

What's New with NetView® for z/OS® 5.4?

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SHARE in Boston

What's New?

- NetView for z/OS V5.4
- Generally available October 2, 2009



NetView for z/OS V5.4

- Major Themes
 - ▶ Major Functional Enhancements
 - Expanded IP management
 - Broader sysplex & DVIPA management
 - Enhancements to core functionality
 - ▶ Enterprise Integration
- Prereqs z/OS 1.9

Major Functional Enhancements

- Expanded IP management
 - ▶ Enhanced trace (OSA and packet)
- Broader sysplex and DVIPA management
- Core functionality

OSA Trace

- Supports tracing of OSA packets with OSA-Express2 and OSA-Express3 Network Traffic Analyzer (OSAENTA)
- Allows for capture of
 - ▶ Ethernet data (Ethernet type, source/destination MAC addresses, VLAN tag, LLC fields)
 - ▶ IPv4 & IPv6 data
 - ▶ ARP packets
 - ▶ SNA transmission headers
 - ▶ Direction indicators
 - ▶ Discard code
 - ▶ Interface identification
- Syntax and behavior similar to packet trace function

Expanded Packet Trace

- Expand and better integrate packet trace functions
- New command: IPTRACE
 - ▶ Manage IP Packet Traces
 - ▶ Display Packet Trace data

Status of All Traces on All Known Stacks

Session B - [24 x 80]

File Edit View Communication Actions Window Help

FKXK2A00 TCP/IP for 390 IPTrace Control Center

Service Point/ Stack	Proc Name	NetView Domain	Trace Status
NMP101	TCPIP	LOCAL	CTrace/ACT PKT/ACT OSA/ACT
NMP217	TCPIP	NTVE1	

List of the stacks known to this NetView

On both local and remote domains

Status of traces on each stack.
PKT/ACT = an active Packet Trace.
OSA/ACT = an active OSA Trace.

Select a stack by moving the cursor to the line and pressing Enter.

Issue IPTRACE * to display this panel

Command ==>
F1=Help F2=Main Menu F3=Return F6=Roll
F7=Backward F8=Forward F12=Cancel

MA b 07/002

Connected to remote server/host ralvmr.raleigh.ibm.com using port 23

Status of All Traces on Selected Stack



Session D - [24 x 80]

File Edit View Communication Actions Window Help

FKXK2A01 IPTrace Control Center D52NV

Service Point/Stack: TVT2007 Proc: TCPIP7 Domain: LOCAL

		Status/Owner	Start	For	Writer
—	CTRACE	SYSTCPIP NONE/NA	NA	NA	*NONE*
—	PKTTRACE	SYSTCPDA ACTIVE/PHK	2009-08-14-08:18:37	NA	*NONE*
=	OSATRACE	SYSTCPOT ACTIVE/PHK	2009-08-14-08:18:56	NA	*NONE*

Command ==>

F1=Help F2=Main Menu F3=Return F5=Refresh F6 =Roll
F7=Backward F8=Forward F12=Cancel

MA d 14/003

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Packet Trace Control

Session D - [24 x 80]

File Edit View Communication Actions Window Help

FKXK2A22 PKTTRACE Control SYSTCPDA **ACTIVE** for NVDomain: LOCAL
z/OS : V1R11

Service Point/Stack: T
PKTS: **ACTIVE** On

Start Time: 2009-08-14-08:33:42

Options: 1-START/ADD 2-STOP 3-VIEW PACKETS

Existing packets (if any) can be viewed.

Infrc/Link	Stat	Prot	IP Address/Prefix	Src	PortNm	Dest	Record Count
3 TCPIPLINK	ON	TCP	*	*	*	*	0
TCPIPLINK2	OFF	*	*	*	*	*	0
TCPIPLINK6	OFF	*	*	*	*	*	0
EZASAMEMVS	OFF	*	*	*	*	*	0
EZ6SAMEMVS	OFF	*	*	*	*	*	0
EZAXCF06	OFF	*	*	*	*	*	0
		*	*	*	*	*	0
		*	*	*	*	*	0

Select link(s) of interest, filter by protocol and/or address, ports

Stop packet tracing (SYSTCPDA)

FKX400I PKTTRACE SCHEDULED FOR SP TVT2007 BY OPERATOR PHK
Command ==>

F1=Help F2=Main Menu F3=Return F4=Stop SYSTCPDA F5=Refresh F6=Roll
F7=Backward F8=Forward F9=Assist F10=PKTS Management F12=Cancel

MA d 13/002

Connected to remote server/host tivm2.raleigh.ibm.com using port 23

OSA Trace Control

Session D - [24 x 80]

File Edit View Communication Actions Window Help

FKXK2A30 OSATRACE Control SYSTCPOT ACTIVE for NVDomain: LOCAL
z/OS : V1R11

Service Point/Stack: TVT2007 TCPNAME: TCPIP OSA Tracing is active
OPKTS: ACTIVE On Task: AUTOOPKT GTF: No NetView domain and z/OS level

Start Time NetView is collecting 56 Writer: *NONE...
traced packets.

Options: 1-START 2-STOP 3-VIEW PACKETS

OSA Port	Stat/ Auth	Length	Data	Record	Time	Discard	Nofilter
OSA0	ON	224	1024	2147483647	10080	EXCEPTION	ALL
	LOGICAL		0	118	6	0	
OSA1	OFF	224	1024	2147483647	10080	EXCEPTION	NONE
	UNKNOWN		0	0	0	0	
NEW		224	1024	2147483647	10080	EXCEPTION	NONE

Stop OSA tracing (SYSTCPOT)

Apply filters

Command ==>
F1=Help F3=Return F4=Stop SYSTCPOT F5=Refresh F6=Roll
F7=Backward F8=Forward F9=Filters F10=PKTS Management F12=Cancel

MA d 12/003

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OSA Trace Filters

Session D - [24 x 80]

File Edit View Communication Actions Window Help

FKXK2A31 OSATRACE Filters SYSTCPOT **ACTIVE** for NVDomain: LOCAL
z/OS : V1R11

Service Point/Stack: TVT2007 Proc: TCPIP7

OSA Port Name: OSAA Clear Filters: NO (YES/NO)

Protocol	Ethernet Type	Port	Device ID	VLAN ID	Mac Address
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Filter by IP address(es)

Up to 8 entries for each type

Command ==>
F1=Help F3=Return F4=Update Filters F6=Roll
F8=IP Addresses F12=Cancel

MA d 05/054

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OSA Trace Filters: IP Addresses

Session D - [24 x 80]

File Edit View Communication Actions Window Help

FKXK2A32 OSATRACE Filters SYSTCPOT **ACTIVE** for NVDomain: LOCAL
Service Point/Stack: TVT2007 TCPNAME: TCPIP7 z/OS : V1R11

IP Address(es) Use up to 8 IPv4 and 8 IPv6 (one IP Address per line)

Up to 8 IPv4 addresses and 8 IPv6 addresses

Command ==>
F1=Help F3=Return F4=Update Filters F6=Roll
F7=Other Filters F12=Cancel

MA d 05/002

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Packet Display Options

Session D - [24 x 80]

File Edit View Communication Actions Window Help

FKXK2A24 Display Packet Control LOCAL

Service Point/Stack: TVT2007 Proc: TCPIP7 Infc Name: TCPIPLINK

LAddr * RAddr *

PORTNUM * LPort: * RPort: * Protocol 1 1-ALL 2-TCP 3-UDP 4-OSPF 5- (Number)

"Last" says to show the most recent 100 packets. _____
"First" says to show the oldest 100 packets. _____

MaxRecs: 1 1-Last 100 Truncate: 65535
2-First

View summary list of packets that meet criteria

Command ==>
F1=Help F3=Return F4=View Packets F6=Roll
F8=Extended Options F12=Cancel

MP d 06/009

Connected to remote server/host tiwvm2.raleigh.ibm.com using port 23

The name of the Interface selected on Packet Trace Control panel (FKXK2A22)

This panel contains all of the base FMTPACKT command options

Summary View of Packets

Session D - [24 x 80]

File Edit View Communication Actions Window Help

FKXK2A26 PKTTRACE SUMMARY D52NV
More: +

DP	Nr	hh:mm:ss.mmmmm	IpId	Seq_num	Ack_num	Wndw	Flags
IO	255	08:21:29.707500	2E35	protocol=OSPF			
			02010044	C0096701	*....{... ..D..g.*		
IO	253	08:21:25.991207	05F8	protocol=OSPF			
			02010044	C0096A01	*....{... ..D..j.*		
IO	251	08:21:23.572996	0C0D	protocol=OSPF			
IO	250	08:21:22.852632	08A7	protocol=OSPF			
			02010044	C0096C01	*....{.%. ..D..l.*		
IO	248	08:21:21.910456	1795	protocol=OSPF			
			02010044	C0096B01	*....{.,. ..D..k.*		
IO	247	08:21:20.849382	079D	protocol=OSPF			
			02010044	C0096B01	*....{.,. ..D..k.*		
IU	246	08:21:20.269648	14FB	protocol=UDP			
			57B20110	00010000	*..... W.....*		

Select a Packet and press PF4 to see the detailed data for that packet

Scroll right for more info

Refresh data with new trace records

Scroll up and down

Command ==>

F1=Help F3=Return F4=Details F5=Refresh F6=Roll
F7=Backward F8=Forward F9=Commands F11=Right F12=Cancel

MA d 04/002

Connected to remote server/host tivm2.raleigh.ibm.com using port 23

Windowed Packet Detail

```
Session D - [24 x 80]
File Edit View Communication Actions Window Help

CNMKWIND OUTPUT FROM Packet Detail LINE 0 OF 59
*----- Top of Data -----*
z/OS TCP/IP Packet Trace Formatter, Copyright IBM Corp. 2000, 2009; 2009.028

**** 2009/08/14
RcdNr Sysname Mnemonic Entry Id Time Stamp Description
-----
-----
250 TVT2007 PACKET 00000004 08:21:22.979387 Packet Trace
From Interface : TCPIPLINK Device: QDIO Ethernet Full=88
Tod Clock : 2009/08/14 08:21:22.979385 Intfx: 5
Segment # : 0 Flags: In
Source : 9.42.5.133
Destination : 224.0.0.5
Source Port : 0 Dest Port: 0 Asid: 004D TCB: 00000000
IpHeader: Version : 4 Header Length: 20
Tos : 00 QOS: Routine Normal Service
Packet Length : 88 ID Number: 17FD
Fragment : Offset: 0
TTL : 1 Protocol: OSPFIGP CheckSum: B29C F
Source : 9.42.5.133
TO SEE YOUR KEY SETTINGS, ENTER 'DISPFK'
CMD==> _
```

Use window PF Keys and functions
to navigate detail data

MR

d

24/009

Connected to remote server/host tivvm2.raleigh.ibm.com using port 23

Additional Functions

- Managing packet collection (PKTS) settings
- Commands from PKTS Summary
- Extended Options
- Modifying TCPIP PKT Trace

Manage PKTS (note OA31808 - ALL)



Session B - [24 x 80]

File Edit View Communication Actions Window Help

FKXK2A22 PKTRACE Control SYSTCPDA **ACTIVE** for NVDomain: LOCAL
z/OS : V1R8

Service Point/Stack: NMP101 TCPNAME: TCPIP
PKTS: ACTIVE On Task: TCPPAUTO GTF: NO

Start Time: 2008-01-28-10:36:02 Writer: *NONE*

Options: 1-START/ADD 2-STOP 3-VIEW PACKETS

Infrc/Link	Stat	Prot	IP Address/Prefix	Src	Ports	Dest	Record Count
TCPIPLINK	ON	*	*	*	*	*	8
TCPIPLINKB	OFF	*	*	*	*	*	0
TCPIPLINK6	OFF	*	*	*	*	*	0

Command ==>

F1=Help F2=Main Menu F3=Return F4=Stop SYSTCPDA F5=Refresh F6=Roll
F7=Backward F8=Forward F9=Assist F10=PKTS Management F12=Cancel

MA b 12/002

NetView collection of traced packets is active.
To stop/change, go to PKTS Management screen.

Use : Manage the PKTTRACE function

Session D - [24 x 80]

File Edit View Communication Actions Window Help

FKXK2A23 NetView PKTS Management PKTS Status: **ACTIVE**
Domain: LOCAL

Start with Storage Size: M

= Stop
- Stopcoll
Define TCPName: TCPIP7 OPID: AUTOPKTS
- Purge
Intfname *
LAddr *
RAddr *
LPort * RPort * PORTNUM *
Time: Start *
End *
Protocol 1 1-All
2-TCP
3-UDP
4-OSPF
5 ____ (Number)

Command ==>
F1=Help F3=Return F6=Roll
F12=Cancel

MA d 05/003

Connected to remote server/host tivvm2.raleigh.ibm.com using port 23

Packet Collection (PKTS) is ACTIVE, so only the Stop, Stopcoll and Purge options are available.

When PKTS is INACTIVE, only the Start and Define options are available.

Additional Functions

- Managing PKTS settings
- **Commands from PKTS Summary**
- Extended Options
- Modifying TCPIP PKT Trace

Summary View of Packets

Session D - [24 x 80]

File Edit View Communication Actions Window Help

FKXK2A26 PKTTRACE SUMMARY D52NV
More: +

DP	Nr	hh:mm:ss.mmmmm	IpId	Seq_num	Ack_num	Wndw	Flags
IO	255	08:21:29.707500	2E35	protocol=OSPF			
			02010044	C0096701	*....{...	...D..g.*	
IO	253	08:21:25.991207	05F8	protocol=OSPF			
			02010044	C0096A01	*....{...	...D..j.*	
IO	251	08:21:23.572996	0C0D	protocol=OSPF			
					1 *....{...	...D..f.*	
IO	250	08:21:22.6					
IO	249	08:21:22.6					
					1 *....{...	...D..h.*	
IO	248	08:21:21.910456	1795	protocol=OSPF			
			02010044	C0097501	*....{...	...D..u.*	
00	247	08:21:20.849382	079D	protocol=OSPF			
			02010044	C0096B01	*....{...	...D..k.*	
IU	246	08:21:20.269648	14FB	protocol=UDP			
			57B20110	00010000	*.....	W.....*	

Command ==>
F1=Help F3=Return F4=Details F5=Refresh F6=Roll
F7=Backward F8=Forward F9=Commands F11=Right F12=Cancel

MA d 04/002

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Commands from Packets Summary

Session D - [24 x 80]

File Edit View Communication Actions Window Help

FKXK2A28 PKTTRACE SUMMARY COMMANDS D52NV

DP Nr hh:mm:ss.mmmmm I Option 1 – Ping *****
IO 255 08:21:29.707500 2 selected 1 Command
IO 253 08:21:25.991207 05F8 protocol=OSP 1. Ping (RAddr)
IO 251 08:21:23.572996 0C0D protocol=OSP 2. TraceRte (RAddr)
IO 250 08:21:22.979387 17FD protocol=OSP 3. Hostnames
IO 249 08:21:22.852632 08A7 protocol=OSP 4. Connections
IO 248 08:21:21.910456 1795 protocol=OSP 5. SNMP (RAddr)
OO 247 08:21:20.849382 079D protocol=OSP 6. SNMP (Stack)
IU 246 08:21:20.269648 14FB protocol=UDP F1=Help F3=Return
57B20110 00010000 F6=Roll F12=Cancel

.....W.....

Commands are applied to the IP resources of the selected Packet.

RADDR means command will be issued to the external address

STACK means command will be issued to the local IP Stack

Command option 3 "Hostnames" performs a GetHostbyAddr lookup for both IP Addresses in the connection

MA d 04/046

Connected to remote server/host tivvm2.raleigh.ibm.com using port 23

Ping Results

```
Session B - [43 x 80]
File Edit View Communication Actions Window Help

CNMKWIND OUTPUT FROM PING 9.42.45.10 LINE 0 OF 6
*----- Top of Data -----*
BNH765I Pinging nmpipl10.tivlab.raleigh.ibm.com at 9.42.45.10 with 3 packets of
BNH767I 16 bytes received from 9.42.45.10: seq=1 in 3ms
BNH767I 16 bytes received from 9.42.45.10: seq=2 in 1ms
BNH767I 16 bytes received from 9.42.45.10: seq=3 in 1ms
BNH769I 3 packets sent, 3 packets received, 0.00% packet loss
BNH770I Round trip times from 1 to 3 ms, averaging 1ms
*----- Bottom of Data -----*

TO SEE YOUR KEY SETTINGS, ENTER 'DISPFK'
CMD==> _

43/009
Connected to remote server/host ralvmr.raleigh.ibm.com using port 23
```

Ping results returned in a window

Additional Functions

- Managing PKTS settings
- Commands from PKTS Summary
- **Extended Options**
- Modifying TCPIP PKT Trace

Extended Options



Session D - [24 x 80]

File Edit View Communication Actions Window Help

FKXK2A24 Display Packet Control LOCAL

Service Point/Stack: TVT2007 Proc: TCPIP7 Infc Name: TCPIPLINK

LAddr *
RAddr *

PORTNUM * LPort: * RPort: * Protocol 1 1-ALL
2-TCP
3-UDP
4-OSPF
5- (Number)

Time: Start
End

This is the basic Display Packets Control screen from before, but now we want a more granular packet request.
Select PF 8 for Extended Options .

MaxRecs: 1 1-Last 100 Truncate: 65535
2-First

Command ==>
F1=Help F3=Return F4=View Packets F6=Roll
F8=Extended Options F12=Cancel

MR d 06/009

Connected to remote server/host tiwvm2.raleigh.ibm.com using port 23

Extended Options

Session D - [24 x 80]

File Edit View Communication Actions Window Help

FKXK2A25 Display Packets Control Extended Options D52NV

Service Point/Stack: TVT2007 Proc: TCPIP7 Infc Name: TCPIPLINK

1 1-Summary 1 1-Local 1 1-PortSel 1 1-Segment LineSize: 80
2-Full 2-GMT 2-Both 2-NoSegment Cleanup: 500
3-Short
4-Tally

Format: 1 1-Detail Stats: 2 2-Detail 2-Summary
2-Summary

Reassem: 65535 , 1 1-Summary Session: 1 1-Detail 1 1-Dump 65535
2-Detail 2-State
3-NoReassem 3-Summary

Streams: 128 , 1 1-Summary
2-Detail

Command ==>
F1=Help F3=Return F4=Display Packets F6=Roll
F7=Query Opts F12=Cancel

MA d 05/004

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See z/OS 1.10 Communications Server *IP Diagnosis Guide*, chapter 5, for description
(<http://publibz.boulder.ibm.com/epubs/pdf/f1a1c580.pdf>)

Displays a NetView Window containing the data formatted as requested from this screen



Windowed Data Returned

```

Session B - [43 x 80]
File Edit View Communication Actions Window Help

CNMKWIND OUTPUT FROM FMTPACKT LINESIZE=133 FULL LINE 0 OF 4431
*----- Top of Data -----*
BNH773I NUMBER OF PACKETS: N/A , MISSED BUFFERS: 0 , TCPNAME: TCPIP
z/OS TCP/IP Packet Trace Formatter, (C) IBM 2000-2007, 2007.072

**** 2007/09/24
RcdNr Sysname Mnemonic Entry Id Time Stamp Description
-----
17 NMP101 PACKET 00000004 08:10:10.953888 Packet Trace
To Interface : TCPIPLINK Device: QDIO Ethernet Full=44
Tod Clock : 2007/09/24 08:10:10.953885 Intfx: 5
Sequence # : 0 Flags: Pkt Out Ping
Source : 9.42.45.101
Destination : 9.42.45.10
Source Port : 0 Dest Port: 8 Asid: 0032 TCB: 0069BB28
IpHeader: Version : 4 Header Length: 20
Tos : 00 QOS: Routine Normal Service
Packet Length : 44 ID Number: 007E
Fragment : 0 Offset: 0
TTL : 64 Protocol: ICMP CheckSum: 0D91 F
Source : 9.42.45.101
Destination : 9.42.45.10

ICMP
Type/Code : ECHO CheckSum: 4DAE FFFF
Id : 0032 Seq: 1
Time : 2007/09/24 12:10:10.953798
Echo Data : 16
000000 46F7A922 000E8DC6 08090A0B 0C0D0E0F

Ip Header : 20 IP: 9.42.45.101, 9.42.45.10
000000 4500002C 007E0000 40010D91 092A2D65 092A2D0A

Protocol Header : 8
000000 08004DAE 00320001

Data : 16 Data Length: 16
000000 46F7A922 000E8DC6 08090A0B 0C0D0E0F |.7z....F.....F..".|

TO SEE YOUR KEY SETTINGS, ENTER 'DISPFK'
CMD==> _
  
```

Additional Functions

- Managing PKTS settings
- Commands from PKTS Summary
- Extended Options
- Modifying TCP/IP PKT Trace

Use : Adding Traces

Session D - [24 x 80]

File Edit View Communication Actions Window Help

FKXK2A22 PKTTRACE Control SYSTCPDA **ACTIVE** for NVDomain: LOCAL
z/OS : V1R11

Service Point/Stack: TVT2007 TCPNAME: TCPIP7
PKTS: **ACTIVE** On Task: AUTOPKTS GTF: NO

Start Time: 2009-08-14-08:33:42 Writer: *NONE*

Options: 1-START/ADD 2-STOP 3-VIEW PACKETS

Infrc/Link	Stat	Prot	IP Address/Prefix	Src	Ports PortNm	Dest	Record Count
TCPIPLINK	ON	TCP	*	*	*	*	7
TCPIPLINK	ON	UDP	*	*	*	*	0
TCPIPLINK2	OFF	*	*	*	*	*	0
TCPIPLINK3	OFF	*	*	*	*	*	0
TCPIPLINK4	OFF	*	*	*	*	*	0
TCPIPLINK5	OFF	*	*	*	*	*	0
TCPIPLINK6	OFF	*	*	*	*	*	0
TCPIPLINK7	OFF	*	*	*	*	*	0
TCPIPLINK8	OFF	*	*	*	*	*	0
TCPIPLINK9	OFF	*	*	*	*	*	0
TCPIPLINK10	OFF	*	*	*	*	*	0
TCPIPLINK11	OFF	*	*	*	*	*	0
TCPIPLINK12	OFF	*	*	*	*	*	0
TCPIPLINK13	OFF	*	*	*	*	*	0
TCPIPLINK14	OFF	*	*	*	*	*	0
TCPIPLINK15	OFF	*	*	*	*	*	0
TCPIPLINK16	OFF	*	*	*	*	*	0
TCPIPLINK17	OFF	*	*	*	*	*	0
TCPIPLINK18	OFF	*	*	*	*	*	0
TCPIPLINK19	OFF	*	*	*	*	*	0
TCPIPLINK20	OFF	*	*	*	*	*	0
TCPIPLINK21	OFF	*	*	*	*	*	0
TCPIPLINK22	OFF	*	*	*	*	*	0
TCPIPLINK23	OFF	*	*	*	*	*	0
TCPIPLINK24	OFF	*	*	*	*	*	0
TCPIPLINK25	OFF	*	*	*	*	*	0
TCPIPLINK26	OFF	*	*	*	*	*	0
TCPIPLINK27	OFF	*	*	*	*	*	0
TCPIPLINK28	OFF	*	*	*	*	*	0
TCPIPLINK29	OFF	*	*	*	*	*	0
TCPIPLINK30	OFF	*	*	*	*	*	0
TCPIPLINK31	OFF	*	*	*	*	*	0
TCPIPLINK32	OFF	*	*	*	*	*	0
TCPIPLINK33	OFF	*	*	*	*	*	0
TCPIPLINK34	OFF	*	*	*	*	*	0
TCPIPLINK35	OFF	*	*	*	*	*	0
TCPIPLINK36	OFF	*	*	*	*	*	0
TCPIPLINK37	OFF	*	*	*	*	*	0
TCPIPLINK38	OFF	*	*	*	*	*	0
TCPIPLINK39	OFF	*	*	*	*	*	0
TCPIPLINK40	OFF	*	*	*	*	*	0
TCPIPLINK41	OFF	*	*	*	*	*	0
TCPIPLINK42	OFF	*	*	*	*	*	0
TCPIPLINK43	OFF	*	*	*	*	*	0
TCPIPLINK44	OFF	*	*	*	*	*	0
TCPIPLINK45	OFF	*	*	*	*	*	0
TCPIPLINK46	OFF	*	*	*	*	*	0
TCPIPLINK47	OFF	*	*	*	*	*	0
TCPIPLINK48	OFF	*	*	*	*	*	0
TCPIPLINK49	OFF	*	*	*	*	*	0
TCPIPLINK50	OFF	*	*	*	*	*	0
TCPIPLINK51	OFF	*	*	*	*	*	0
TCPIPLINK52	OFF	*	*	*	*	*	0
TCPIPLINK53	OFF	*	*	*	*	*	0
TCPIPLINK54	OFF	*	*	*	*	*	0
TCPIPLINK55	OFF	*	*	*	*	*	0
TCPIPLINK56	OFF	*	*	*	*	*	0
TCPIPLINK57	OFF	*	*	*	*	*	0
TCPIPLINK58	OFF	*	*	*	*	*	0
TCPIPLINK59	OFF	*	*	*	*	*	0
TCPIPLINK60	OFF	*	*	*	*	*	0
TCPIPLINK61	OFF	*	*	*	*	*	0
TCPIPLINK62	OFF	*	*	*	*	*	0
TCPIPLINK63	OFF	*	*	*	*	*	0
TCPIPLINK64	OFF	*	*	*	*	*	0
TCPIPLINK65	OFF	*	*	*	*	*	0
TCPIPLINK66	OFF	*	*	*	*	*	0
TCPIPLINK67	OFF	*	*	*	*	*	0
TCPIPLINK68	OFF	*	*	*	*	*	0
TCPIPLINK69	OFF	*	*	*	*	*	0
TCPIPLINK70	OFF	*	*	*	*	*	0
TCPIPLINK71	OFF	*	*	*	*	*	0
TCPIPLINK72	OFF	*	*	*	*	*	0
TCPIPLINK73	OFF	*	*	*	*	*	0
TCPIPLINK74	OFF	*	*	*	*	*	0
TCPIPLINK75	OFF	*	*	*	*	*	0
TCPIPLINK76	OFF	*	*	*	*	*	0
TCPIPLINK77	OFF	*	*	*	*	*	0
TCPIPLINK78	OFF	*	*	*	*	*	0
TCPIPLINK79	OFF	*	*	*	*	*	0
TCPIPLINK80	OFF	*	*	*	*	*	0
TCPIPLINK81	OFF	*	*	*	*	*	0
TCPIPLINK82	OFF	*	*	*	*	*	0
TCPIPLINK83	OFF	*	*	*	*	*	0
TCPIPLINK84	OFF	*	*	*	*	*	0
TCPIPLINK85	OFF	*	*	*	*	*	0
TCPIPLINK86	OFF	*	*	*	*	*	0
TCPIPLINK87	OFF	*	*	*	*	*	0
TCPIPLINK88	OFF	*	*	*	*	*	0
TCPIPLINK89	OFF	*	*	*	*	*	0
TCPIPLINK90	OFF	*	*	*	*	*	0
TCPIPLINK91	OFF	*	*	*	*	*	0
TCPIPLINK92	OFF	*	*	*	*	*	0
TCPIPLINK93	OFF	*	*	*	*	*	0
TCPIPLINK94	OFF	*	*	*	*	*	0
TCPIPLINK95	OFF	*	*	*	*	*	0
TCPIPLINK96	OFF	*	*	*	*	*	0
TCPIPLINK97	OFF	*	*	*	*	*	0
TCPIPLINK98	OFF	*	*	*	*	*	0
TCPIPLINK99	OFF	*	*	*	*	*	0
TCPIPLINK100	OFF	*	*	*	*	*	0

We now have two entries for TCPIPLINK , one for TCP and the other for UDP

EZZ0053I COMMAND VARY PKTTRACE COMPLETED SUCCESSFULLY

Command ==>

F1=Help F2=Main Menu F3=Return F4=Stop SYSTCPDA F5=Refresh F6=Roll
F7=Backward F8=Forward F9=Assist F10=PKTS Management F12=Cancel

MA d 12/002

Connected to remote server/host tivvm2.raleigh.ibm.com using port 23

Major Functional Enhancements

- Expanded IP management
- Broader sysplex and DVIPA management
- Core functionality

Sysplex and DVIPA Management

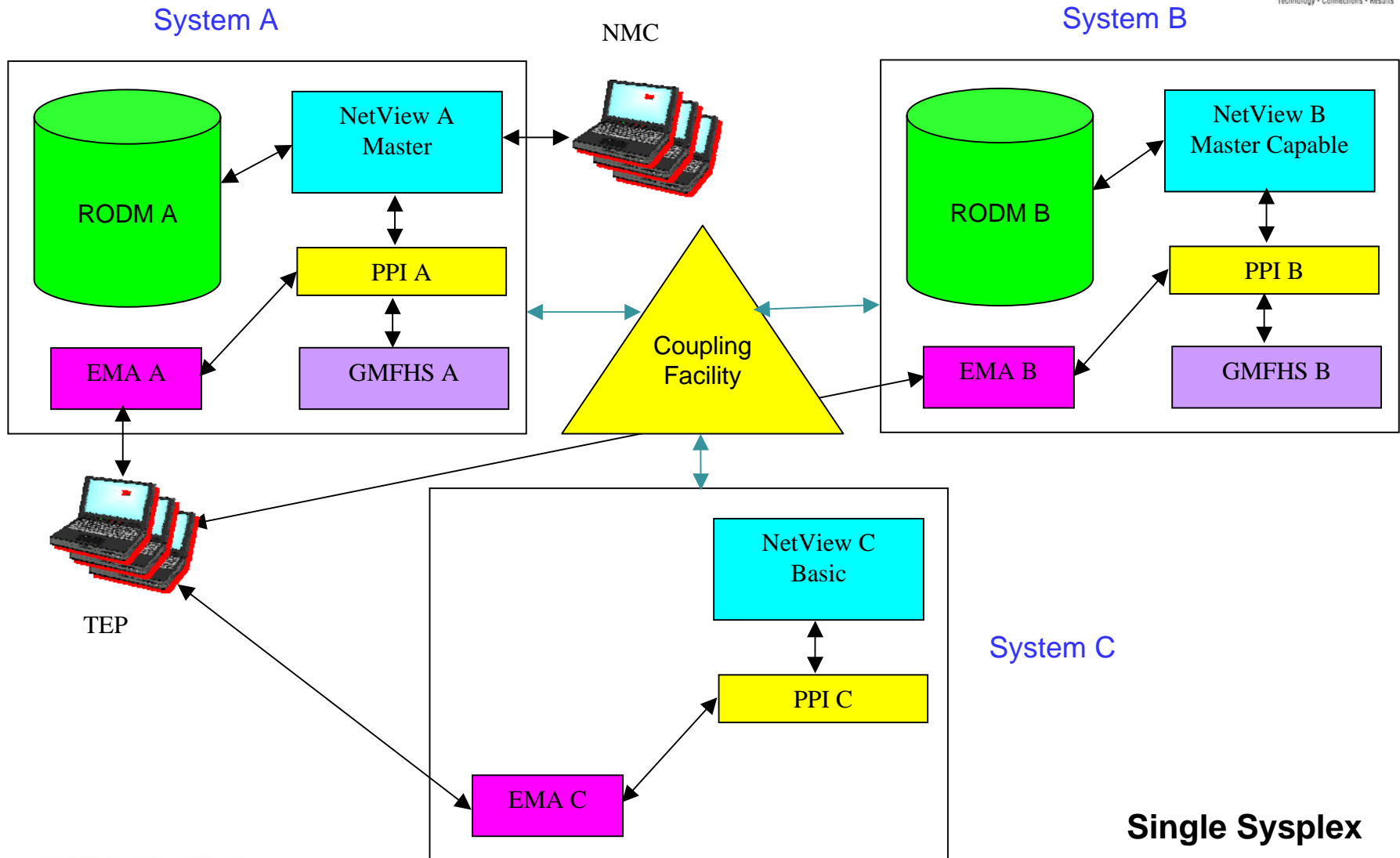
- Provides consolidated sysplex management from a single point of control
- Uses z/OS XCF services to provide communication between NetViews
 - Provides master, master-capable, and basic NetView concepts
- Enhances and improves sysplex and TCP/IP stack resource discovery
- Provides additional DVIPA functionality:
 - Extended DVIPA resource discovery
 - DVIPA event capability
 - Distributed DVIPA statistics

XCF Services Overview



- XCF support is enabled by default, but it can be disabled
- NetView will use XCF services to establish a sysplex-wide group called DSIPLXnn
 - Each NetView in the sysplex can be a member of the group (one member per NetView domain)
 - XCF drives exits to inform all group members of events affecting one of the members, such as:
 - Entering or leaving the group
 - Updating shared information with the group
 - XCF provides send and receive services between members for communications purposes

NetView and XCF - High Level Architectural Components

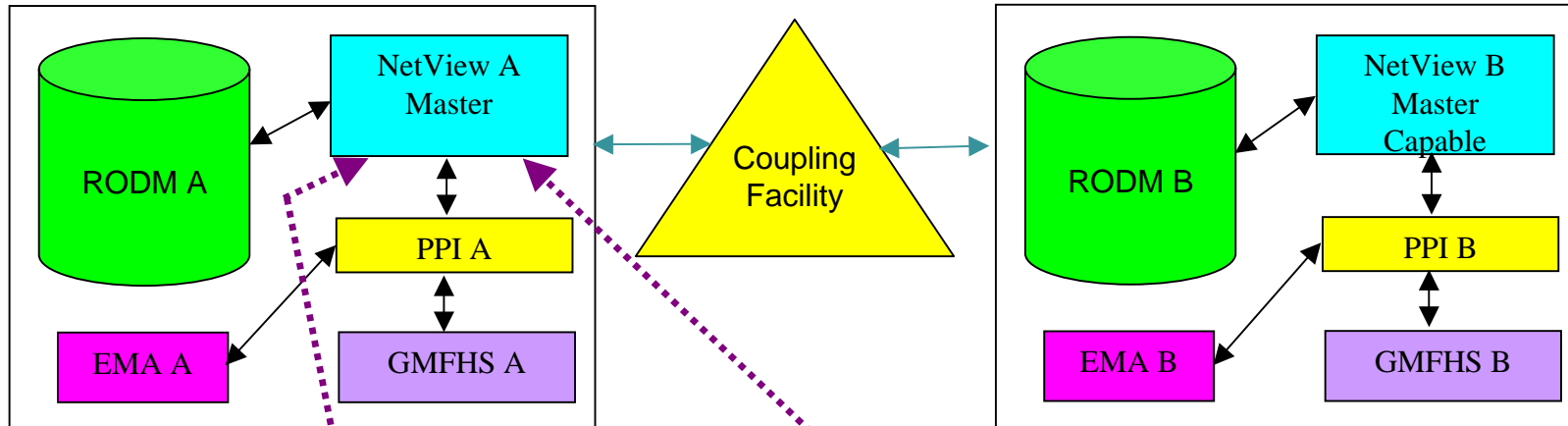


“Mini Enterprise” – Enterprise Level RODM

System A

SYSPLEX A

System B



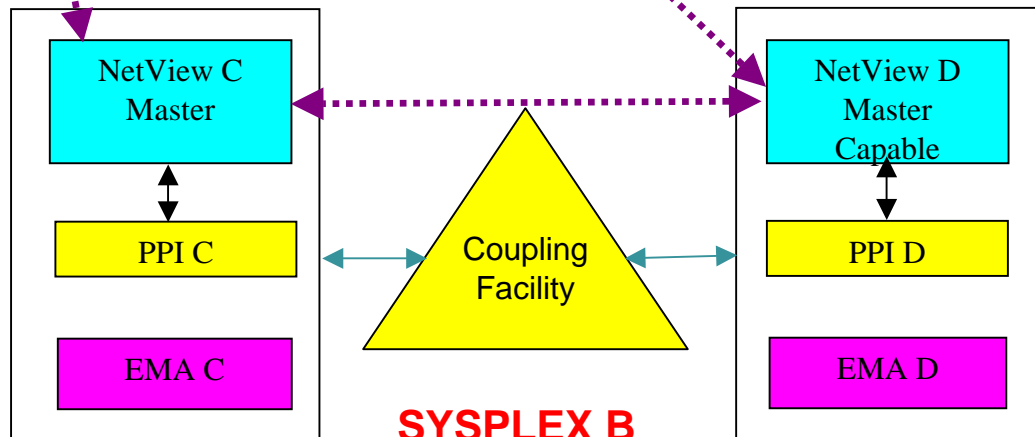
Local Data
Only



RMTCMD
connection or
session

System C

System D



SYSPLEX B

DVIPA data
not forwarded
to Enterprise
Master.

Additional
SYSDEF
required.

Sysplex and DVIPA Discovery

- Enabled by default
 - Sysplex
 - Coupling Facility
 - z/OS Image
 - NetView Application
 - TCP/IP stack
 - TCP/IP subplex
- Optional
 - IP interface
 - Telnet servers and ports
 - OSA and HiperSockets
 - (requires RODM; HiperSockets requires z/OS 1.11)
 - OSA trace does not require RODM
 - DVIPA, Distributed DVIPA (DDVIPA), DVIPA Connections, VIPA Routes, and DDVIPA Connection Routing
- Each z/OS image would need to enable discovery for the particular function to provide a complete view of the sysplex



User Interfaces



- NetView 3270 console
 - Commands are available for discovered information (sysplex, DVIPA, OSA, and HiperSockets)
 - Provides real-time data
 - Has a REXX command interface and a sample command (user-friendly) interface – output from REXX can be automated
- NetView Management Console (NMC)
 - Topology is available for sysplex, OSA, and HiperSockets information
 - Commands are provided for some sysplex resources
- Tivoli Enterprise Portal (TEP) using the NetView for z/OS Enterprise Management Agent
 - Workspaces are provided for discovered information (sysplex, DVIPA, OSA, and HiperSockets)
 - New Take Action commands are provided
 - New situations and expert advice are provided

NetView in the TEP

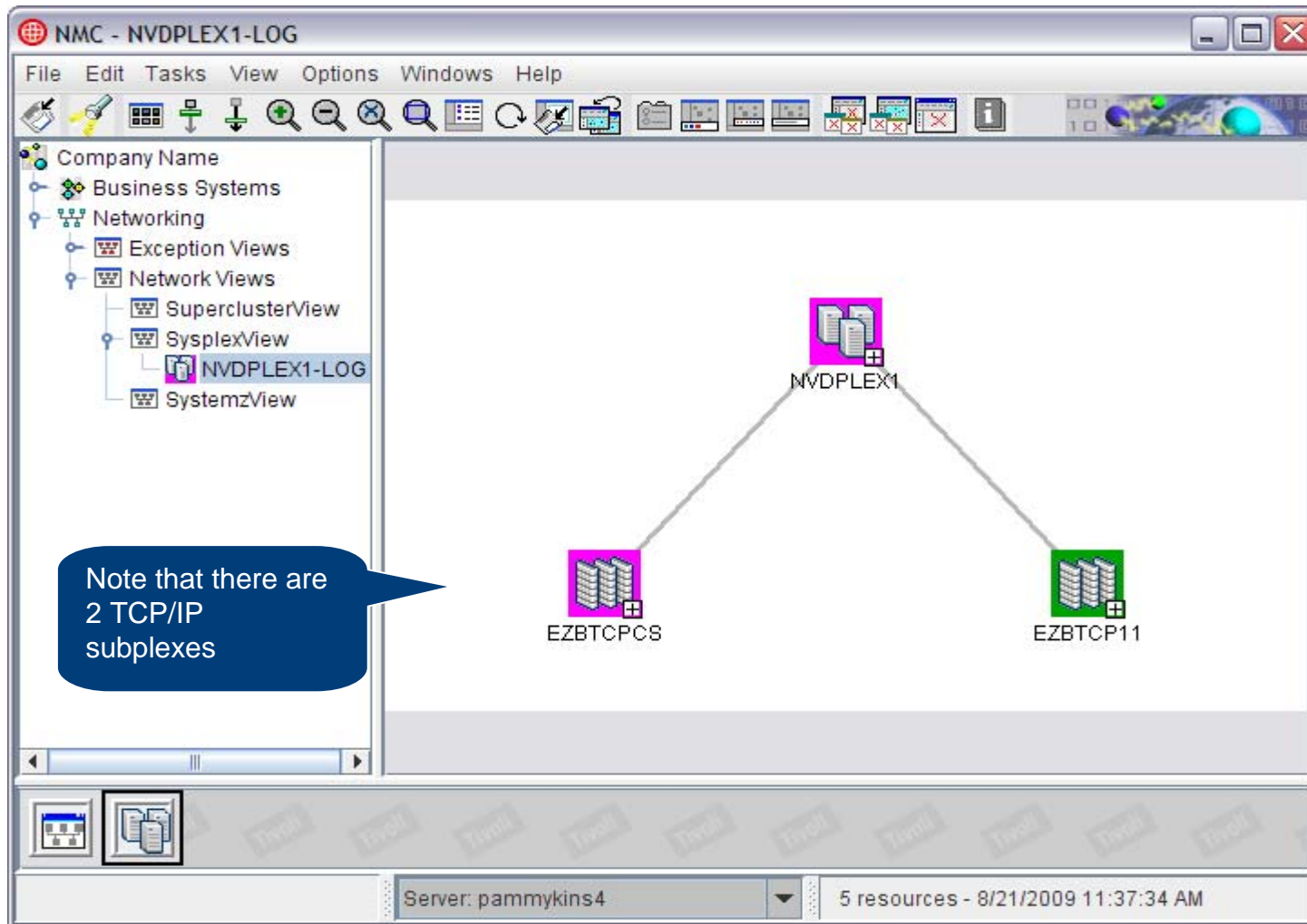
- NetView V5.3 workspaces

- ▶ DVIPA Connections
- ▶ DVIPA Definition and Status
- ▶ DVIPA Distributor Targets
- ▶ DVIPA Sysplex Distributors
- ▶ DVIPA Workload
- ▶ Active TCP/IP Connections
- ▶ Inactive TCP/IP Connections
- ▶ SNA Sessions
- ▶ NetView Audit Log
- ▶ NetView Command Response
- ▶ NetView Log
- ▶ NetView Tasks
- ▶ NetView Task Details
- ▶ Stack Configuration & Status

NetView in the TEP

- Additional NetView V5.4 workspaces
 - ▶ Distributed DVIPA Connection Routing
 - ▶ Distributed DVIPA Server Health
 - ▶ Distributed DVIPA Server Health Details
 - ▶ Distributed DVIPA Targets
 - ▶ Distributed DVIPA Unhealthy Servers
 - ▶ Application-Instance DVIPA
 - ▶ Stack-Defined DVIPA
 - ▶ DVIPA Stack Summary
 - ▶ VIPA Routes
 - ▶ HiperSocket Interface Configuration & Status
 - ▶ OSA Channels & Ports
 - ▶ Telnet Server Configuration & Status
 - ▶ NetView Applications

NMC Views: Sysplex – Configuration Logical



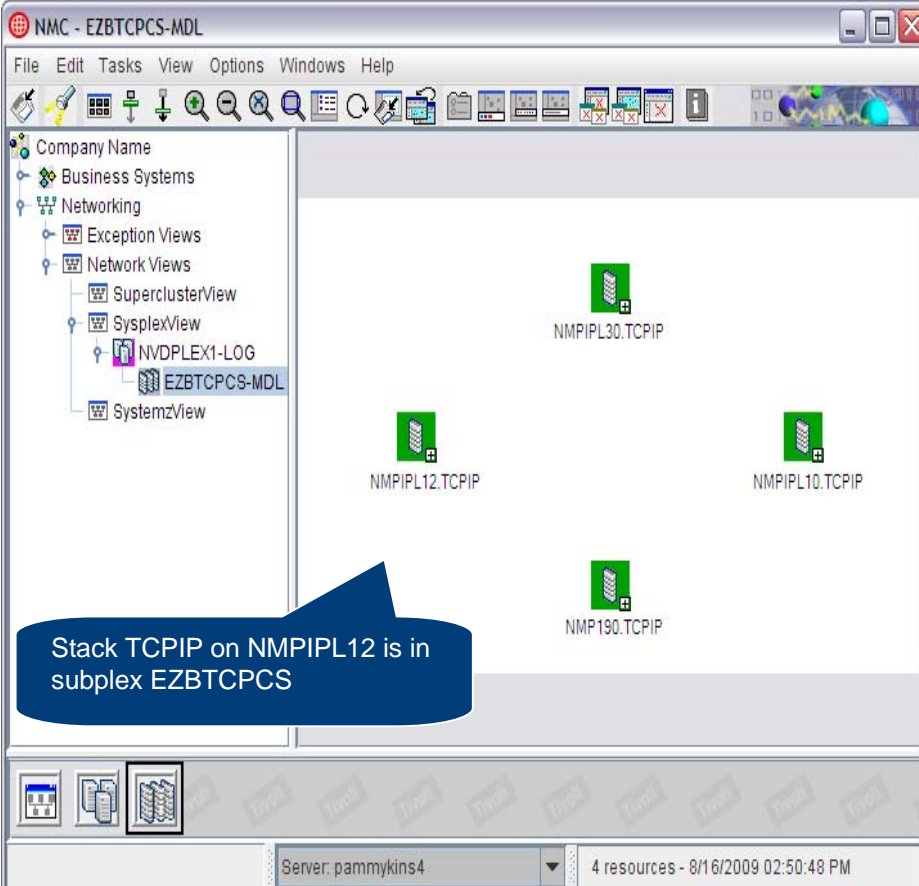
Sysplex Aggregate

- Config. type
- Type of signaling
- Max. # systems allowed
- Current max. # systems

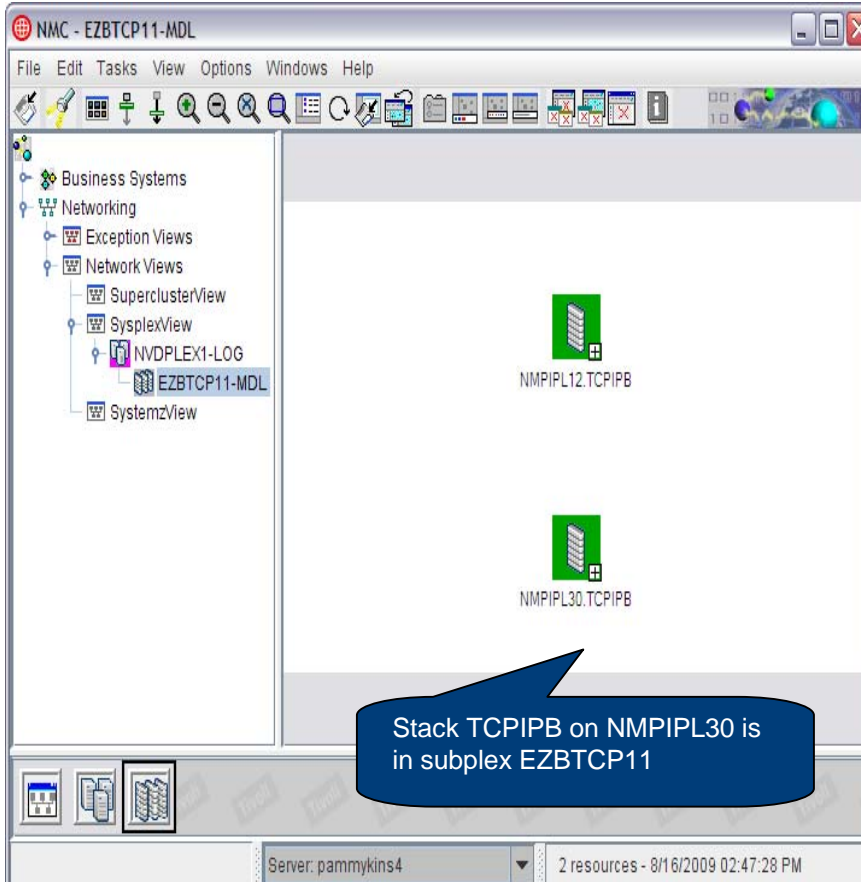
Subplex Aggregate

- VTAM subplex

NMC Views: Subplex – More Detailed Logical



The screenshot shows the NMC - EZBTCPCS-MDL window. The left pane displays a tree view with the following structure: Company Name, Business Systems, Networking, Exception Views, Network Views, SuperclusterView, SysplexView, NVDPLEX1-LOG, EZBTCPCS-MDL (selected), and SystemzView. The main pane shows a logical diagram with four TCPIP resources: NMPIPL12.TCPIP, NMPIPL30.TCPIP, NMPIPL10.TCPIP, and NMP190.TCPIP. A blue callout bubble points to NMPIPL12.TCPIP with the text: "Stack TCPIP on NMPIPL12 is in subplex EZBTCPCS". The status bar at the bottom indicates "Server: pammykins4" and "4 resources - 8/16/2009 02:50:48 PM".

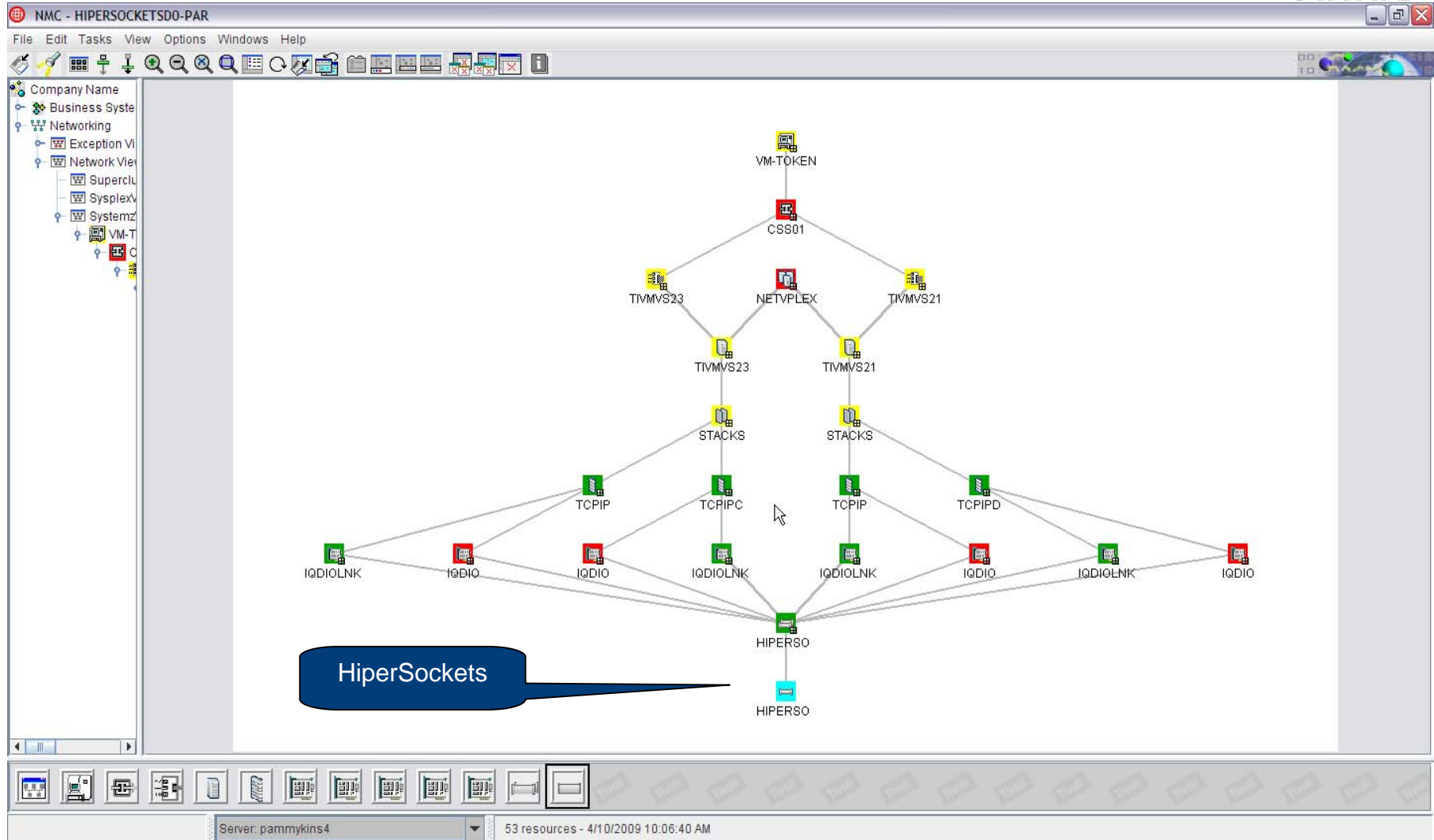


The screenshot shows the NMC - EZBTCP11-MDL window. The left pane displays a tree view with the following structure: Business Systems, Networking, Exception Views, Network Views, SuperclusterView, SysplexView, NVDPLEX1-LOG, EZBTCP11-MDL (selected), and SystemzView. The main pane shows a logical diagram with two TCPIP resources: NMPIPL12.TCPIPB and NMPIPL30.TCPIPB. A blue callout bubble points to NMPIPL30.TCPIPB with the text: "Stack TCPIPB on NMPIPL30 is in subplex EZBTCP11". The status bar at the bottom indicates "Server: pammykins4" and "2 resources - 8/16/2009 02:47:28 PM".

System Aggregate

- Domain
- NetID

NMC Views: HiperSockets Interfaces Parent View



HiperSockets Configuration and Status (TEP)

HiperSockets Configuration and Status - EDDIE - SYSADMIN

File Edit View Help

Navigator View: Physical

- DVIPA Application-Insta
- DVIPA Connections
- DVIPA Definition and St
- DVIPA Distributor Targe
- DVIPA Stack-Defined
- DVIPA Sysplex Distrib
- HiperSockets**
- NetView Audit Log
- NetView Command Res
- NetView Health
- NetView Log
- OSA

Take Action

Action

Name: <Select Action>

Command:

Destination Systems

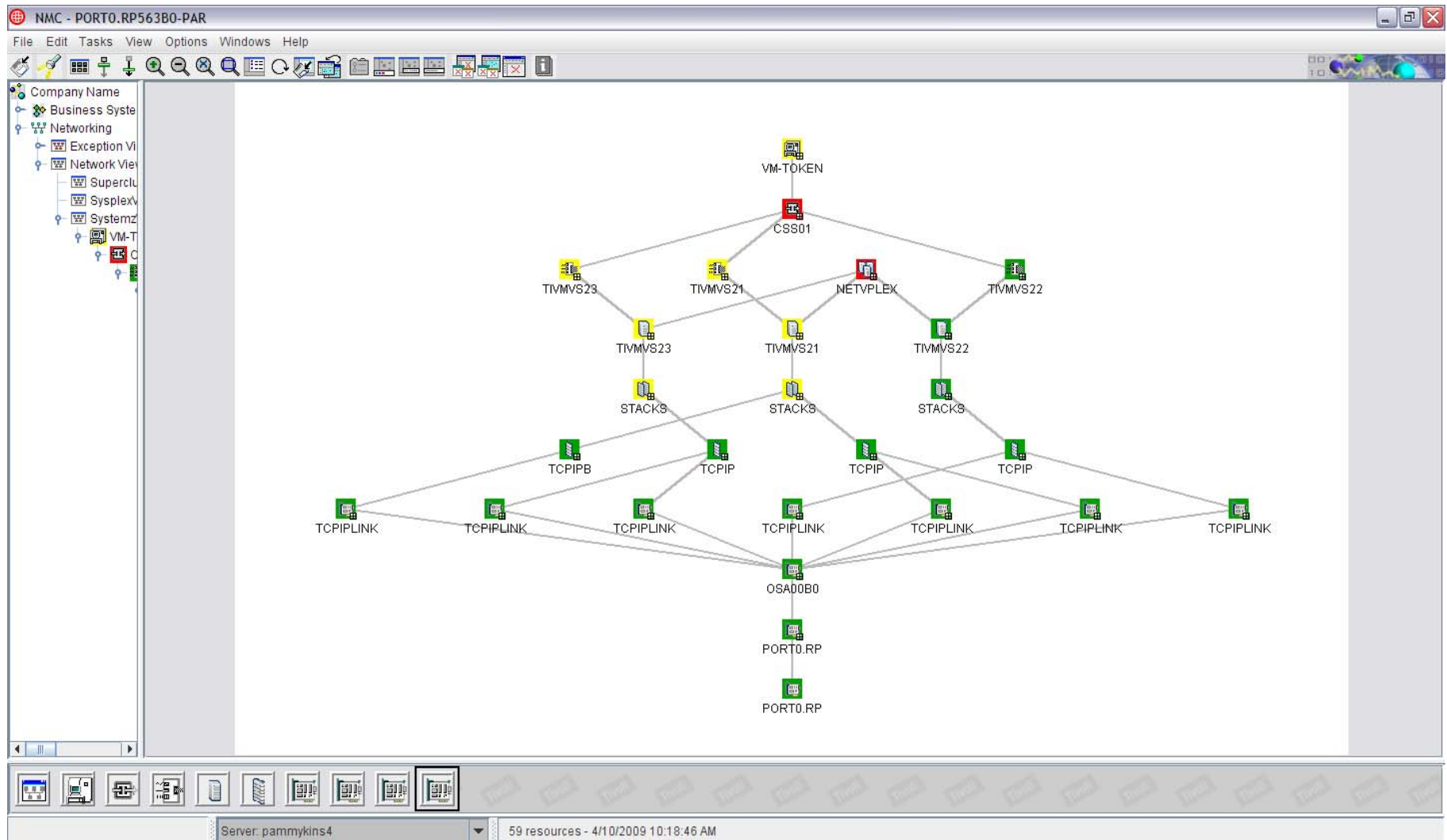
HiperSockets Configuration and Status Summary

Collection Time	Interface Name	Channel Number	IQD Network ID	Protocol	VLAN ID	Interface Operational Status	Interface Administration Status	IQDIO Routing Enabled	QDIO Accelerator Enabled	QDIO Priority	Multiple Write Enabled
07/27/09 14:47:19	IQDIO	D0	0704	IPv4	0	down	up	No	No	0	No
07/27/09 14:47:19	IQDIOLNKC02A2E61	D0	0704	IPv4	0	up	up	No	No	0	No
07/27/09 14:47:19	IQDIO1	D1	0705	IPv4	510	up	up	No	No	0	No

Hub Time: Mon, 07/27/2009 03:05 PM Server Available

HiperSockets Configuration and Status - EDDIE - SYSADMIN

NMC Views: OSA Port Parent View



OSA Channels and Ports Workspace (TEP)



OSA Ports

- Collection Time
- Channel Number
- Channel Hardware Level
- Channel Subsystem ID
- Subtype
- Port Name
- Port Number
- Port Type
- Active MAC Addr.
- Burned-in MAC Addr.
- LAN Traffic State
- Service Mode
- Disabled Status
- Config. Speed Mode
- Active Speed Mode
- Sysplex Name
- System ID

OSA Channels and Ports - EDDIE - SYSADMIN

File Edit View Help

Navigator View: Physical

- DVIPA Stack-Defined
- DVIPA Sysplex Distributors
- HiperSockets
- NetView Audit Log
- NetView Command Response
- NetView Health
- NetView Log
- OSA**
- Session Data
- Stack Configuration and Status
- TCPIP Connection Data
- Telnet Server Configuration and Status

Physical

Take Action

Take Action

Action

Name: <Select Action>

Command:

Arguments...

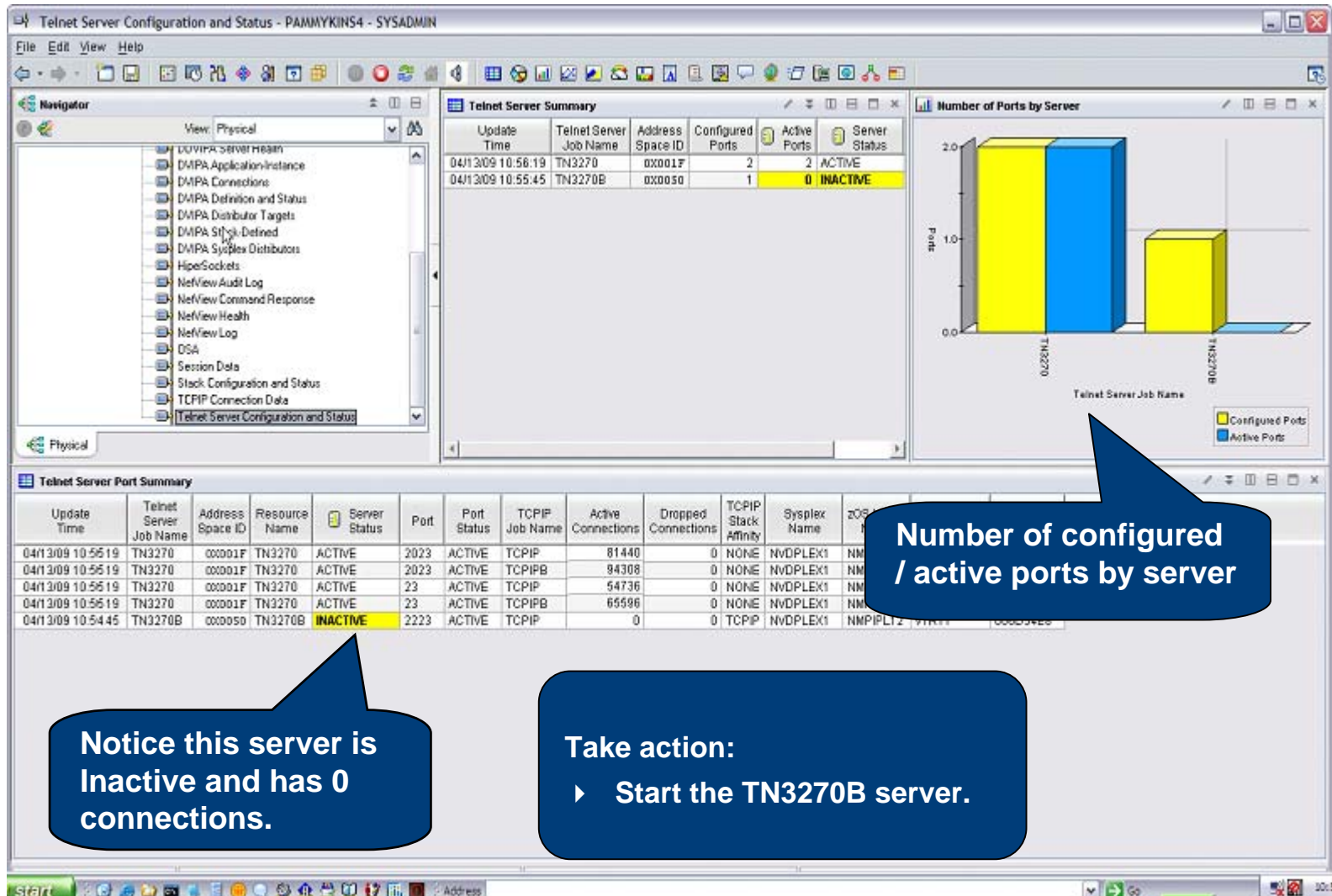
Destination Systems

OSA Channels and Ports Summary

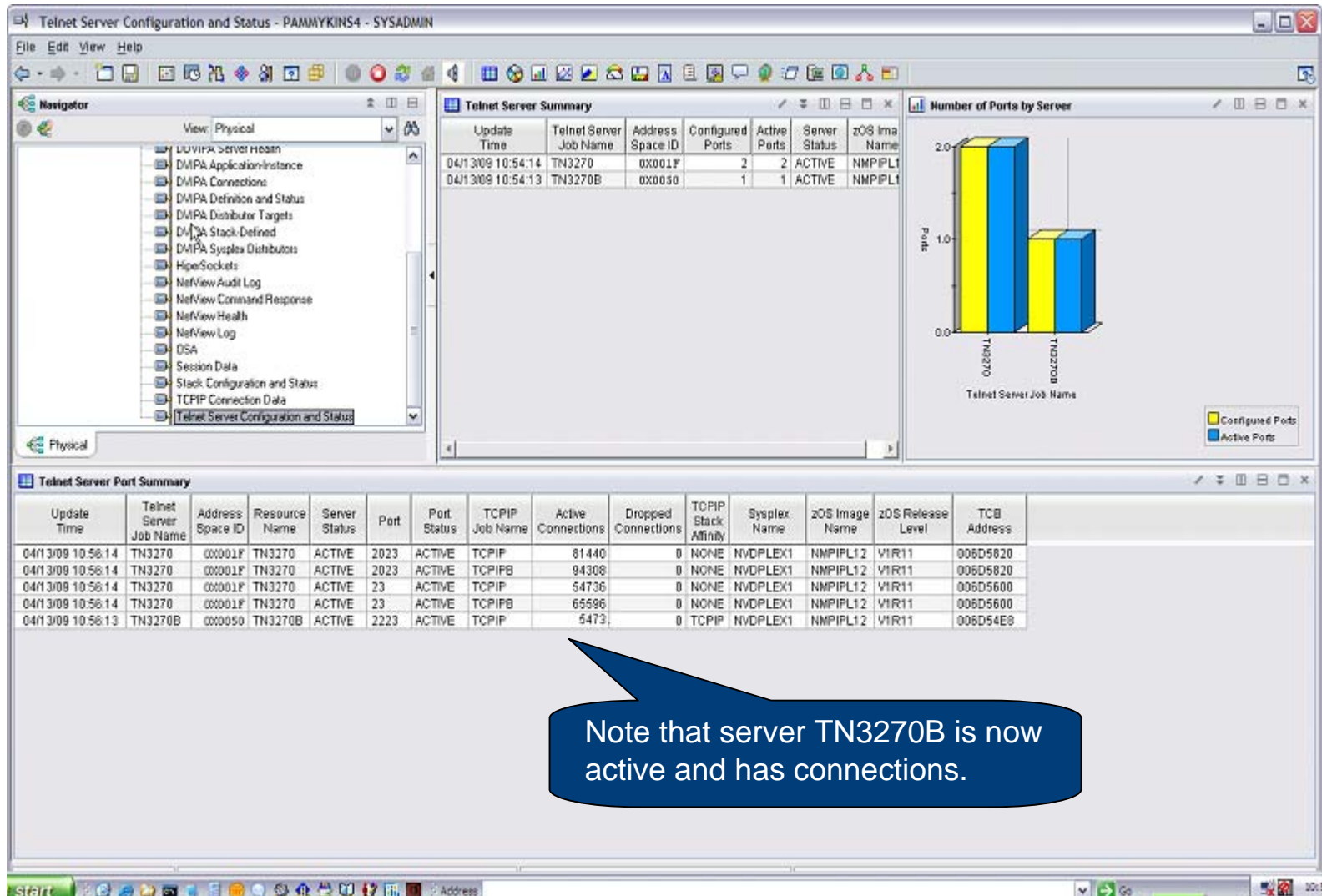
Collection Time	Channel Number	Channel Hardware Level	Subtype	Port Name	Port Number	Port Type	Active MAC Address	Bu
07/27/09 14:07:58	09	osaExp300	oneThousandBaseTEthernet	OSAA	0	oneThousandBaseTEthernet	00145EB712C6	00145

Hub Time: Mon, 07/27/2009 02:20 PM Server Available OSA Channels and Ports - EDDIE - SYSADMIN

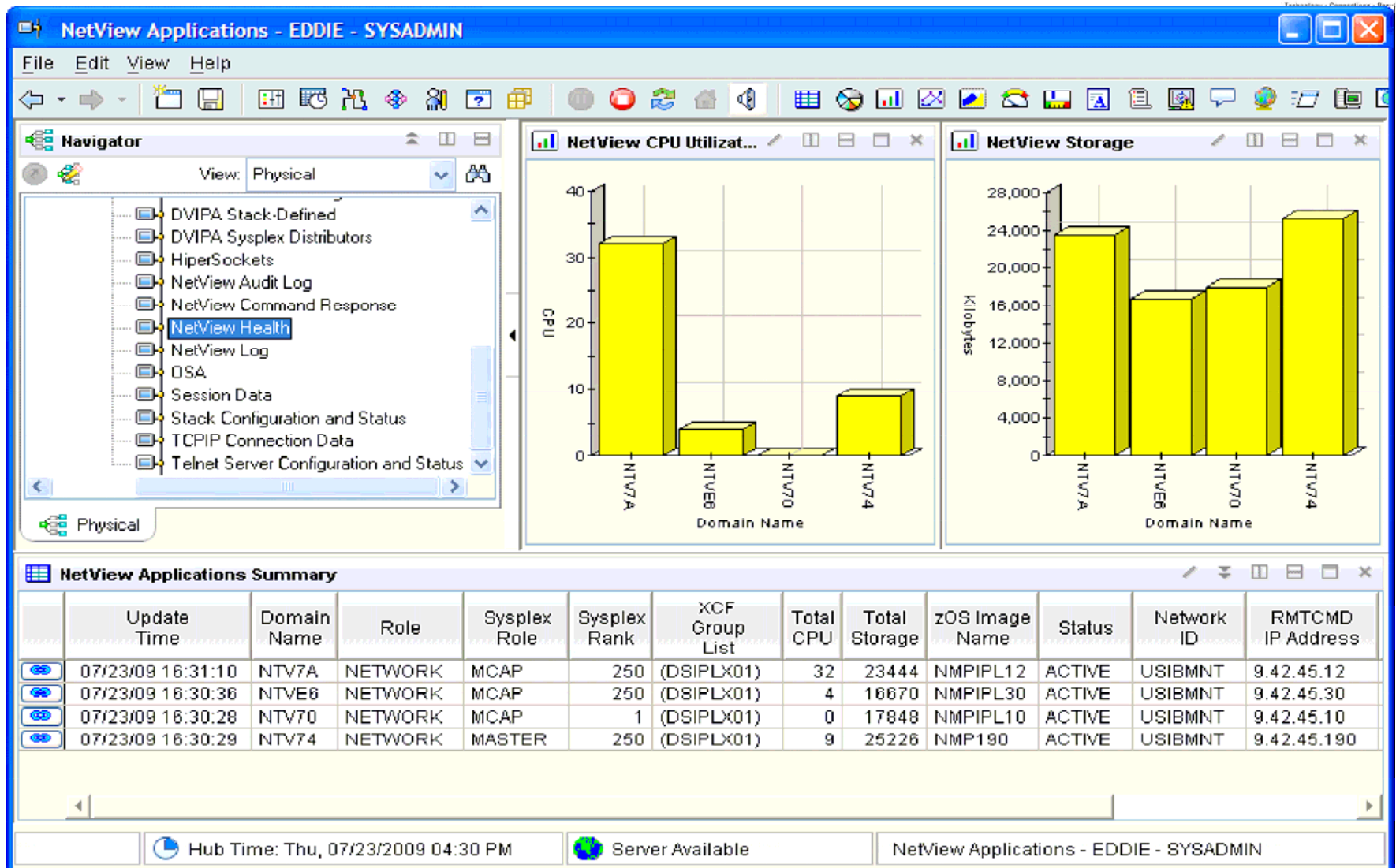
Telnet Server Configuration & Status (TEP)



Telnet Server Configuration & Status (TEP) (cont.)



NetView Applications (TEP)



DVIPA Stack Summary (TEP)

DVIPA Stack Summary - PAMMYKINS4 - SYSADMIN

File Edit View Help

Navigator

View: Physical

- DVIPA server team
- DVIPA Application-Instance
- DVIPA Connections
- DVIPA Definition and Status
- DVIPA Distributor Targets
- DVIPA Stack-Defined
- DVIPA Sysplex Distributors
- HiperSockets
- NetView Audit Log
- NetView Command Response
- NetView Health
- NetView Log
- OSA
- Session Data
- Stack Configuration and Status
- TCPIP Connection Data
- Telnet Server Configuration and Status

Physical

DVIPA Defined for TCPIP Job Name TCPIP and z/OS Image ...

	Update Time	DVIPA	Time Activated	Origin	Status
	04/10/09 15:52:40	201.2.10.203	04/09/09 13:26:35	define	active
	04/10/09 15:52:40	2000:201.2.10::200	04/09/09 13:26:35	define	active

Sysplex Distributors Defined for TCPIP Job Nam...

	Update Time	DVIPA	DVIPA Port	Status	Distribution Method	Co
	04/10/09 16:04:52	201.2.10.201	623	active	baseWlm	N/A
	04/10/09 16:04:52	201.3.10.60	23	active	baseWlm	N/A
	04/10/09 16:04:52	201.3.10.59	23	active	baseWlm	1
	04/10/09 16:04:52	201.2.10.212	21	active	baseWlm	N/A
	04/10/09 16:04:52	201.2.10.202	23	active	baseWlm	N/A
	04/10/09 16:04:52	201.2.10.200	23	active	baseWlm	1
	04/10/09 16:04:52	201.3.10.60	1700	active	baseWlm	N/A
	04/10/09 16:04:52	201.3.10.59	1700	active	baseWlm	1

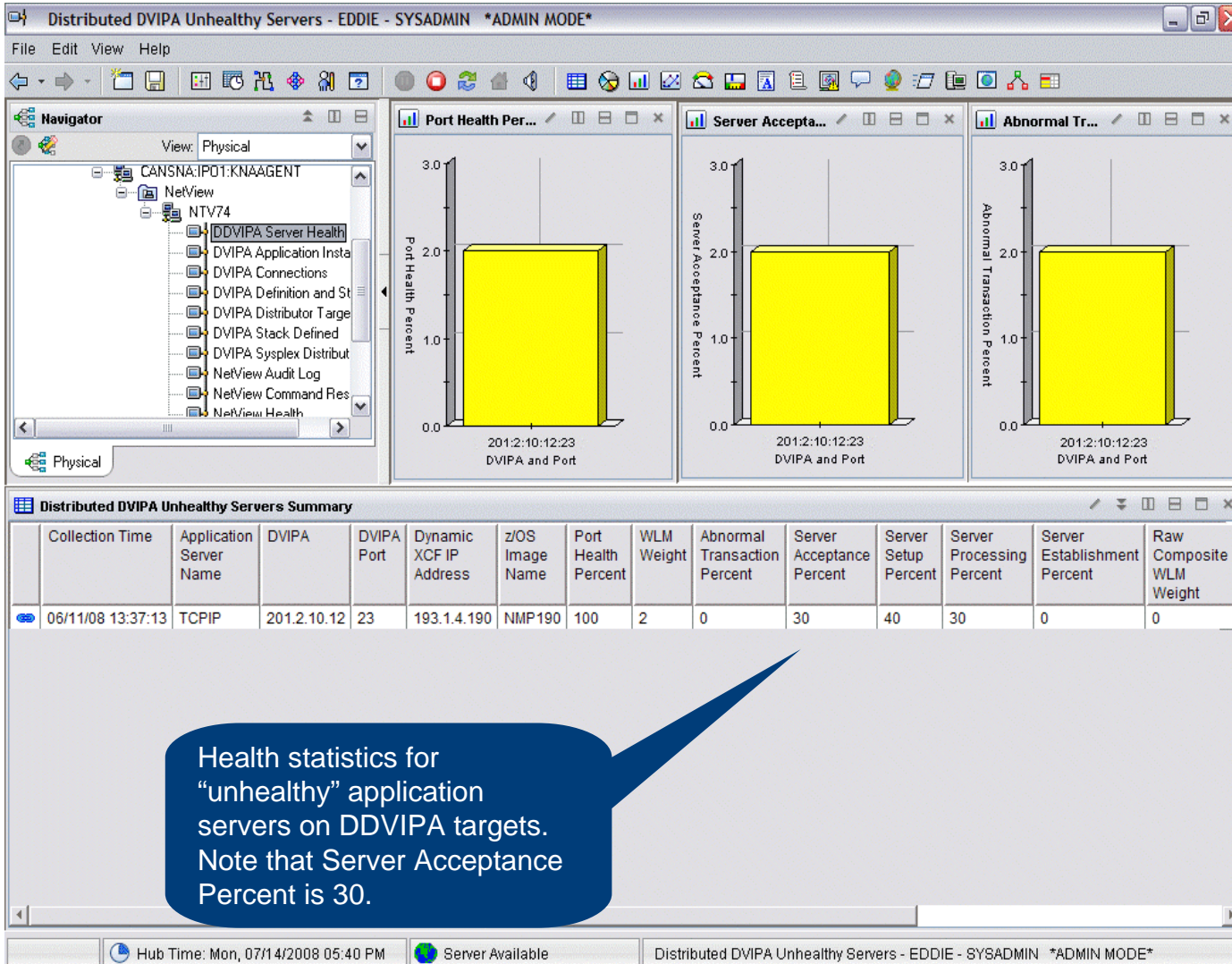
Local Distributed Targets Defined for TCPIP Job Name TCPIP and z/OS Image Name NMPIPL12

	Update Time	DVIPA	DVIPA Port	Dynamic XCF IP Address	Listening Servers	Total Connections	Active Connections	Distribution Port Function
	04/10/09 16:05:58	201.2.10.10	23	193.1.1.12	1	0	0	0x80
	04/10/09 16:05:58	201.2.10.9	23	193.1.1.12	1	0	0	0x80
	04/10/09 16:04:52	201.2.10.201	623	193.1.1.12	1	0	0	0x80
	04/10/09 16:04:52	201.3.10.60	23	193.1.1.12	1	0	0	0x80
	04/10/09 16:04:52	201.2.10.212	21	193.1.1.12	1	5	1	0x80
	04/10/09 16:04:52	201.2.10.202	23	193.1.1.12	1	0	0	0x80
	04/10/09 16:04:52	201.3.10.60	1700	193.1.1.12	1	0	0	0x80
	04/10/09 15:34:24	146.99.99.99	23	193.1.1.12	1	0	0	0x40
	04/10/09 16:03:23	201.2.10.251	23	193.1.1.12	1	0	0	0x80
	04/10/09 16:03:23	201.2.10.250	23	193.1.1.12	1	0	0	0x80

DVIPA configuration for a specific TCP/IP stack.

- Definition and status
- Sysplex Distributors
- DDVIPA Targets

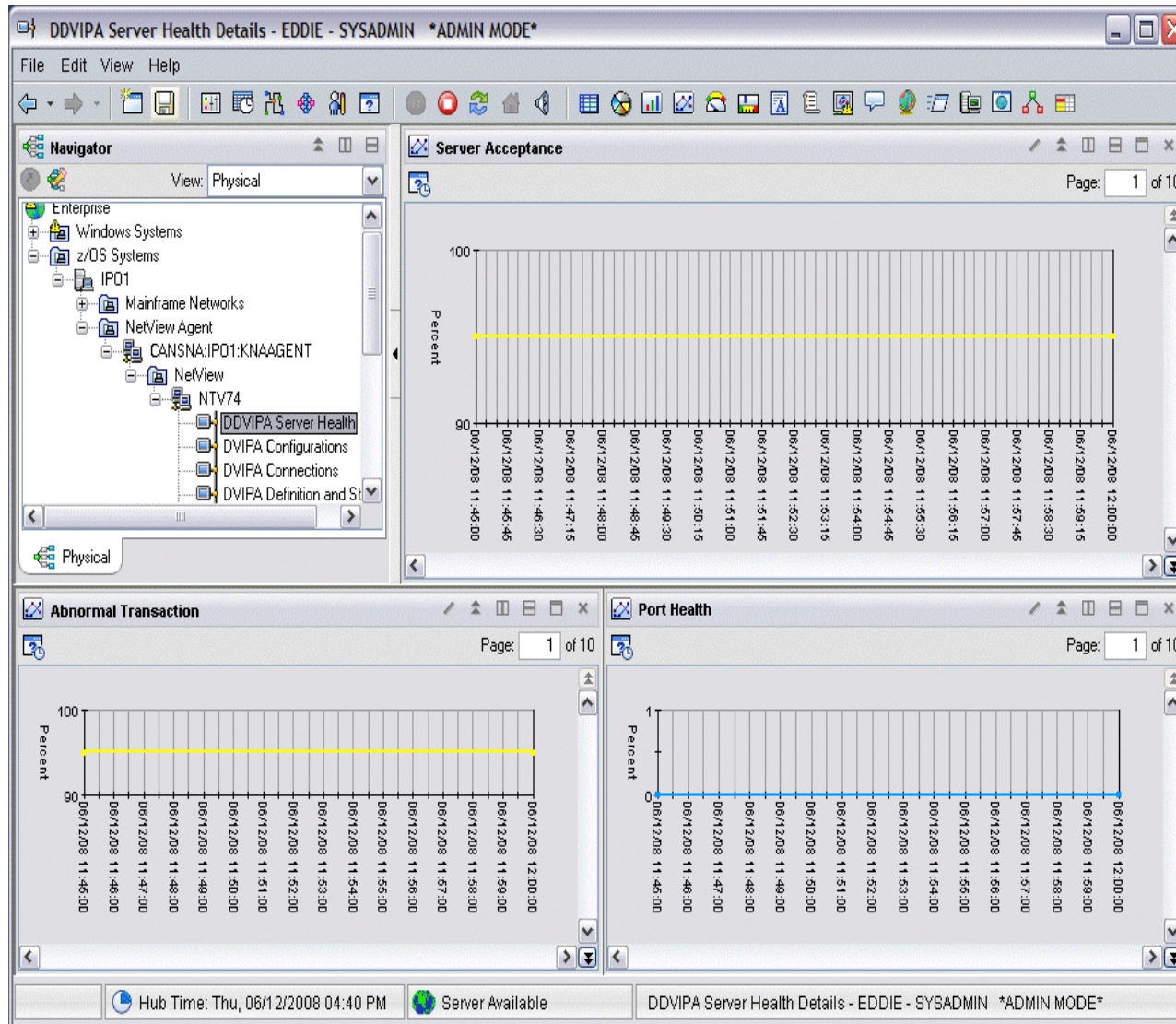
Distributed DVIPA Unhealthy Servers (TEP)



Unhealthy = 1 or more of:

- WLM Weight = 0
- Port Health % < 90
- Server Acceptance % < 80
- Abnormal Transaction % > 25

Distributed DVIPA Server Health Details (TEP)



Health statistics
for specific
application server
on a DDVIPA
target, over time.

DVIPA Events

- DVIPA Events can be used to provide a better “real time” view of DVIPA information. NetView is providing automation for three types of DVIPA Events:
 - DVIPA SNMP Traps
 - Uses NetView SNMP trap DST
 - DVIPA Configuration Changes
 - Requires z/OS V1R11 Communications Server
 - Sysplex Autonomics messages
- When a DVIPA event is received:
 - NetView will bundle the events using configurable delays
 - Notify the master that this system needs rediscovering
 - The master NetView also has a delay to bundle the event messages
 - Send rediscovery commands to all systems in the sysplex impacted by the event

Distributed DVIPA Statistics



- Provides the capability to collect workload distribution for each distributed DVIPA target
 - Used for problem determination
 - Used for historical data
- Collects data after each DDVIPA discovery is done
- Starts during NetView initialization or with DVIPALOG command
- Writes data to a sequential data set
 - Primary and secondary data sets allocated
 - Messages indicate data set switching
- Sample CNMSDVST display data from both data sets
- Forwards data to master NetView, if configured to do so
- Reports (not provided by NetView) can be written against the data
 - Historical DDVIPA data can still be gathered using ITM

DDVIPA Statistics (CNMSDVPT sample)

What's new in IBM Tivoli NetView for z/OS Version 5.4

NetView Command Response - Mozilla Firefox

Notice that the values in the Sysplex Distributor Percent (SD%) column and in the Workload Manager Percent (WLM%) column are either very close or identical. This indicates that connections are distributed equitably across the six stacks in the sysplex.

CNMSDVST DVIPA=201.108.1.11 PORT=2023 TIME=(14:30,15:00)
BNH8671 NUMBER OF DISTRIBUTED DVIPA STATISTICAL RECORDS: 18

#	Date	Time	LocalSys	LclStack	DDVIPA	Port	TargSys	TargStak	DistribMethod	TotalComms	DeltaComms	WLMweight	SD%	WLM%
1	01/27/10	14:31:40	TVT2008	TCPIP8	201.108.1.11	2023	TVT2007	TCPIP7B	ServerULN	26	0	8	0	14
2	01/27/10	14:31:40	TVT2008	TCPIP8	201.108.1.11	2023	TVT2007	TCPIP7	ServerULN	27	0	8	0	14
3	01/27/10	14:31:40	TVT2008	TCPIP8	201.108.1.11	2023	TVT2006	TCPIP6	ServerULN	52	0	16	0	29
4	01/27/10	14:31:40	TVT2008	TCPIP8	201.108.1.11	2023	TVT2002	TCPIP2	ServerULN	21	0	8	0	14
5	01/27/10	14:31:40	TVT2008	TCPIP8	201.108.1.11	2023	TVT2008	TCPIP8	ServerULN	24	0	8	0	14
6	01/27/10	14:31:40	TVT2008	TCPIP8	201.108.1.11	2023	TVT2008	TCPIP8D	ServerULN	24	0	8	0	14
7	01/27/10	14:34:33	TVT2008	TCPIP8	201.108.1.11	2023	TVT2007	TCPIP7B	ServerULN	26	0	8	0	14
8	01/27/10	14:34:33	TVT2008	TCPIP8	201.108.1.11	2023	TVT2007	TCPIP7	ServerULN	27	0	8	0	14
9	01/27/10	14:34:33	TVT2008	TCPIP8	201.108.1.11	2023	TVT2006	TCPIP6	ServerULN	52	0	16	0	29
10	01/27/10	14:34:33	TVT2008	TCPIP8	201.108.1.11	2023	TVT2002	TCPIP2	ServerULN	21	0	8	0	14
11	01/27/10	14:34:33	TVT2008	TCPIP8	201.108.1.11	2023	TVT2008	TCPIP8	ServerULN	24	0	8	0	14
12	01/27/10	14:34:33	TVT2008	TCPIP8	201.108.1.11	2023	TVT2008	TCPIP8D	ServerULN	24	0	8	0	14
13	01/27/10	14:39:39	TVT2008	TCPIP8	201.108.1.11	2023	TVT2007	TCPIP7B	ServerULN	50	24	8	14	14
14	01/27/10	14:39:39	TVT2008	TCPIP8	201.108.1.11	2023	TVT2007	TCPIP7	ServerULN	51	24	8	14	14
15	01/27/10	14:39:39	TVT2008	TCPIP8	201.108.1.11	2023	TVT2006	TCPIP6	ServerULN	108	56	16	32	29
16	01/27/10	14:39:39	TVT2008	TCPIP8	201.108.1.11	2023	TVT2002	TCPIP2	ServerULN	45	24	8	14	14
17	01/27/10	14:39:39	TVT2008	TCPIP8	201.108.1.11	2023	TVT2008	TCPIP8	ServerULN	48	24	8	14	14
18	01/27/10	14:39:39	TVT2008	TCPIP8	201.108.1.11	2023	TVT2008	TCPIP8D	ServerULN	48	24	8	14	14

Hub Time: Wed, 01/27/2010 03:38 PM Server Available NetView Command Response - rudolph.tivlab.raleigh.ibm.com - SYSADMIN

Applet CMWApplet started

Start NetView Command Re... 3:49 PM

Major Functional Enhancements

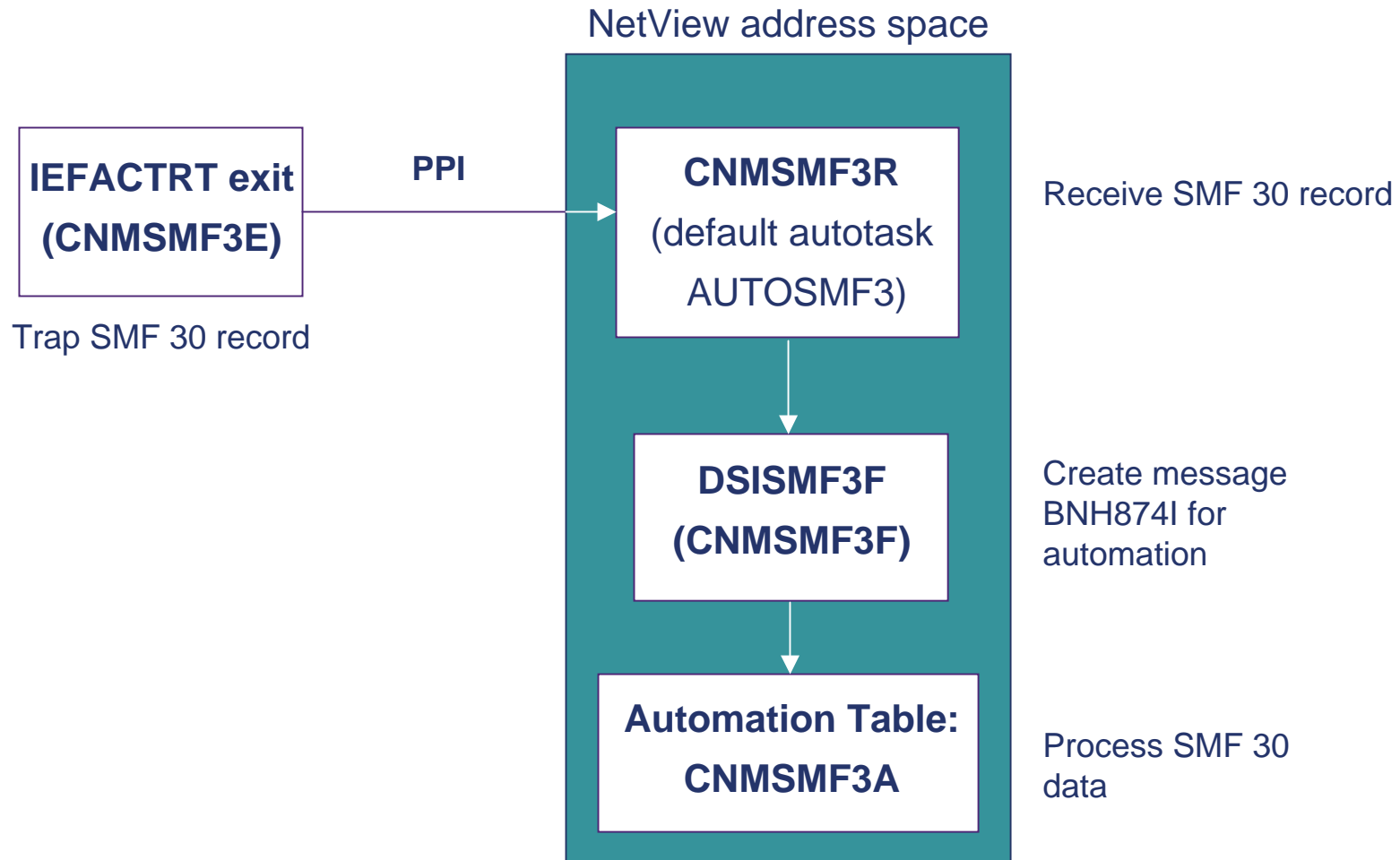
- Expanded IP management
- Broader sysplex and DVIPA management
- Core functionality

- Core functionality
 - Automation of SMF 30 records
 - Support for long password phrases
 - Command revision
 - Global Keep
 - NetView Web Services Gateway

Automation of SMF 30

- Automation enablement for SMF 30 records
- SMF 30 records cut for job & job-step termination (& other reasons)
- Note: Also available in NetView V5.3 via APAR OA25962

Automation of SMF 30



Automation of SMF 30

BNH874I SMF RECORD RECEIVED: sdata

- Two-line message created by CNMSMF3R when an SMF30 record is received.
- Intended for automation
- First line includes
 - ▶ Record type
 - ▶ Record subtype
 - ▶ Work type indicator (e.g., STC, TSO)
 - ▶ Date / time when record was moved to SMF buffer
 - ▶ Address space ID of source
 - ▶ Subtype identification (e.g., step total, job ended)
 - ▶ Subsystem or product name
 - ▶ System name
 - ▶ Program name
 - ▶ Step name
 - ▶ Step completion code
 - ▶ Termination indicator
 - ▶ Abend reason code
 - ▶ (more)
- Second line
 - ▶ SMF 30 record itself
 - ▶ Available to automation
 - ▶ Not logged or displayed
 - ▶ Truncated at 32000 characters

- Core functionality
 - Automation of SMF 30
 - Support for long password phrases
 - Command revision
 - Global Keep
 - NetView Web Services Gateway

Long Password Phrases

- Up to 100 characters in password phrases
- In support of RACF changes in z/OS 1.9

Long Password Phrases

```

vmrop - [24 x 80]
File Edit View Communication Actions Window Help

NN  NN      VV      VV
NNN NN  EEEEE TTTTTT VV      VV  II  EEEEE  WW      W  TM
NNNN NN  EE      TT      VV      VV  II  EE      WW      W  W
NN NN NN  EEEE      TT      VV      VV  II  EEEE      WW  WWW  WW
NN MNNN  EE      TT      VV VV      II  EE      WWW  WWW
NN  NNN  EEEEE  TT      VVV      II  EEEEE      WW  WW
NN  NN
                        V

5697-ENV © Copyright IBM Corp.      1986, 2009 - All Rights Reserved
U.S. Government users restricted rights - Use, duplication, or disclosure
      restricted by GSA ADP schedule contract with IBM corporation.
      Licensed materials - Property of IBM Corporation
Domain = NTVE1                      NetView V5R4

OPERATOR ID ==>                      or LOGOFF
PASSWORD ==>

      PROFILE ==>                      Profile name, blank=default
      HARDCOPY LOG ==>                  device name, or NO, default=NO
RUN INITIAL COMMAND ==>                YES or NO, default=YES
Takeover session ==>                  YES, NO, or FORCE, default=NO

Enter logon information or PF3/PF15 to logoff
Leave password blank to change

MA  c                                                                    01/0001

```

- Core functionality
 - Automation of SMF 30
 - Support for long password phrases
 - Command revision
 - Global Keep
 - NetView Web Services Gateway

Command Revision

- Supersedes existing “MVS Command Management” function
- Identify / shield sensitive or complex commands and/or desired synonyms
- For all MVS commands: change, reject, or transfer to Net View
- Automatically revise command text in-line before execution
 - ▶ Route to NetView’s base address space for further processing,
- or -
 - ▶ Send out on SSI

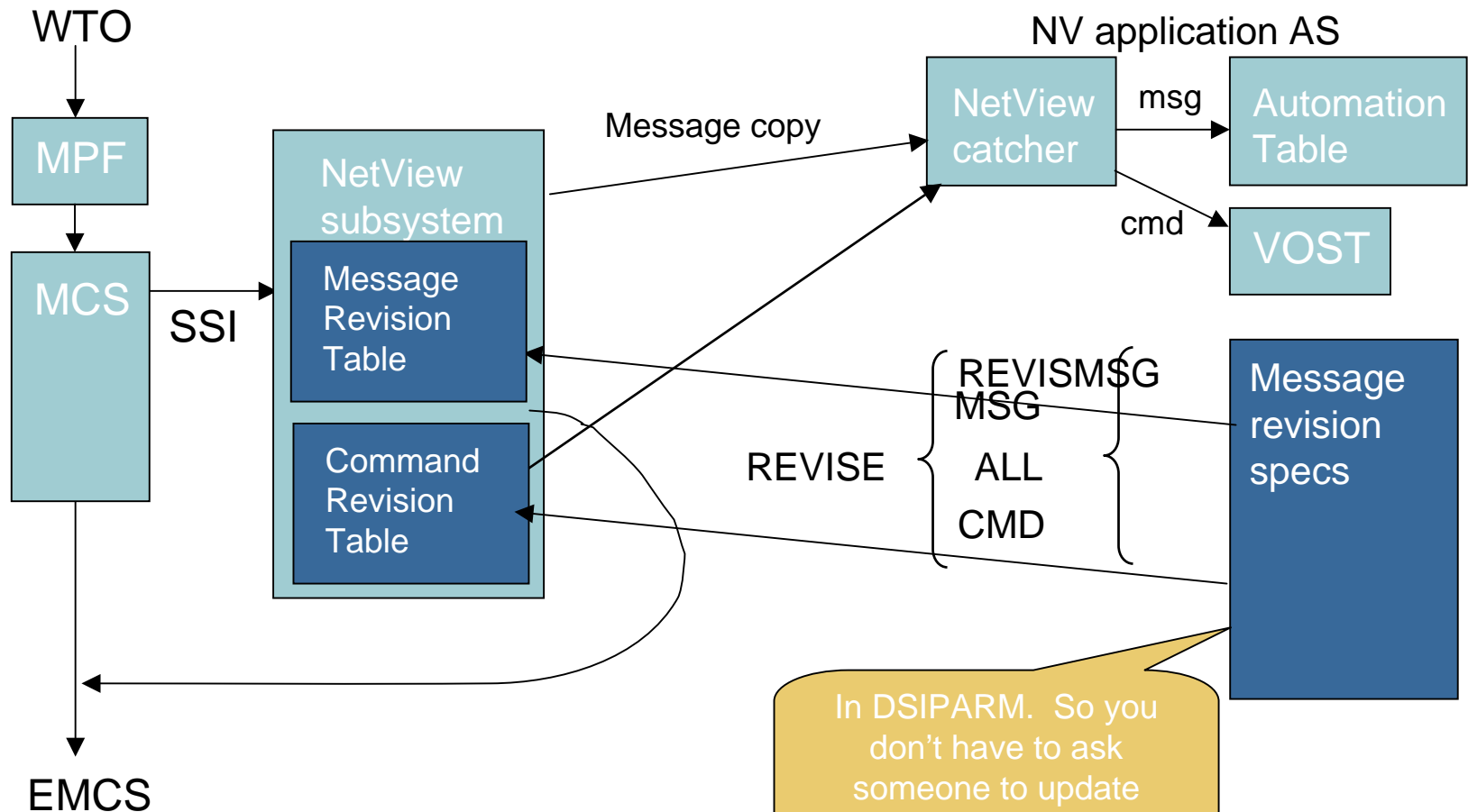
Command Revision

- Example
 - ▶ Problem: Operators occasionally shut down a process before it completes creation of a check point.
 - ▶ Solution: Use the Command Revision Table to transfer the shutdown command to NetView, where a WTOR is issued to the same console where the command was entered. The operator must verify the check point before the command is allowed to proceed.

Command Revision

- Similar to Message Revision Table
- Runs in NetView SSI
- Issue message when
 - ▶ A command is revised, showing original & revised
 - ▶ Unauthorized command revision is attempted
- Sample CNMSCRT1

Command Revision



Command Revision

- REVISMSG command is deprecated.
- REVISE will support all the keywords and values of REVISMSG, and their meanings unchanged.
- In addition: REVISE TESTMODE=YES | NO
 - ▶ No effect on message revision
 - ▶ For Command Revision: issues a message showing changes that would have been made.
- Stylesheet
 - ▶ Action of SSI.ReviseTable statement unchanged as long as member referred to is unchanged
 - ▶ Can be started automatically through NetView initialization. Commented out by default.
- Special Installation considerations
 - ▶ Must establish the provided Revision Command Exit as MPF command user exit
 - ▶ Required to allow revision of JES commands before JES SSI sees them
 - ▶ Exit remains dormant until CRT is loaded by command from NetView.

Command Revision

- Language similar to Message Revision: UPON, WHEN, OTHERWISE, REVISE
- UPON: Trap a command based on
 - Name of console issuing command
 - Value of first token
 - All other commands
 - All commands
- WHEN: check for
 - ASID
 - JOBNAME
 - Jobtype (how the address space was started)
 - Name of console issuing command
 - Authority of console issuing command
 - Next, left, right, substring, etc.
 - SAF user identity and/or group name
 - More ...

Command Revision

- Actions
 - ▶ **REVISE**
 - Similar to MRT REVISE: modify command text (only). Cannot modify other command attributes.
 - ▶ **WTO**
 - Create text for a WTO, which is issued immediately to console that issued command. Cannot set route codes, descriptor codes, or other WTO parms.
 - ▶ **NETVONLY**
 - CRT removes command from MVS command stream
 - Send the command (with any revisions) to NetView for further action (suppress, modify further, reissue)
- Other restrictions
 - ▶ Only 1 CRT per LPAR

- Core functionality
 - Automation of SMF 30
 - Support for long password phrases
 - Command revision
 - Global Keep
 - NetView Web Services Gateway

Global Keep

- Current pipeline KEEP stage allows users to create, delete, modify, and access repositories of NetView messages.
- Name space will be expanded to allow 255 byte identifiers for the keeps
- Specially designated keeps will be accessible from any regular task
- ENDCMD for global keep specifies commands to be run (within custom time limit) when NetView ends.

Global Keep

- **Example 1:** Programmer wants to use a TCP/IP domain name as a keep identifier, but the names exceed 8 characters (not expected to exceed 255). The programmer uses the special name LOCAL, specifies the domain name in a delimited string, and then proceeds as before for a pipe KEEP.
- **Example 2:** Programmer has data to be shared between many operator tasks, but the length of the records exceeds the 255 limit for the existing INSTORE function (but is not expected to exceed the 32000 character limit on all NetView message records).
- **Example 3:** Programmer wants to make a collection of messages, including attributes, available across NetView auto-tasks.

- Core functionality
 - Automation of SMF 30
 - Support for long password phrases
 - Command revision
 - Global Keep
 - NetView Web Services Gateway

NetView Web Services Gateway

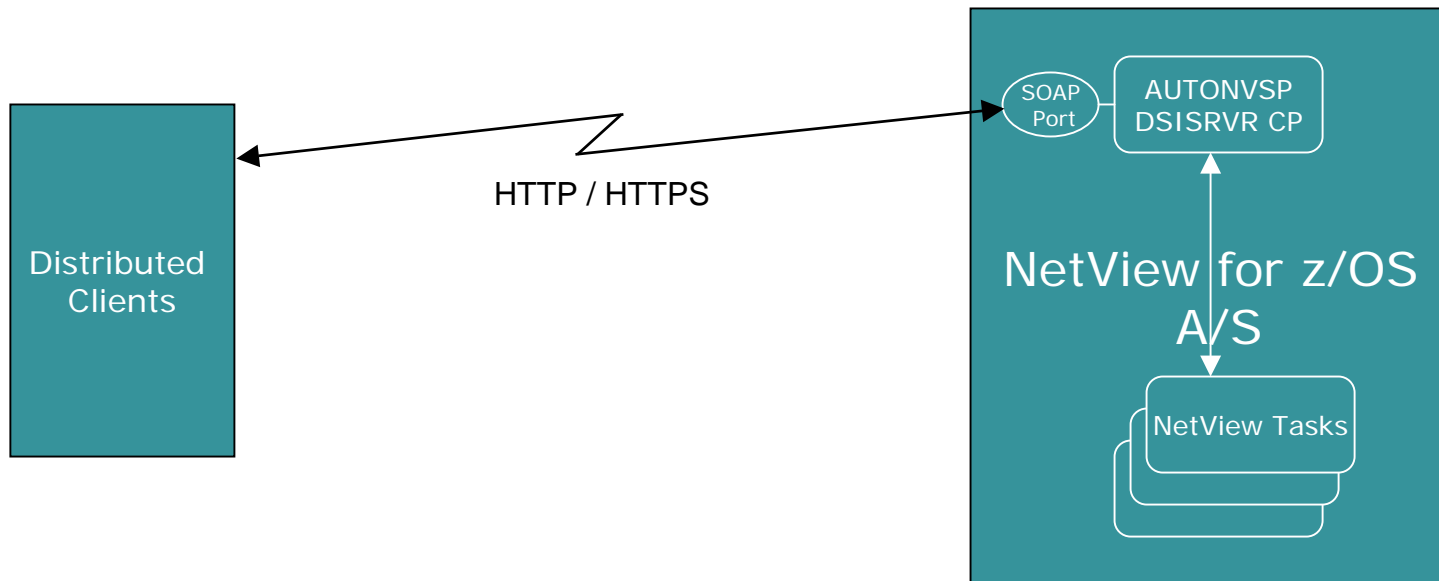
- Provides an industry-standard open interface into the NetView program
- Allows distributed applications (IBM- or customer-written) to interact with NetView.
- Provides services independent of platform, environment, application language, or programming model.
- Implemented as SOAP Server
- Different types of client applications (such as Java, Microsoft .NET, and third-party applications) can submit SOAP requests to NetView to extract data.
- Does not require WebSphere or any other middleware.

What kind of data can be accessed via the Gateway?



- Anything that NetView can access or store, i.e., RODM, TCP/IP, Sysplex, etc.
- All data is text-based

Flows



Security

- **Authentication** - Verify that a user is who he/she claims to be
 - ▶ User ID/Password (DSIOPF/SAF/RACF)
 - ▶ Certificate Authorization (SSL)
- **Authorization** - Ensure that he/she is permitted access to the requested resource
 - ▶ NetView Command Authorization Table, SAF/RACF
- **Transport** - Conduct the entire exchange over a secure network connection
 - ▶ SSL

Summary of Server Features

- Can execute all NetView line-mode commands
- Can provide automation for external messages
- Can provide both secure and non-secure communication
- WSDL file provided for generating static or dynamic proxy clients
- Can be customized using CNMSTYLE
- IPv6-enabled
- Debug tools such as Trace, SOAP test client and other help tools are provided
- Multiple instances of server can be started for load balancing, security, or customization
- Can serve as basic HTTP/HTTPS server
- Supports SSL user cache, Cert Auth and different Cipher suites

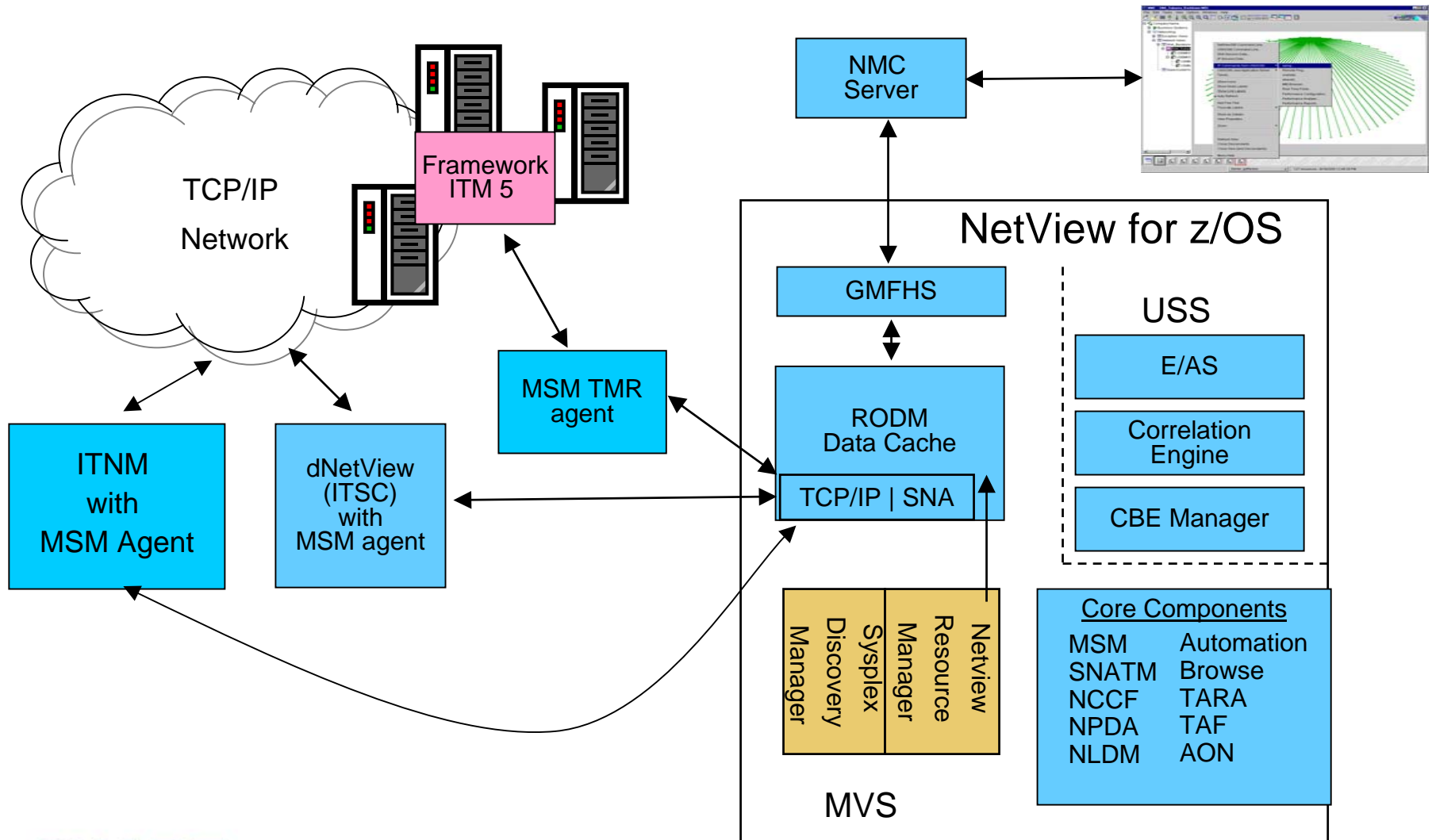
NetView 5.4

- Major Themes
 - ▶ Major Functional Enhancements
 - ▶ Enterprise Integration

Enterprise Integration

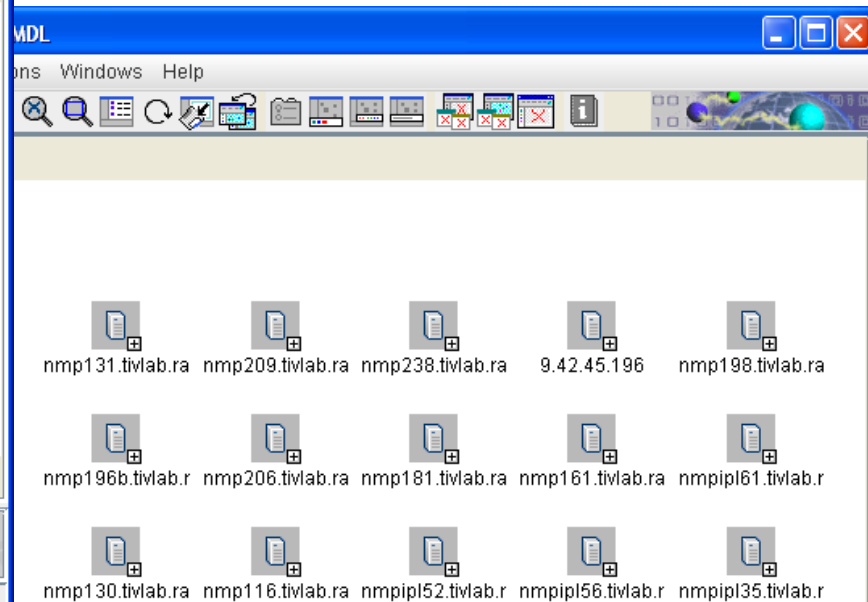
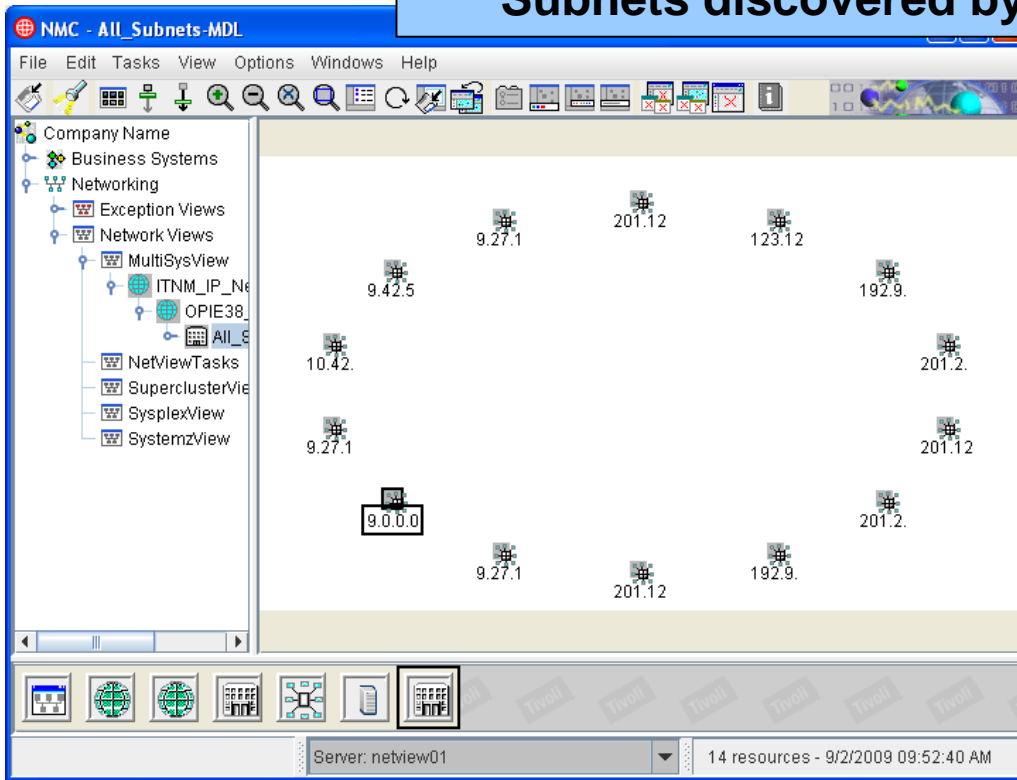
- Integration with Tivoli Network Manager IP Edition (ITNM-IP)
 - ▶ Transition from Tivoli NetView (Distributed NetView)
 - ▶ All customers of NetView for z/OS V5R4 are entitled to free download of limited-license version of IBM Tivoli Network Manager
 - ▶ Provides discovery of
 - Layer 3 IP resources
 - Resources that are “1 hop” away from z/OS
 - Together, provide enterprise-wide IP availability management
 - ▶ Data on distributed resources is stored in RODM
 - Maintain updated resource status
 - Topology views in NMC
 - ▶ Provides ability to manage the distributed IP network from a central z/OS point
 - ▶ Allows customers who have separate mainframe and distributed shops to see beyond the z/OS network.

NetView for z/OS environment



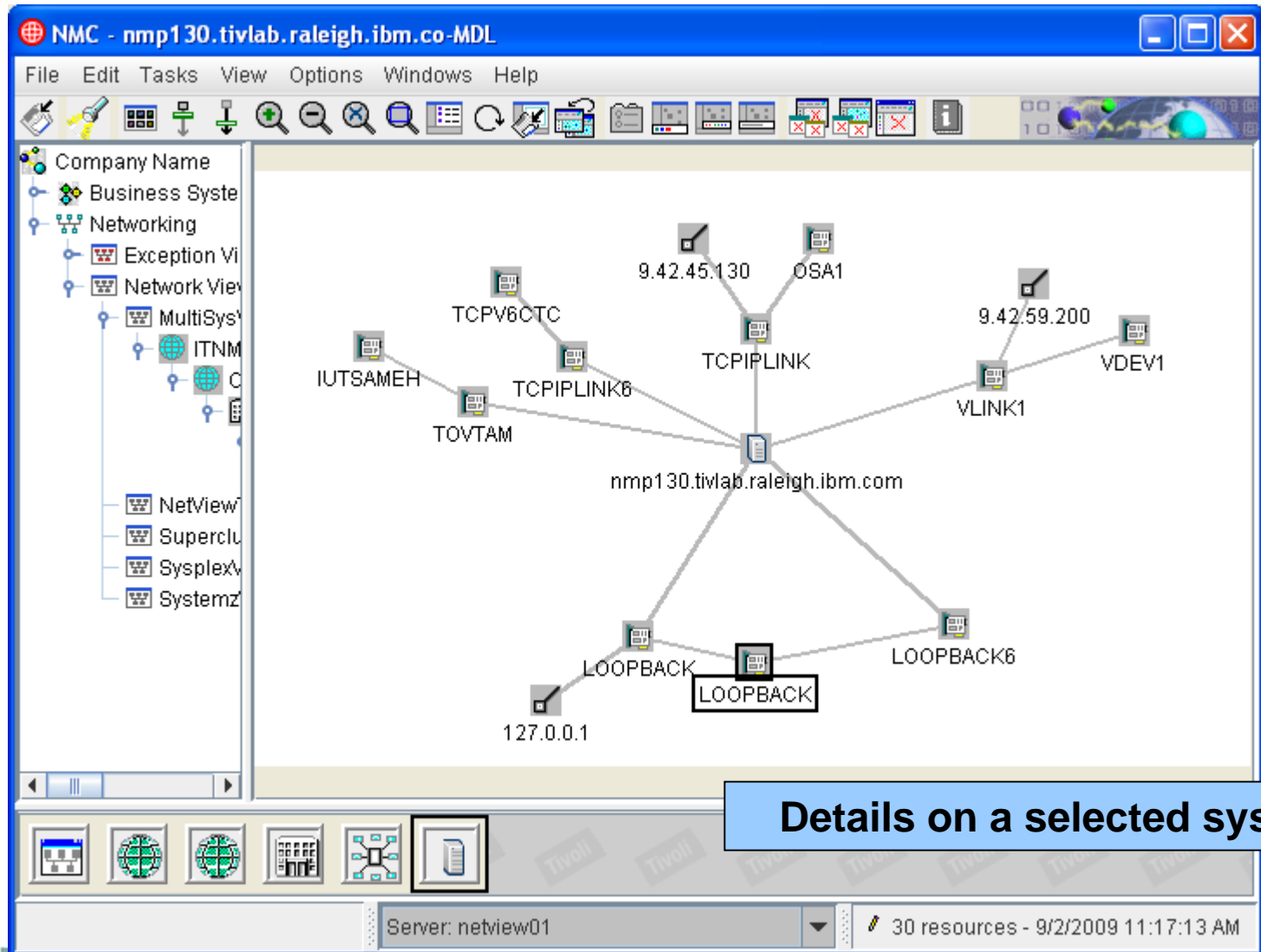
Views in NMC

Subnets discovered by ITNM



Systems in the selected subnet

Views in NMC



Event Viewer

Event Viewer - nmp196b.tivlab.raleigh.ibm.com

Event Edit Options Windows Help

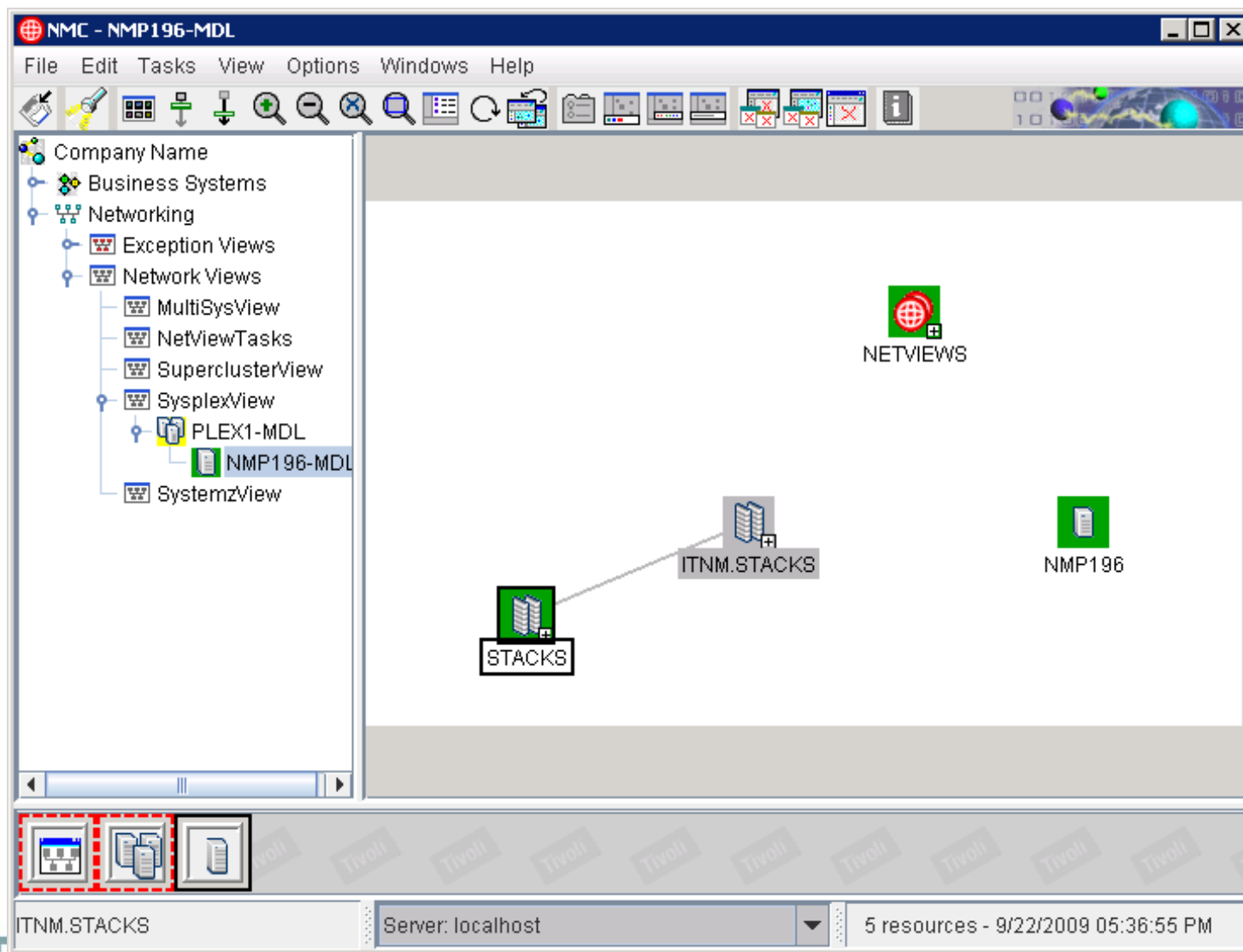
Unsat	MedUns	SevDeg	LowUns	Deg	IntMed	MedSat	Sat	Unk	Open	Ack	Closed
-------	--------	--------	--------	-----	--------	--------	-----	-----	------	-----	--------

Severity	Status	Date Received	Message	Source
Unknown	OPEN	05:24:36 PM 9/22...	TCP/IP CONNECTION FAILURE:REVIEW EVENT DETAIL FOR PROBABLE CAUSE	NPDA
Unknown	OPEN	05:23:36 PM 9/22...	TCP/IP CONNECTION FAILURE:REVIEW EVENT DETAIL FOR PROBABLE CAUSE	NPDA
Unknown	OPEN	05:22:36 PM 9/22...	TCP/IP CONNECTION FAILURE:REVIEW EVENT DETAIL FOR PROBABLE CAUSE	NPDA
Unknown	OPEN	05:21:36 PM 9/22...	TCP/IP CONNECTION FAILURE:REVIEW EVENT DETAIL FOR PROBABLE CAUSE	NPDA
Unknown	OPEN	05:20:36 PM 9/22...	TCP/IP CONNECTION FAILURE:REVIEW EVENT DETAIL FOR PROBABLE CAUSE	NPDA
Unknown	OPEN	05:19:36 PM 9/22...	TCP/IP CONNECTION FAILURE:REVIEW EVENT DETAIL FOR PROBABLE CAUSE	NPDA
Unknown	OPEN	05:18:37 PM 9/22...	TCP/IP CONNECTION FAILURE:REVIEW EVENT DETAIL FOR PROBABLE CAUSE	NPDA

Events for a selected resource

Manual refresh 7 events as of 9/22/2009 05:24:38 PM 1 of 7 selected

Integration with Sysplex



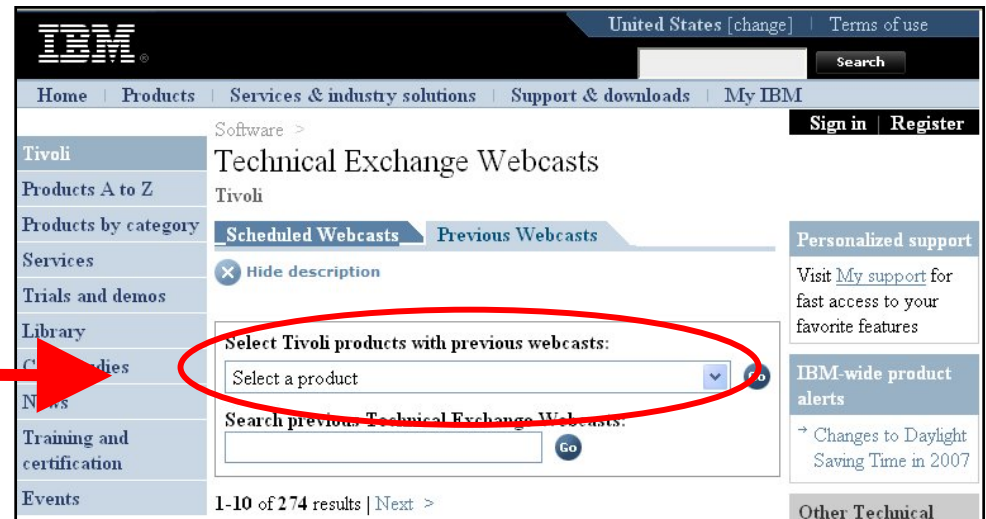
Questions?

For More Information

- NetView Home Page
<http://www.ibm.com/software/tivoli/products/netview-zos/>
 - ▶ Downloads (NMC, MSM agents, tools)
 - ▶ Release comparison
 - ▶ Link to Announcement letter
 - ▶ Links to other online information sources
 - ▶ More
- NetView Documentation
<http://publib.boulder.ibm.com/infocenter/tivihelp/v3r1/index.jsp?toc=/com.ibm.itnetviewforzos.doc/toc.xml>
- NetView Customer Forum
<http://groups.yahoo.com/group/NetView/>

Where to Find Web Seminars

- Recordings of all Web Seminars are available at the STE Web page:
 - http://www.ibm.com/software/sysmgmt/products/support/supp_tech_exch.html
- Search *Previous Webcasts*
 - NetView for z/OS



Webinars/Classes

- Webinar Descriptions and Recordings
 - ▶ http://www.ibm.com/software/tivoli/education/edu_prd.html#N
- Examples
 - ▶ NetView for z/OS 5.3 Enterprise Management Agent (EMA)
 - ▶ TCP/IP Management – Part 1
 - ▶ TCP/IP Management – Part 2
 - ▶ Automation
 - ▶ Time to Value, Ease of Use, and Migration Considerations
- Classes
 - ▶ <http://www.ibm.com/software/tivoli/education>

IBM System z Advisor

- A monthly e-newsletter for System z and zSeries IT Service Management, Information on Demand, and Service Oriented Architecture/Enterprise Transformation
- <http://www-01.ibm.com/software/tivoli/systemz-advisor/?&ca=spotlights&me=W&met=inli&re=Imiitsm>

NetView Demos

- NetView 5.4 Demos
 - DVIPA
 - <http://www.ibm.com/developerworks/wikis/display/tivolimedialogallery/DVIPA+Enhancements+in+Tivoli+NetView+for+zOS+5.4>
 - Packet Trace
 - <http://www.ibm.com/developerworks/wikis/display/tivolimedialogallery/Viewing+Packet+Trace+Data+using+IPTRACE>

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