe Networks

NLDM API

TCP/IP NMI

VTAM API

SNMP

### z/OS Communications Server

- **Recolectadas usando TCP/IP NMI:**
  - Applications, Connections, TCP/IP Memory Statistics, IPsec
  - FTP Sessions and Transfers, TN3270 Server Sessions, Interfaces (z/OS 1.12)
- **Recolectadas usando VTAM API:**
  - ▶ VTAM Summary, CSM Buffer Pools
  - ▶ Enterprise Extender (EE), High Performance Routing (HPR)
- **Recolectadas usando SNMP:**
  - ▶ Interfaces (z/OS 1.11 o anterior)
  - ▶ OSA
- **Recolectadas usando “Session Awareness and trace” API:**
  - ▶ SNA Session Awareness and Trace

- ✓ Cambiamos de usar SNMP y NETSTAT COMMANDS a usar NMI API
- ✓ Menos overhead
- ✓ Escalable

## Tivoli Enterprise Portal (TEP) – características destacadas

- **User interface Común para zOS**
  - Gestiona recursos z/OS y distribuido - single user interface.
  - Muestra real time , histórico y alertas al mismo tiempo
  - Customización y administración a través del mismo interface
  - Define thresholds y genera eventos
- **Out of the box Best Practices**
  - Workspaces
  - Situations – Avisa de problemas y permite Expert Advice (ALERTAS)
- **Creación de tus propias vistas y situaciones**
  - Coincidiendo con la responsabilidad y el nivel de skills del usuario

The screenshot displays the Tivoli Enterprise Portal (TEP) interface for monitoring the WMDACHN application. The interface is divided into several sections:

- LISTENER for: WMDACHN**: A summary table showing application statistics.
- Active Connections for: WMDACHN**: A table listing active connections with columns for Remote Port, ASID, Connection Start Time, Connection Duration, Connection State, Response Time, Time Since Last Activity, Duplicate ACKs, Total Segments Retransmitted, and Total Out of Order Segments.
- INACTIVE CONNECTIONS for: WMDACHN**: A table listing inactive connections with columns for Main ID, Resource Name, Remote IP Address, Remote Port String, Termination Reason Code, Total Segments Retransmitted, and Byte Rate.
- Application Connection Topo...**: A diagram showing the network topology of the application connections.
- JOB OVERVIEW**: A table showing job details for WMDACHN, including Job Name, CPU Percent, Step Name, Proc Step, Type, SysClass, SysClass Period, ASID, JESJOBID, TCB Percent, BRB Percent, FA Percent, FA on CP Percent, ZFP Percent, ZFP on CP Percent, and Independent Enclose C.

The bottom of the screenshot shows the text "zOS Job summary for: WMDACHN".

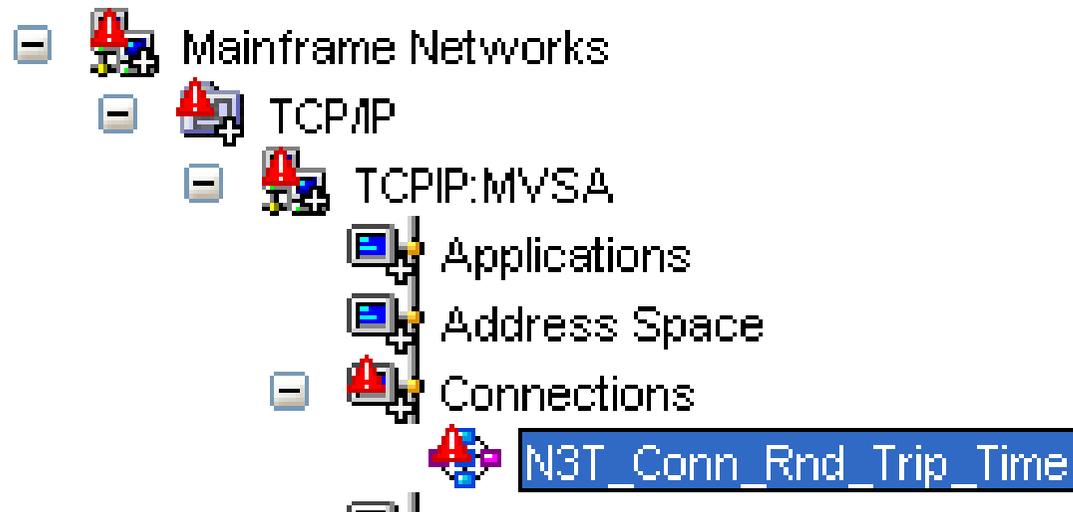
## View Thresholds

Muestra las métricas en una tabla (ver y modificar)

Response Time	Origin Node	System ID
15.19	TCPIP:MVSA	MVSA
5.67	TCPIP:MVSA	MVSA
Response Time GE 5.00		

## Situations

Notificación, a través del TEP , OMNIBUS o incluso un email



# Situation Expert Advice

The screenshot displays the Situation Expert Advice interface. On the left is a tree view of system components. The main area contains two tables: 'Initial Situation Values' and 'Current Situation Values'. Below these is a 'Take Action' panel with a dropdown for 'Drop' and a 'Command' field containing 'drop'. On the right, the 'Expert Advice' window is open, showing a description for 'N3T\_Conn\_Rnd\_Trip\_Time'.

Initial Situation Values										
Response Time	Application Name	Connection Type	Local Port	Foreign Socket	Connection Number	Connection State	Total Bytes Received	Total Bytes Sent	Total Bytes	Total Bytes
6.48	CICSAOR5	TCP_Connection	18085	9.65.243.124:3440	6745433	ESTABLISHED	884	759	1643	1643
16.16										

Current Situation Values										
Response Time	Application Name	Connection Type	Local Port	Foreign Socket	Connection Number	Connection State	Total Bytes Received	Total Bytes Sent	Total Bytes	Total Bytes
6.48	CICSAOR5	TCP_Connection	18085	9.65.243.124:3440	6745433	ESTABLISHED	884	759	1643	1643
16.16										

**Take Action**

Action Name: Drop  
 Command: drop

Destination Systems: TCP/IP: MVSA

**Expert Advice**

**N3T\_Conn\_Rnd\_Trip\_Time**

Situation Description  
Suggested Actions

**Connection round trip time**

The response time for the last TCP segment transmitted on the connection. It is the elapsed time, in tenths of a second, starting when the segment was sent and ending when the acknowledgment was received. Round trip time is not end-to-end response time since it does not account for application time. However in conjunction with the round trip variance, it is a good indication of the general health of the route.

- **Initial Situation Values:** Captura métricas cuando se alcanza el umbral.
- **Current Situation Values:** Compara métricas actuales con las iniciales
- **Expert Advice:** Proporciona sugerencias para tomar acciones
- **Take Action:** Ejecuta comandos desde el TEP
- **Reflex Automation:** Ejecuta comandos Automáticamente
- **Event Forwarding:** Puede enviar alertas a OMNIBUS



# Networks Extended Navigator Workspaces

- El Networks\_Extended Navigator View ha sido creado para simplificar la monitorización de las redes de z/OS usando OMEGAMON for Mainframe Networks.
- Muchos de estos workspaces fueron creados partiendo de experiencias de usuarios para solucionar problemas específicos de la red.

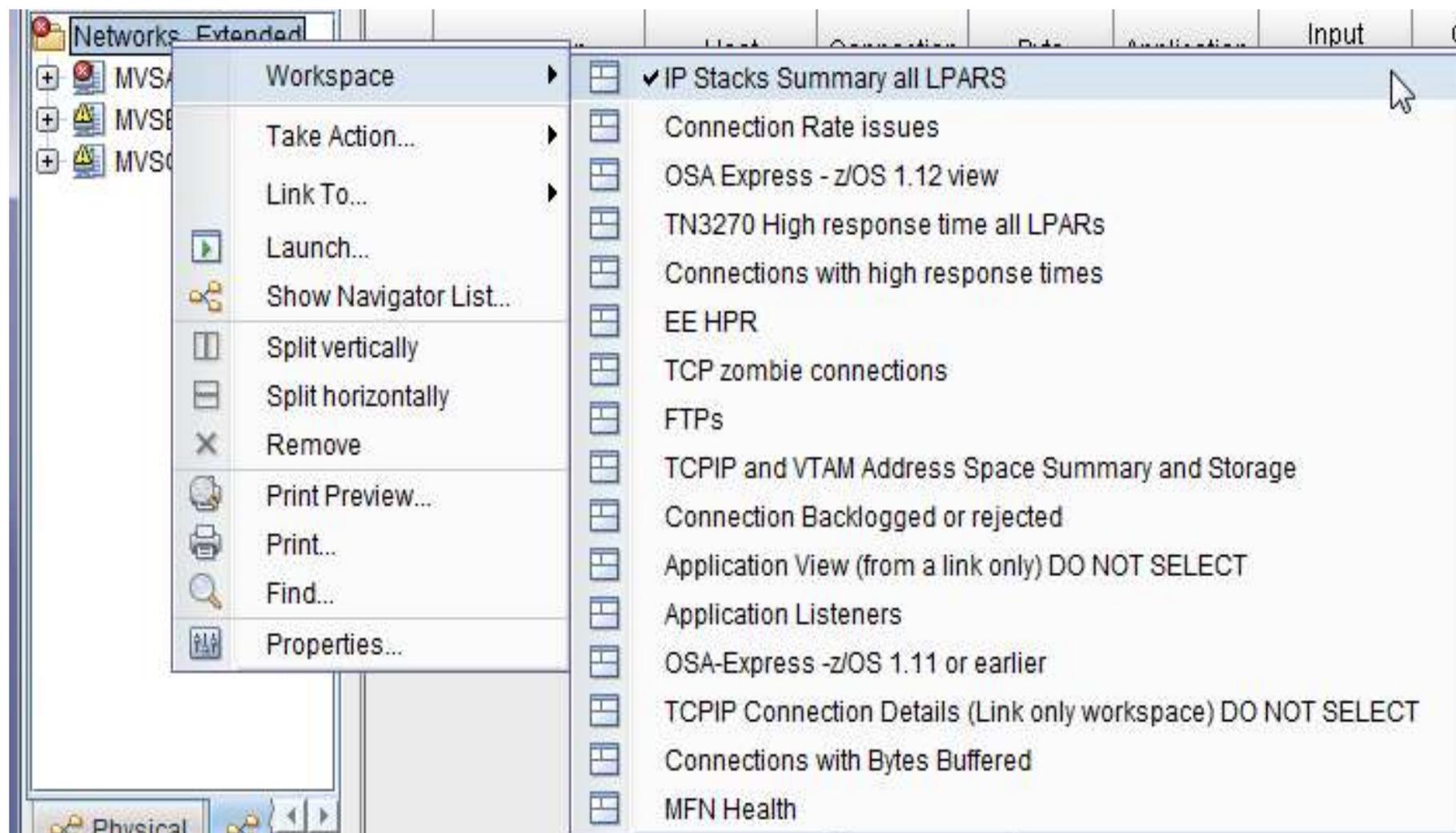
## Prerequisitos

1. IBM Tivoli OMEGAMON XE for Mainframe Network on z/OS V4.2.0 PID 5698-A35
2. IBM Tivoli OMEGAMON DE on z/OS
3. Fixpack 4.2.0.3-TIV-KN3-IF0001
4. PTFs UA59709 UA61066
5. IBM Tivoli Monitoring V6.2.2 FP5 - Recomendado FP6 o posterior

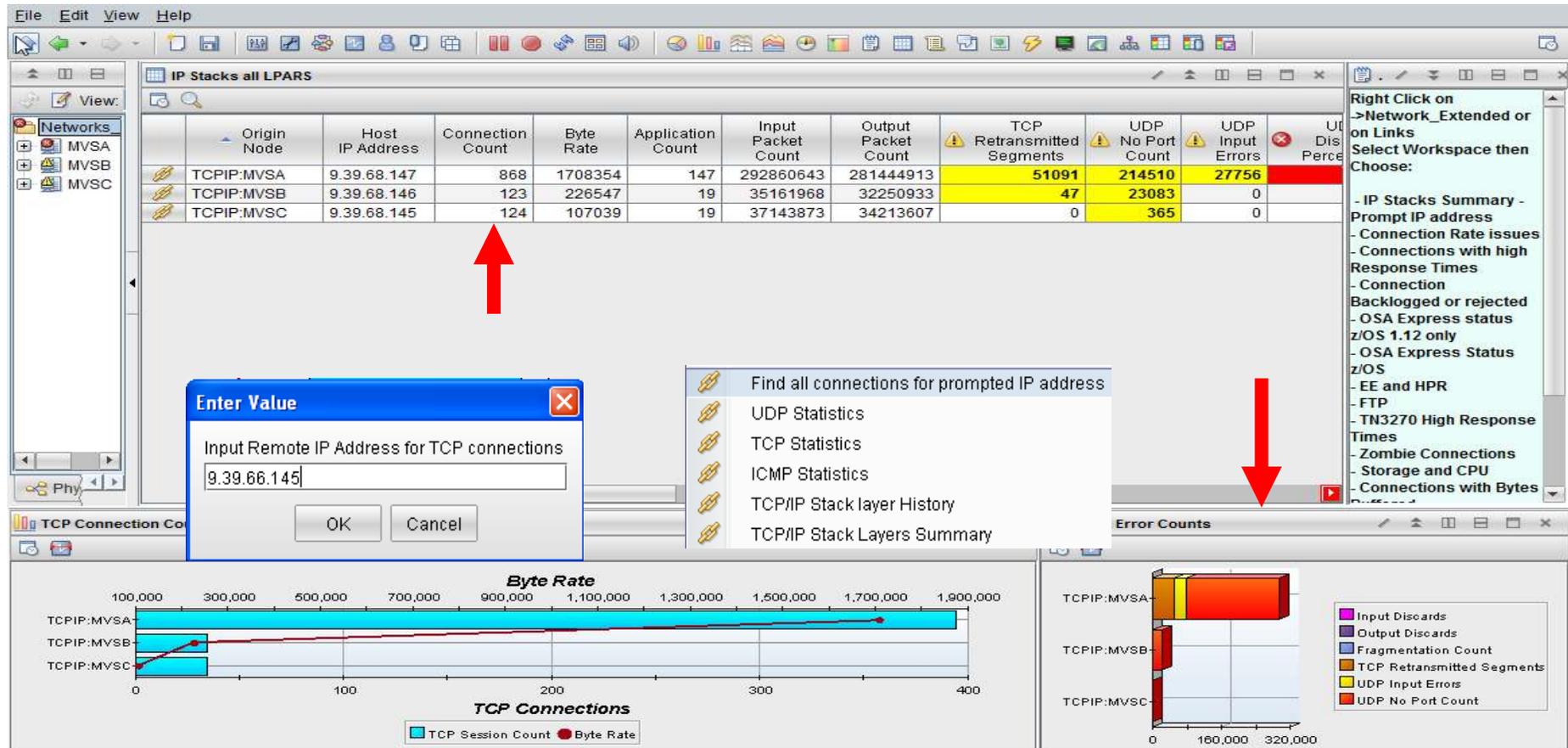
## COMPONENTES OPCIONALES para hacer Drill down a la vista de Aplicaciones

1. NetView for z/OS V5R4 or Later. (Proporciona Inactive Connection failure reason codes).
2. OMEGAMON on z/OS V4R2 (Proporciona detalles de consumo de CPU de las Aplicaciones)

# Lista de Workspaces en Networks Extended



# IP Stacks Summary: Lista todos los IP Stacks (default workspace)



En el "IP Stacks Summary workspace", podemos ver estadísticas del tráfico en todas las LPARs.

Desde este workspace podemos ver información de los TCP/IP stacks, como: connection count, retransmitted segments, fragmentation, etc.

Podemos hacer click dcho y especificar un Remote IP Address para encontrar todas las conexiones relativas a esa dirección IP.

Recomendaciones:

-Crear situaciones para monitorizar segmentos retransmitidos.



# TCP/IP y VTAM Address Space y Storage Summary

**TCP/IP Address Space all LPARS**

System ID	Host IP Address	zOS Release	CPU Percentage	Paging Rate	CSA Usage Below 16MB	CSA Percent Below 16MB	Total CSA Usage	Total CSA Percentage	Connection Count	Byte Rate	Application Count
MVSB	9.39.68.146	zOS_1.12	0	0	136	0	26032	0	53	67999	15
MVSC	9.39.68.145	zOS_1.12	0	0	136	0	26032	0	73	118353	15
MVSA	9.39.68.147	zOS_1.12	0	0	136	0	34392	0	587	1299346	121

**TCP/IP Memory Statistics all LPARS**

System ID	IP Address	ECDSA Storage In Use	ECDSA Storage Free	Percent ECDSA Storage In Use	Authorized Private Storage In Use	Authorized Private Storage Free	Percent Authorized Private Storage In Use	64bit Common Storage In Use	64bit Common Storage Free
MVSB	9.39.68.146	3,071,680	0	100	8,917,608	9,456	100	151,120	897,...
MVSC	9.39.68.145	3,070,848	0	100	9,040,392	9,808	100	157,504	891,...
MVSA	9.39.68.147	6,361,080	61,608	99	11,197,544	24,208	100	333,568	715,...

**VTAM Address Space all LPARS**

System ID	CPU Percentage	Paging Rate	CSA Below	CSA Percent	CSA Intly tated	CSA Percentage	DASD SIO Per Sec	NCP SIO Per Sec	CTC SIO Per Sec	Local SNA SIO Per Sec	Local Non-SNA SIO Per Sec	Other SIO Per Sec	SIO Rate Pct of System
MVSC	0				9228	2	0	0	0	0	0	0	0
MVSA	0	0	84541	2	10213686	3	0	0	0	0	0	0	0

**CSM Storage Statistics all LPARS**

System ID	Percent ECDSA In Use Storage	Percent ECDSA Allocated Storage	Storage In Use Across ECDSA Pools	Storage Free Across ECDSA Pools	Storage Allocated Across ECDSA Pools	Maximum ECDSA Storage Allowed	Storage In Use Across DSP Pools	Storage Free Across DSP Pools	Storage Allocated Across DSP Pools	Storage In Use Across Pools
MVSC	0	2	248	1800	2383	122880	5208	1616	6824	5456
MVSA	1	3	812	2340	4160	122880	23008	5648	28656	23820

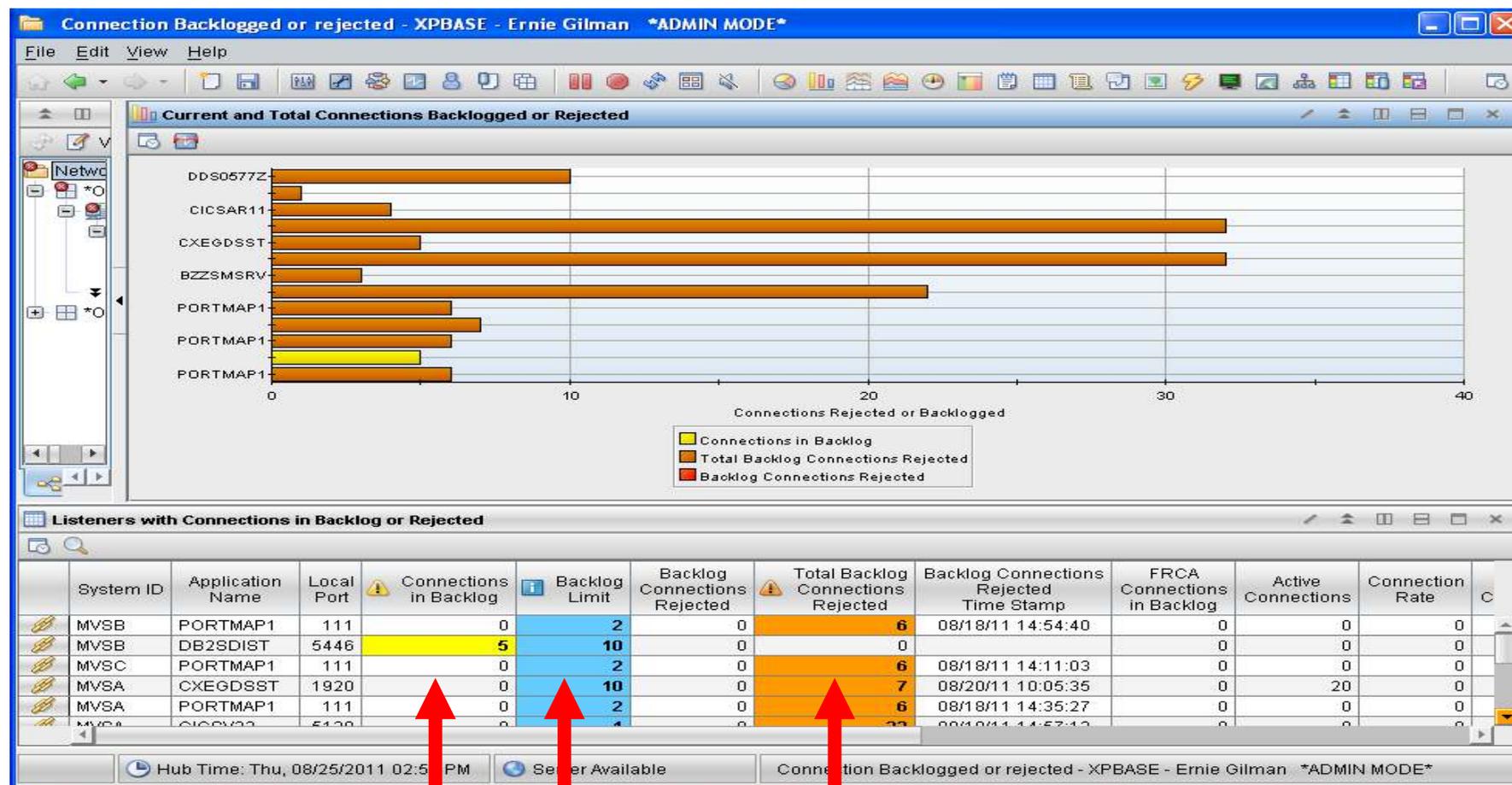
El "VTAM address space and storage summary" proporciona información de nuestras redes VTAM , así como el TCP/IP Storage en todas las LPARS.

Recomendaciones:

- Crear Situaciones que notifiquen sobre el uso de storage o problemas de uso de buffer.



# Conexiones Backlogged o Rejected

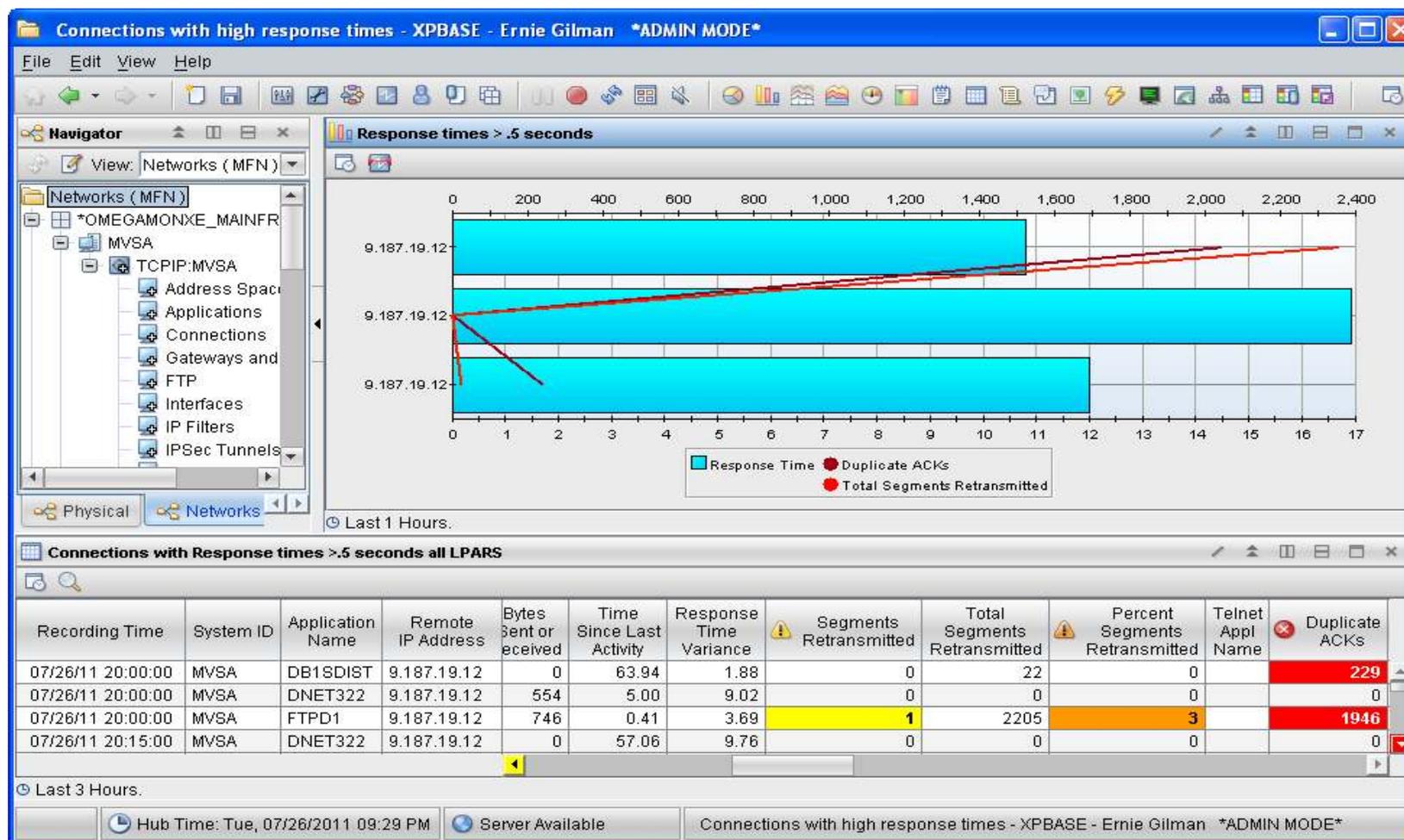


El workspace "Connection Backlogged and Rejected" muestra conexiones que están siendo encoladas o rechazadas.. Las Conexiones empiezan a ser rechazadas cuando las Conexiones encoladas exceden el backlog limit.

Recomendaciones.

- Habilitar el histórico y mirar qué es lo que está sucediendo cuando las Conexiones comienzan a tener backlog.
- Considerar incrementar el Backlog Limit si esto se convierte en un problema.

# Conexiones con Tiempos de Respuesta altos



El workspace "Connections with High Response Times" muestra aplicaciones que están experimentando altos tiempos de respuesta, que podría indicar un problema con esa conexión.

Recomendación:

Incrementar el response time threshold en Custom Query para reducir el número de Conexiones listadas.



# Zombie Connections

TCP connections with no activity for >2 Days - all LPARS

	Origin Node	Application Name	Remote IP Address	Remote Port	Local IP Address	Local Port	ASID	Byte Rate	Time Since Last Activity	Connection State	Inbound Bytes Buffered
	TCPIP:MVSA	BBOS002S	9.39.68.147	9558	9.39.68.147	50145	0X018D	0	248,818.80	CLOSE_WAIT	23
	TCPIP:MVSA	BBOS002S	9.39.68.147	9558	9.39.68.147	50144	0X018D	0	248,818.80	CLOSE_WAIT	23
	TCPIP:MVSA	BBOS002S	9.39.68.147	9558	9.39.68.147	41581	0X018D	0	248,881.85	CLOSE_WAIT	23
	TCPIP:MVSA	BBOS002S	9.39.68.147	9558	9.39.68.147	50145	0X018D	0	248,878.80	CLOSE_WAIT	23
	TCPIP:MVSA	BBOS002S	9.39.68.147	9558	9.39.68.147	50145	0X018D	0	248,878.80	CLOSE_WAIT	23
	TCPIP:MVSA	BBOS002S	9.39.68.147	9558	9.39.68.147	50145	0X018D	0	248,878.80	CLOSE_WAIT	23
	TCPIP:MVSA	RD4ZRSE9	9.39.68.147	9558	9.39.68.147	50145	0X018D	0	248,878.80	CLOSE_WAIT	23
	TCPIP:MVSA	HSISANLO	9.145.1.1	9558	9.39.68.147	50145	0X018D	0	248,878.80	CLOSE_WAIT	23
	TCPIP:MVSA	HSISANLO	9.145.1.1	9558	9.39.68.147	50145	0X018D	0	248,878.80	CLOSE_WAIT	23
	TCPIP:MVSA	CICSCM	9.78.95.1	9558	9.39.68.147	50145	0X018D	0	248,878.80	CLOSE_WAIT	23
	TCPIP:MVSA	RESERV1	9.39.68.147	9558	9.39.68.147	50145	0X018D	0	248,878.80	CLOSE_WAIT	23
	TCPIP:MVSA	ADHSRV2	9.39.68.147	9558	9.39.68.147	50145	0X018D	0	248,878.80	CLOSE_WAIT	23
	TCPIP:MVSA	WMQACHIN	9.39.92.1	9558	9.39.68.147	50145	0X018D	0	248,878.80	CLOSE_WAIT	23
	TCPIP:MVSA	CQMCAESV	9.76.93.1	9558	9.39.68.147	50145	0X018D	0	248,878.80	CLOSE_WAIT	23
	TCPIP:MVSA	IBMSMV31	9.78.91.1	9558	9.39.68.147	50145	0X018D	0	248,878.80	CLOSE_WAIT	23
	TCPIP:MVSA	IBMSMV31	9.65.218.231	2593	9.39.68.147	9994	0X00EC	0	179,950.82	ESTABLISHED	0
	TCPIP:MVSA	REAGNT1	9.39.68.147	9876	9.39.68.147	1034	0X00D1	0	543,964.54	ESTABLISHED	0
	TCPIP:MVSA	CQMCAESV	9.65.144.62	56903	9.39.68.147	443	0X00CC	0	348,194.68	ESTABLISHED	0
	TCPIP:MVSA	CQMCAESV	9.65.166.142	49940	9.39.68.147	443	0X00CC	0	351,563.01	ESTABLISHED	0
	TCPIP:MVSA	ADHADB1S	9.39.68.147	62521	9.39.68.147	1035	0X00D8	0	543,962.40	ESTABLISHED	0
	TCPIP:MVSA	IBMSMV31	9.20.203.70	3223	9.39.68.147	9994	0X00EC	0	281,524.92	ESTABLISHED	0

Specification Query Results Source

Specification

	fx Origin Node	fx Remote IP Address	fx Time Since Last Activity	fx Remote IP Address	fx Byte Rate	fx Col T
1	<input checked="" type="checkbox"/>					
2	== \$NODE\$	!= '127.0.0.1'	> 172,800.00	!= '::1'		
3						
4						

El "Zombie Connection workspace" muestra conexiones que han estado activas por 2 dias , pero que no tienen actividad. Las Conexiones que no tienen actividad pueden indicar que una aplicacion se esté colgando o quizá que no esté haciendo drop de las Conexiones. Estas conexiones pueden consumir memoria y es necesario hacerles un kill o un drop.

Recomendación:

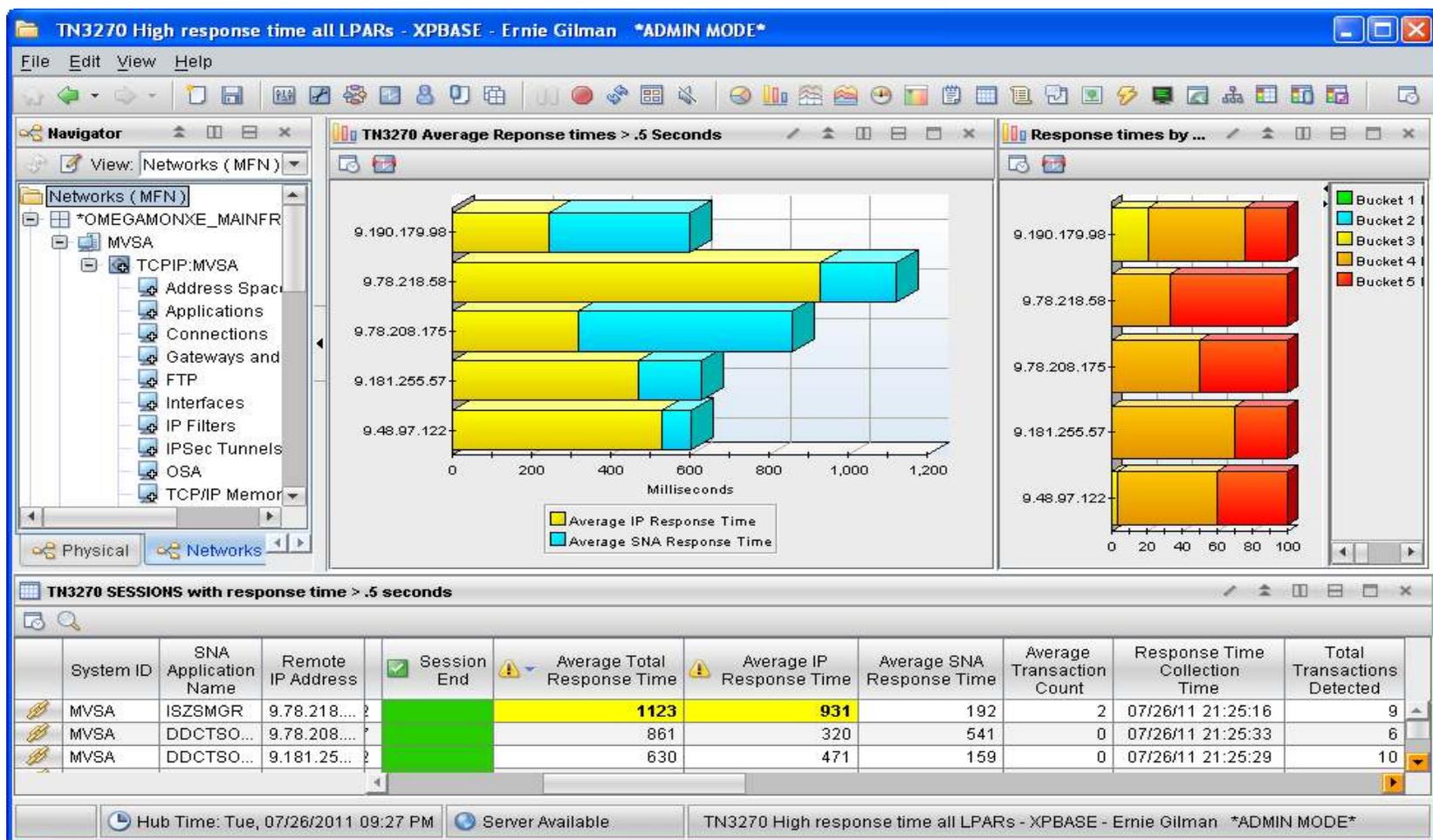
Filtrar las conexiones conocidas que se mantienen sin tráfico durante mucho tiempo. Default es 2 dias (172,800 segundos)

Filtrar idle connections que no son un problema.

Podemos customizar la cantidad de tiempo que consideremos que sea una conexión zombie.



# Tiempo de Respuesta TN3270



El " TN3270 High Response Time workspace" muestra información acerca de las conexiones TN3270 donde el tiempo de respuesta es > 0.5 seconds. Este workspace puede ser usado para diagnosticar todos los problemas 3270 en una pantalla.

Recomendaciones:

- Incrementar el umbral de response time en Custom Query para reducir el número de conexiones listadas.
- El Response time puede ser configurado a otro valor diferente a 0.5 segundos



# OSA-EXPRESS Interfaces (z/OS 1.12)

The screenshot displays the OSA Express z/OS 1.12 view interface. The main window shows the OSA Interface Topology, which is a tree diagram with MVSA at the root, branching into MVSB, MVSC, and MVSA. Below this, there are several data tables:

**Interface Statistics OSA only - all IPARS z/OS 1.12 only**

System ID	Interface Name	Interface Type	Device or Datapath Status	Interface Status	Total Outbound Packets Discarded for No Storage	IP Address Version	Total Inbound Packets Discarded in Error
MVSB	OSAFC0L	OSA GDIO ethernet OSD	Active	Active	0	IPv4	4
MVSC	OSAFC0L	OSA GDIO ethernet OSD	Active	Active	0	IPv4	4
MVSA	EZ60SM01	OSA GDIO ethernet OSM	Active	Active	24	IPv6	32
MVSA	EZ60SM02	OSA GDIO ethernet OSM	Active	Active	24	IPv6	32
MVSA	OSAFC0L	OSA GDIO ethernet OSD	Active	Active	0	IPv4	2
MVSA	OSK320P	OSA GDIO ethernet OSK	Active	Active	0	IPv4	0
MVSA	OSK320P	OSA GDIO ethernet OSK	Active	Active	0	IPv4	0

**Interface Write Queue Statistics**

System ID	Interface Name	Interface Type	Interface Status	GDIO Accelerator	Frame Invalidation Support	Queue Priority	Q
MVSA	OSK340P	OSA Q...	Active	No	Yes	4	4
MVSA	OSK340P	OSA Q...	Active	No	Yes	3	3
MVSA	OSK340P	OSA Q...	Active	No	Yes	2	2
MVSA	OSK340P	OSA Q...	Active	No	Yes	1	1
MVSA	OSK320P	OSA Q...	Active	No	Yes	4	4
MVSA	OSK320P	OSA Q...	Active	No	Yes	3	3
MVSA	OSK320P	OSA Q...	Active	No	Yes	2	2

**OSA Interface Status**

IP Address Version	Device or Datapath Status	Interface Status	Duplicate Address Count	Interface Type	Actual Inbound Performance Type	Actual MTU Value	TCP Segmentation Offload Active
IPv4	Active	Active	0	OSA GDIO ethernet...	DYNAMIC	8992	No
IPv4	Active	Active	0	OSA GDIO ethernet...	DYNAMIC	8992	No
IPv6	Active	Active	1	OSA GDIO ethernet...	BALANCED	1500	No
IPv6	Active	Active	1	OSA GDIO ethernet...	DYNAMIC	1500	No

**Interface Read Queue Statistics**

System ID	Interface Name	Interface Status	GDIO Accelerator	Frame Invalidation Support	Queue Workload Name	Queue ID	Real Intern
MVSB	OSAFC0L	Yes	No	Yes	PRIMARY	1	505
MVSC	OSAFC0L	Yes	No	Yes	PRIMARY	1	410
MVSA	EZ60SM01	Yes	No	Yes	PRIMARY	1	1
MVSA	EZ60SM02	Yes	No	Yes	PRIMARY	1	1
MVSA	OSAFC0L	Yes	No	Yes	PRIMARY	1	4,120
MVSA	OSK320P	Yes	No	Yes	PRIMARY	1	1
MVSA	OSK340P	Yes	No	Yes	PRIMARY	1	1

El "OSA express workspace" muestra información de la OSA en todo el sistema.. Podemos usarla para analizar el Interface status, Performance, condiciones de error y Configuración.

También podemos ver estadísticas de lectura y escritura para otros interfaces, como hipersockets.

Recomendaciones:

- Filtrar OSA Express Interfaces que no están normalmente en uso.
- Crear situation "OSA-Express Status" = no Activa.



# OSA-EXPRESS z/OS 1.11 o anterior

OSA-Express -z/OS 1.11 or earlier - XPBASE - Ernie Gilman \*ADMIN MODE\*

File Edit View Help

Navigator View: Networks\_Sample

Networks\_Sample

- \*OMEGAMONXE\_MAINFRAME\_NTWK\_TC
  - MVSA
    - TCPIP:MVSA
      - Connections
        - More...
- \*OMEGAMONXE\_MAINFRAME\_NTWK\_VT...

Networks\_Sample

OSA Interface Topology - - Interface Names and System IDs

```

    graph TD
      MVSA --- OSX3400P
      MVSA --- OSX3200P
      MVSA --- EZ6OSM02
      MVSA --- EZ6OSM01
      MVSA --- OSAFBC0L
      MVSB --- OSAFBC0L
      MVSC --- OSAFBC0L
    
```

OSA Interfaces - all LPARS

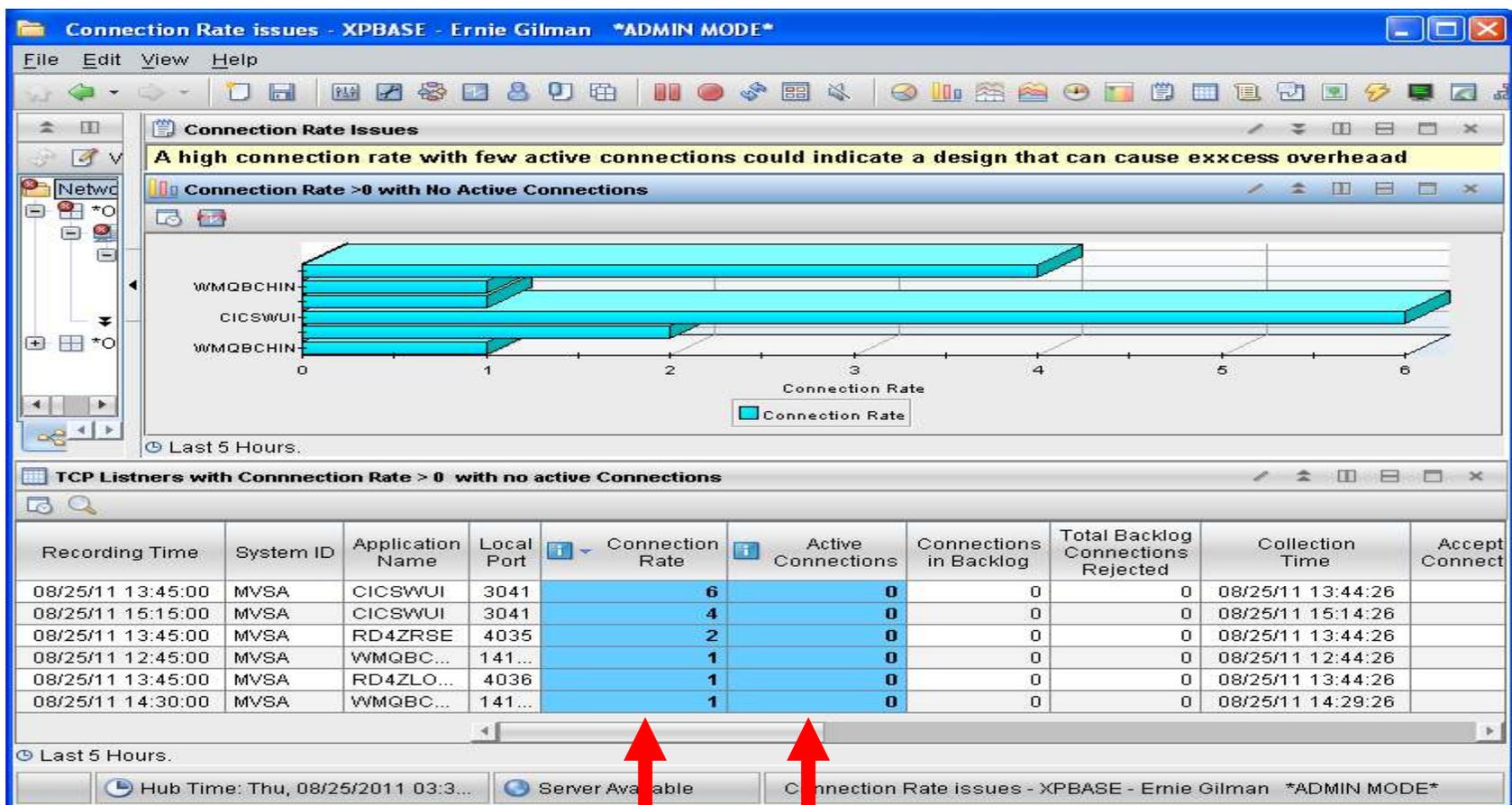
System ID	Interface Name	Interface Type	Physical Address	Current State	MTU Size
MVSB	OSAFBC0L	OSA_QDIO_ethernet_OSD	E41F13500C00	Up	8992
MVSC	OSAFBC0L	OSA_QDIO_ethernet_OSD	E41F13500C00	Up	8992
MVSA	EZ6OSM01	OSA_QDIO_ethernet_OSM	0200FDF7601A	Up	1500
MVSA	EZ6OSM02	OSA_QDIO_ethernet_OSM	0200FDF2001A	Up	1500
MVSA	OSAFBC0L	OSA_QDIO_ethernet_OSD	E41F13500C00	Up	8992
MVSA	OSX3200P	OSA_QDIO_ethernet_OSX	02EE5B000017	Up	8992
MVSA	OSX3400P	OSA_QDIO_ethernet_OSX	02E573000017	Up	8992

OSA Express Channels - all LPARS

System ID	Channel Number	Device or Port Name	Micro Code Level	PCI Utilization Per Minute
MVSA	01	IUTMP001	0X0906	0
MVSA	02	IUTMP002	0X0906	0
MVSA	04	IUTXP004	0X0D0A	0
MVSA	06	IUTXP006	0X0D0A	0
MVSB	0B	OSAFBC0P	0X0010	3
MVSC	0B	OSAFBC0P	0X0010	3
MVSA	0B	OSAFBC0P	0X0010	3

Hub Time: Thu, 08/25/2011 04:40 PM Server Available OSA-Express -z/OS 1.11 or earlier - XPBASE - Ernie Gilman \*ADMIN MODE\*

# Problemas con el Connection Rate



El "Connection Rate issues workspace" muestra aplicaciones en todas las LPARS que tengan ratios de conexión altos, pero que no tengan conexiones activas. Altos ratios de conexión con conexiones no activas podría indicar problemas con el diseño de la aplicación que puede causar un excesivo overhead o incluso un ataque malicioso al sistema.

Recomendación:

-Filtrar Aplicaciones donde los altos ratios de conexiones son aceptables.

# HPR y EE

The screenshot displays the HPR and Enterprise Extender workspace. It is divided into three main sections:

- HPR all LPARS:** A table showing recording sessions with columns for Recording Time, System ID, Remote CP Name, Sessions, ARB Mode, and Local RTP Pipe Name. The ARB Mode column uses color coding: Yellow for sessions with 11 sessions, Red for sessions with 6 sessions, and Green for sessions with 2, 1, or 6 sessions.
- HPR Topology:** A network diagram showing four nodes: US IBMNR.NDCMVSA, US IBMNR.NDCMVSC, US IBMNR.T499, and US IBMNR.NDCMVSB. They are interconnected in a mesh-like structure.
- Enterprise Extender all LPARS:** A table showing performance metrics for a specific session. The data is as follows:

Origin Node	System ID	PU Name	Local IP Address	Remote IP Address	RTP Pipes	Sessions	Packets Retransmitted	Percent of Packets Retransmitted	Packet Retransmission Rate	Transmit Byte Rate	Receive Byte Rate	Bytes Sent	Bytes Received
VTAM:MVSA	MVSA	EX000012	9.39.68.12	9.65.189.66	1	2	0	0	0	33	33	33	33

El " High Performance Routing (HPR) and Enterprise Extender (EE) workspace" muestra la configuración y el estado del dispositivo en todas las LPARS. . El modo ARB de un HPR pipe puede mostrarse en ROJO cuando ningun dato has entrado por el HPR pipe.

Recommendations:

-Filtrar por ARB mode en entornos grandes.

# OMEGAMON for Mainframe Networks Agents Health

The screenshot displays the 'MFN Health - XBASE - Ernie Gilman \*ADMIN MODE\*' application window. It contains three main data tables:

### MFN Agent Status - ALLPARS

System ID	Origin Node	TCP Collection Start Time	TCP Collection Interval	TCP Collector SMI Parameter Dataset Name	PAAGENT Daemon Stated	IKE Daemon Stated	SNA Collection Stated	SNA Collection Start Time	SNA Collection Interval	Virtual IO Unit Name	System Name
MVSB	CXE0N3: MVSB:KN3AGENT	08/20/11 10:05:58	1	CANDLET XE6A.DEMO.MVSB.RKANPARU(KN3SNMP)	No	No	Yes	08/20/11 10:05:58	1	WIO	DEMOPLEX
MVSC	CXE0N3: MVSC:KN3AGENT	08/20/11 10:04:39	1	CANDLET XE6A.DEMO.MVSB.RKANPARU(KN3SNMP)	No	No	Yes	08/20/11 10:04:39	1	WIO	DEMOPLEX
MVSA	CXE0N3: MVSA:KN3AGENT	08/20/11 10:10:02	1	CANDLET XE6A.DEMO.MVSB.RKANPARU(KN3SNMP)	No	No	Yes	08/20/11 09:44:21	1	WIO	DEMOPLEX

### MFN SNA Collector Status - ALLPARS

Origin Node	Agent VTAM Major Node Name	Agent VTAM Major Node Status	Agent VTAM Application Name	Agent VTAM Application Status	PNI Exit Name	PNI Exit Status	SNA NM Enabled	EE And HPR Collection	ALL HPR Collection	CSM Buffer Reporting Collection	Buffer Pool And VTAM Environment Collection	System Name
CXE0N3: MVSB:KN3AGENT	APPL0M33	ACTIV	XE83N3SP	ACTIV	KN3AMV00	ACTIVE	Yes	Yes	Yes	Yes	Yes	DEMOPLEX
CXE0N3: MVSC:KN3AGENT	APPL0M33	ACTIV	XE83N3SP	ACTIV	KN3AMV00	ACTIVE	Yes	Yes	Yes	Yes	Yes	DEMOPLEX
CXE0N3: MVSA:KN3AGENT	APPL0M31	ACTIV	XE81N3SP	ACTIV	KN3AMV00	ACTIVE	Yes	Yes	Yes	Yes	Yes	DEMOPLEX

### MFN TCP Collector Status - ALLPARS

Origin Node	P Agent name	SNMP Agent Port	SNMP Version	SNMP Service Enabled	IPv4 Security Enabled	IPv6 Security Enabled	Connections And Applications Collection	IP Security Collection	QoS Statistics Collection	Stack Layer Statistics Collection	Interface Statistics Collection	Data Link Control Statistics Collection	Routing Table Collection	Routing Table Collection Frequency	TH3271 Buffer Collection
CXE0N3...	WFO	161	snmp...	Yes	No	No	Yes	No	Yes	Yes	Yes	Yes	Yes	15	Yes
CXE0N3...	WFO	161	snmp...	Yes	No	No	Yes	No	Yes	Yes	Yes	Yes	Yes	15	Yes
CXE0N3...	WFO	161	snmp...	Yes	No	No	Yes	No	Yes	Yes	Yes	Yes	Yes	15	Yes

At the bottom of the window, there are status indicators: 'Hub Time: Sun, 08/20/2011 02:42 PM', 'Server Available', and the application title 'MFN Health - XBASE - Ernie Gilman \*ADMIN MODE\*'.

El "OMEGAMON for Mainframe Networks Agents Health " muestra información del estado de los agentes que se ejecutan en mis sistemas Me dice si hay un problema recolectando datos en mis sistemas y también si el TEP tiene conexión con el MFN agent.

Recomendaciones:

- Si tenemos un workspace vacío, verificar si los datos se están colectando.
- Es el primer workspace que debería ser chequeado cuando se comienza a usar MFN para asegurarse que el agente está recolectando información.



# Listeners con Active Connections

Pop-up Commands

- Right Click anywhere on a connection row and select: DROP PING TRACETE NSLOOKUP or EXPORT
- Select Link for Application Network View

Listeners with active connections - All LPARS

System ID	Application Name	Local Port	Active Connections	Idle Time Since Last Accept	Hex Connection Number	Local IP Address	Accepted Connections	Conne Rat
MVSA	CXEGDSST	9002	21	25.21	0X002A5E59	0.0.0.0	0	
MVSA	CXEGDSST	1920	19	15.08	0X002A595F	0.0.0.0	0	

Listeners with active connections - All LPARS

System ID	Application Name	Local Port	Active connections in Water Mark	Time Stamp for Active Connections High Water Mark	Server Up Time	Connections in Backlog	Established Connections in Backlog	FRCA Connections in Backlog	Backlog Connections Rejected	Total Backlog Connections Rejected	Backlog Co Reje Time
MVSA	BBOS002	9558	163	02/27/12 18:01:56	007:45	0	0	0	0	36	02/24/12
MVSA	CQMCAE...	443	17	02/24/12 05:57:55		0	0	0	0	32	02/29/12
MVSA	OSNMPD	1026	1	02/22/12 20:04:55		0	0	0	0	0	
MVSA	CXEGDS...	1920	3	02/23/12 02:03:55		0	0	0	0	0	
MVSA	AUISIMSA	525...	1	02/27/12 10:36:56		0	0	0	0	0	
MVSA	NETVIEW	4022	2	02/22/12 20:04:55		0	0	0	0	0	
MVSA	DTSP	130...	11	02/28/12 19:06:56		0	0	0	0	0	
MVSA	CTGATE1	2980	1	02/22/12 20:04:55		0	0	0	0	0	
MVSA	TN3270	23	30	02/23/12 14:04:55		0	0	0	0	0	
MVSA	IDIGSVR	5124	13	02/29/12 21:53:56		0	0	0	0	0	
MVSA	CTGATE4	320...	1	02/22/12 20:04:55		0	0	0	0	0	
MVSA	CXEGHL	499...	2	02/22/12 20:04:55		0	0	0	0	0	
MVSA	CXEGRV	499...	2	02/22/12 20:04:55		0	0	0	0	0	

El "Listeners with Active Connections workspace" muestra listeners con un gran número de conexiones activas en mis LPARS. Desde este workspace se puede ejecutar algún comando sobre las conexiones si se encuentran problemas.

## Recomendaciones

-Chequear si alguna conexión ha sido rechazada bajo el campo "Total Backlog Connections Rejected"

# Application View

**How to issue POPUP commands**

Right Click anywhere on a connection and select: DROP PING TRACETE NSLOOKUP or EXPORT

**Application Listener for WMQACHIN**

System ID	Application Name	Local Port	Active Connections	Accepted Connections	Connection Rate	Active Connections High Water Mark	Time Stamp for Active Connections High Water Mark	Idle Time Since Last Accept	Server Up Time	Connections in Backlog	Established Connections in Backlog
MVSA	WMQACHIN	1414	7	0	0	7	08/25/11 15:38:26	0.18	187.70	0	

**Active Connections for APPLID:WMQACHIN**

Application Name	Remote IP Address	TN3270 Logmode Name	Segments Retransmitted	Total Segments Retransmitted	Percent Segments Retransmitted	Retransmission Rate	Local Window Size	Frequency
WMQACHIN	9.48.62.16		0	46	0	0		
WMQACHIN	9.50.48.2...		0	13	0	0		
WMQACHIN	9.39.92.2...		0	4	0	0		

**Inactive connections for APPLID:WMQACHIN (Last 10)**

System ID	Resource Name	Remote IP Address	Remote Port	Local Port	Termination Reason Code	Byte Rate	Connection Start Time	Connection End Time	Total Bytes Received	Total Bytes Sent	Total Bytes
MVSA	BBOS002S	9.39.68.147	9558	8616	Client_Sent_Reset	28...	08/25/11 14:56:12	08/25/11 14:57:12	1835	1018	2853
MVSA	BBOS002	9.39.68.147	8612	9558	Client_Sent_Reset	95...	08/25/11 14:55:59	08/25/11 14:56:26	514	3786	4300
MVSA	DSNCDIST	9.39.68.147	17184	448	App_Closed	80...	08/25/11 14:57:10	08/25/11 14:57:19	688	471	1159

**z/OS CPU Utilization summary for Address Space:WMQACHIN**

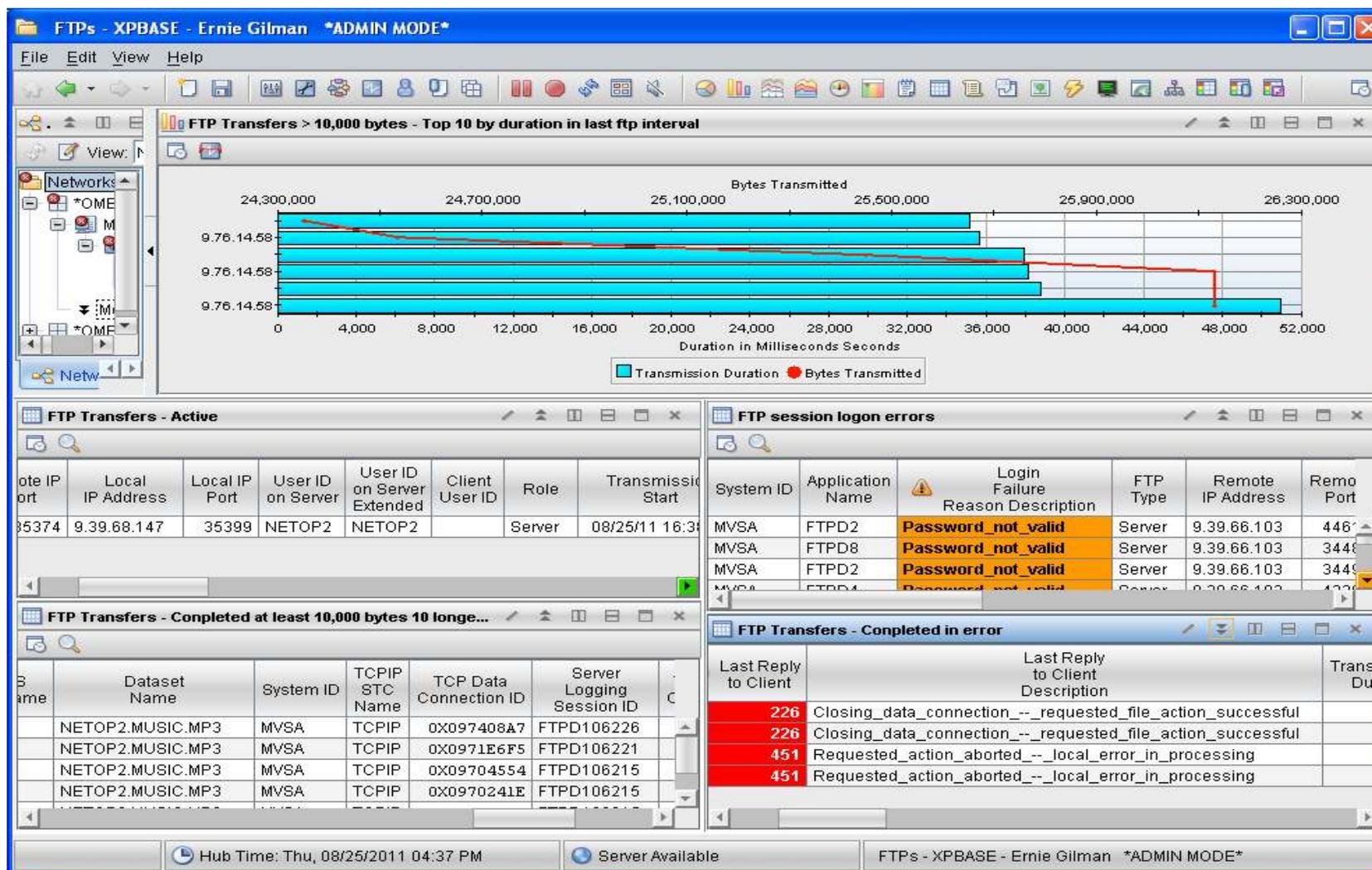
Managed System	Job Name	CPU Percent	TCB Percent	SRB Percent	IFA Percent	IFA on CP Percent	zIIP Percent	zIIP on CP Percent	Independent Enclave CPU%	Independent Enclave IFA%	Independent Enclave IFA% on CP
DEMOPLX:MVSA:MVSSYS	WMQACHIN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Hub Time: Thu, 08/25/2011 03:50 PM    Server Available    Application View from a link - XPBASE - Ernie Gilman \*ADMIN MODE\*

Este workspace muestra información específica para una aplicación en particular que es linkada desde otro workspace. Por ejemplo, si quisieramos más información acerca de la aplicación WMQACHIN desde otro workspace, podemos hacer click en el link para acceder a este workspace que es una vista en profundidad dentro de la aplicación. Este workspace contiene workspaces de OMEGAMON XE for z/OS y NetView.



# FTP



El "FTP workspace" muestra FTP performance, configuración e información del estado de aquellas aplicaciones que están usando FTP.



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