



IBM Software Group

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

Larry Green

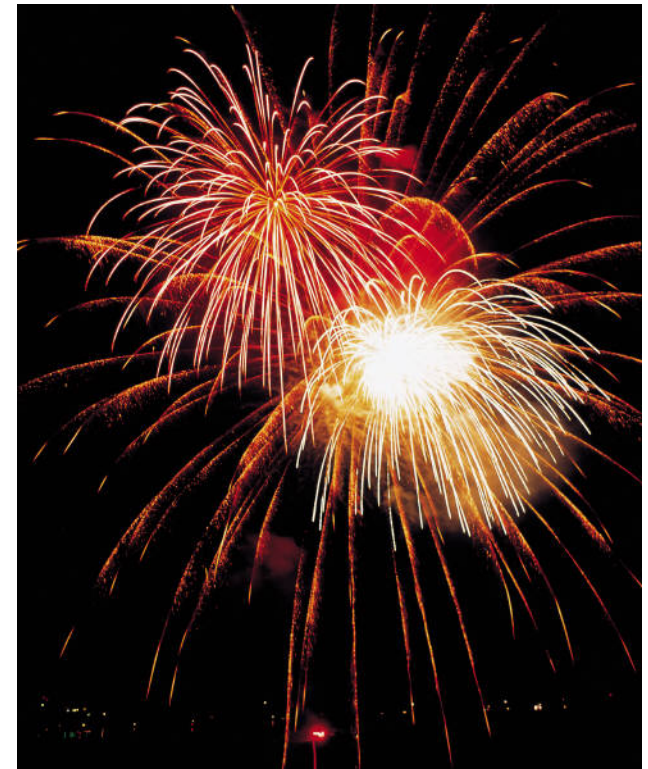
Architect, NetView for z/OS

October 2, 2009



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, Enterprise-wide management
- Enhancements to core functionality

▶ Product Portfolio Integration

- Expanded DLA

▶ Enterprise Integration

■ Prereqs z/OS 1.9



Major Functional Enhancements

- Expanded IP management
 - ▶ OSA Topology
 - ▶ Enhanced trace (includes OSA and packet)
- Broader sysplex and DVIPA management, Enterprise-wide management
- Core functionality



OSA Trace

- Supports tracing of OSA packets with OSA-Express2 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.

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	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

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

Packet Trace Control

Session D - [24 x 80]

File Edit View Communication Actions Window Help

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

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

TCPIP7
GTF: NO

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

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

NetView is collecting traced packets.

Packet Tracing is NetView domain and z/OS level

Existing packets (if any) may 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 PKTRACE 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/	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)

Two Lines per OSA Port
Top Line shows status
Bottom Line is for setting options

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

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

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)

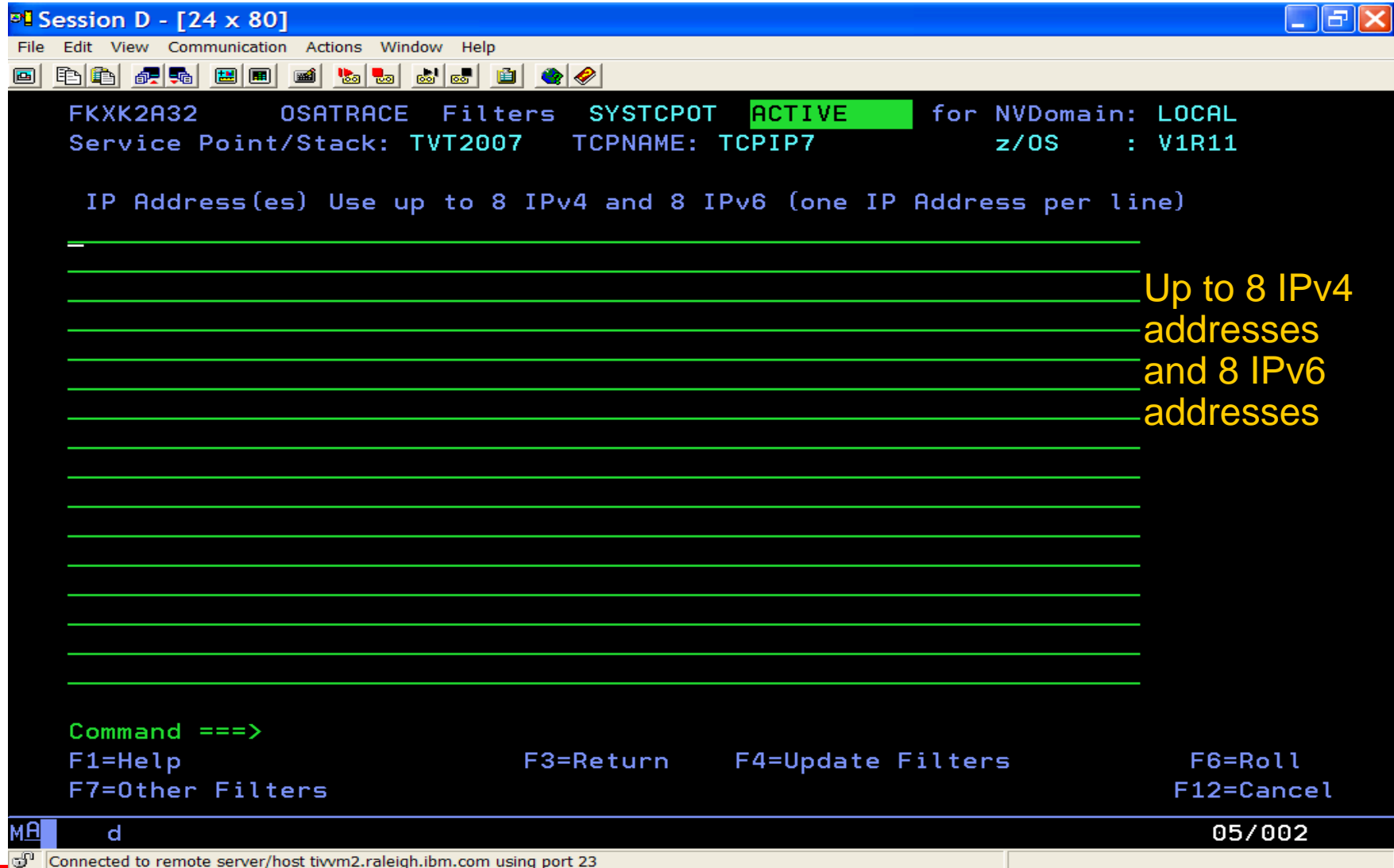
Up to 8 entries for each type

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

MA d 05/054

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

OSA Trace Filters: IP Addresses



The screenshot shows a terminal window titled "Session D - [24 x 80]" with a menu bar (File, Edit, View, Communication, Actions, Window, Help) and a toolbar. The main display area has a black background with green text. At the top, it shows "FKXK2A32 OSATRACE Filters SYSTCPOT ACTIVE for NVDomain: LOCAL" and "Service Point/Stack: TVT2007 TCPNAME: TCPIP7 z/OS : V1R11". Below this is the instruction "IP Address(es) Use up to 8 IPv4 and 8 IPv6 (one IP Address per line)". A series of 16 horizontal green lines follows. To the right of these lines, yellow text reads "Up to 8 IPv4 addresses and 8 IPv6 addresses". At the bottom left, it says "Command ==>". At the bottom right, it lists function keys: "F1=Help", "F3=Return", "F4=Update Filters", "F6=Roll", "F7=Other Filters", and "F12=Cancel". The status bar at the very bottom shows "MA d" on the left and "05/002" on the right. A small status bar at the bottom of the window indicates "Connected to remote server/host tivvm2.raleigh.ibm.com using port 23".

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

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

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

MA d 06/009

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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			
				{... ..D..f.		
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..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.....*		

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

Refresh data space with new trace records

Scroll right for more info

Scroll up and down

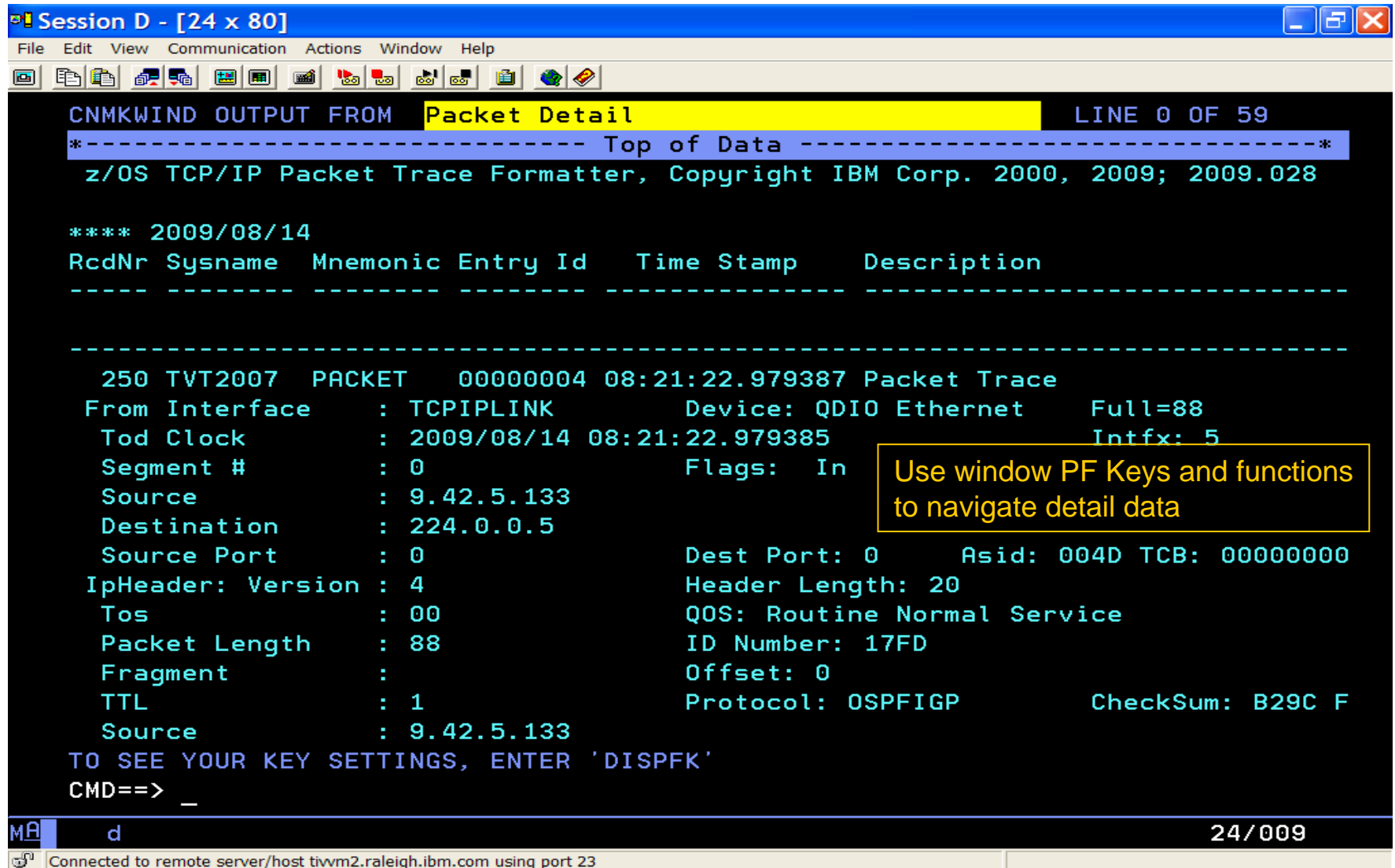
Command ==>

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 tivvm2.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==> _

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

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

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

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 tivm2.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 F7=Backward F8=Forward F3=Return F9=Commands F4=Details F5=Refresh F11=Right F6=Roll F12=Cancel

MA d 04/002

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

Select packet 250
Use PF 9 to get Command menu

Commands from Packets Summary

Session D - [24 x 80]

File Edit View Communication Actions Window Help

FKXK2A28 PKTTRACE SUMMARY COMMANDS D52NV U

DP	Nr	hh:mm:ss.mmmmm	I	Option 1 – Ping selected	*****
IO	255	08:21:29.707500	2		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)
IO	247	08:21:20.849382	079D	protocol=OSP	6. SNMP (Stack)
IU	246	08:21:20.269648	14FB	protocol=UDP	

F1=Help F3=Return
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

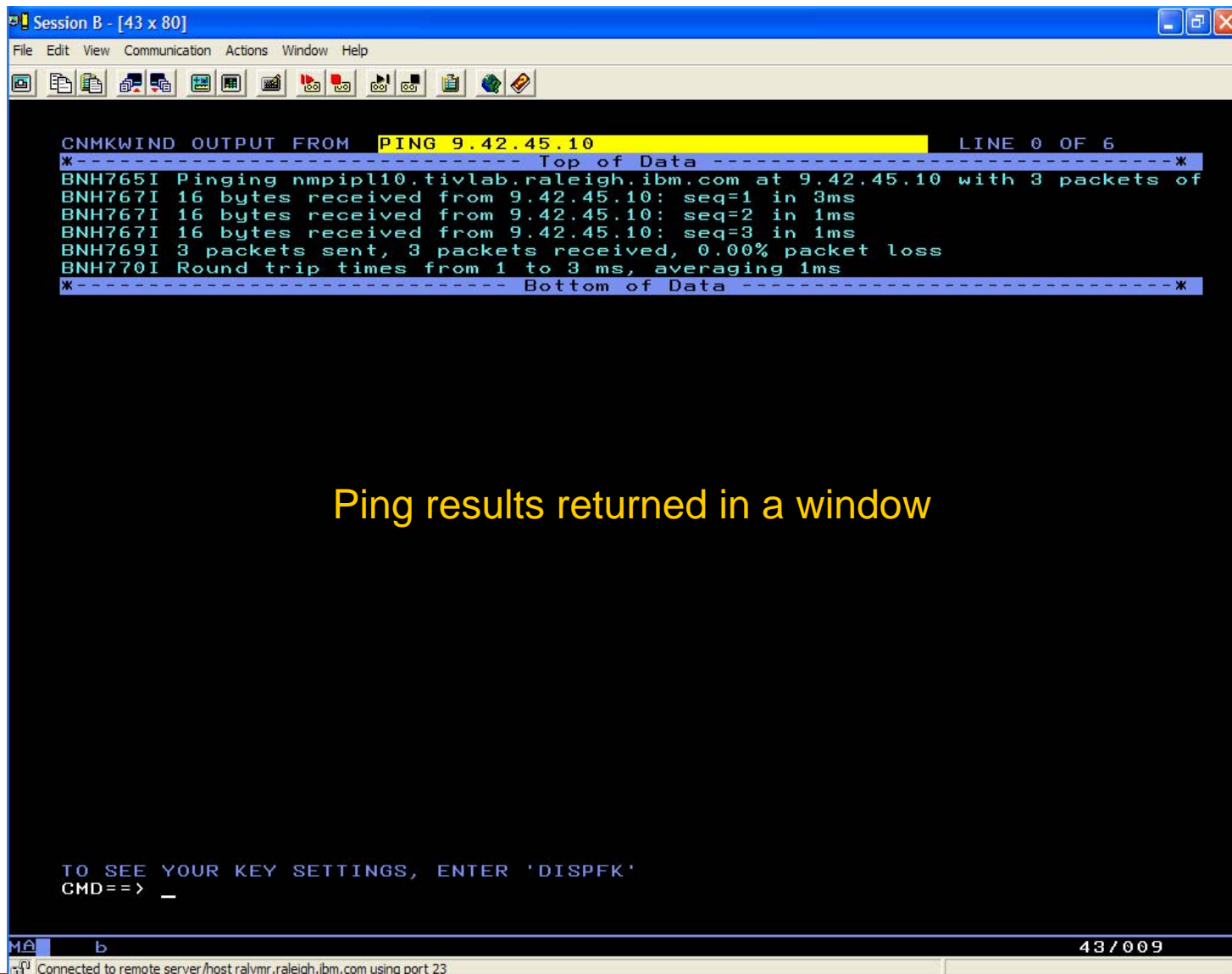
STACK means command will be issued to the local IP Stack

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

04/046

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

Ping Results



The screenshot shows a terminal window titled "Session B - [43 x 80]" with a menu bar (File, Edit, View, Communication, Actions, Window, Help) and a toolbar. The main display area shows the output of a ping command. The text is as follows:

```
CNMKWIN 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==> _
```

At the bottom of the window, there is a status bar showing "b" and "43/009". Below the status bar, a small text box indicates "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 3
End 3

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 tivvm2.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 3-Ascii
 4-Tally 4-Ebcdic
 5-Hex

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

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

Streams: 128 , 1-Summary
 2-Detail

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

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

MA d 05/004

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

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==> _

```

MA b 43/009

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

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 PKTRACE 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

Infc/Link	Stat	Prot	IP Address/Prefix	Ports		Record Count
				Src	PortNm Dest	
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
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TCPIPLINK102	OFF	*	*	*	*	0
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TCPIPLINK104	OFF	*	*	*	*	0
TCPIPLINK105	OFF	*	*	*	*	0
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TCPIPLINK107	OFF	*	*	*	*	0
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TCPIPLINK114	OFF	*	*	*	*	0
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TCPIPLINK136	OFF	*	*	*	*	0
TCPIPLINK137	OFF	*	*	*	*	0
TCPIPLINK138	OFF	*	*	*	*	0
TCPIPLINK139	OFF	*	*	*	*	0
TCPIPLINK140	OFF	*	*	*	*	0
TCPIPLINK141	OFF	*	*	*	*	0
TCPIPLINK142	OFF	*	*	*	*	0
TCPIPLINK143	OFF	*	*	*	*	0
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TCPIPLINK149	OFF	*	*	*	*	0
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TCPIPLINK151	OFF	*	*	*	*	0
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TCPIPLINK153	OFF	*	*	*	*	0
TCPIPLINK154	OFF	*	*	*	*	0
TCPIPLINK155	OFF	*	*	*	*	0
TCPIPLINK156	OFF	*	*	*	*	0
TCPIPLINK157	OFF	*	*	*	*	0
TCPIPLINK158	OFF	*	*	*	*	0
TCPIPLINK159	OFF	*	*	*	*	0
TCPIPLINK160	OFF	*	*	*	*	0
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TCPIPLINK166	OFF	*	*	*	*	0
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TCPIPLINK176	OFF	*	*	*	*	0
TCPIPLINK177	OFF	*	*	*	*	0
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TCPIPLINK195	OFF	*	*	*	*	0
TCPIPLINK196	OFF	*	*	*	*	0
TCPIPLINK197	OFF	*	*	*	*	0
TCPIPLINK198	OFF	*	*	*	*	0
TCPIPLINK199	OFF	*	*	*	*	0
TCPIPLINK200	OFF	*	*	*	*	0
TCPIPLINK201	OFF	*	*	*	*	0
TCPIPLINK202	OFF	*	*	*	*	0
TCPIPLINK203	OFF	*	*	*	*	0
TCPIPLINK204	OFF	*	*	*	*	0
TCPIPLINK205	OFF	*	*	*	*	0
TCPIPLINK206	OFF	*	*	*	*	0
TCPIPLINK207	OFF	*	*	*	*	0
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TCPIPLINK212	OFF	*	*	*	*	0
TCPIPLINK213	OFF	*	*	*	*	0
TCPIPLINK214	OFF	*	*	*	*	0
TCPIPLINK215	OFF	*	*	*	*	0
TCPIPLINK216	OFF	*	*	*	*	0
TCPIPLINK217	OFF	*	*	*	*	0
TCPIPLINK218	OFF	*	*	*	*	0
TCPIPLINK219	OFF	*	*	*	*	0
TCPIPLINK220	OFF	*	*	*	*	0
TCPIPLINK221	OFF	*	*	*	*	0
TCPIPLINK222	OFF	*	*	*	*	0
TCPIPLINK223	OFF</					

Major Functional Enhancements

- Expanded IP management
- Broader sysplex and DVIPA management, Enterprise-wide management
- Core functionality

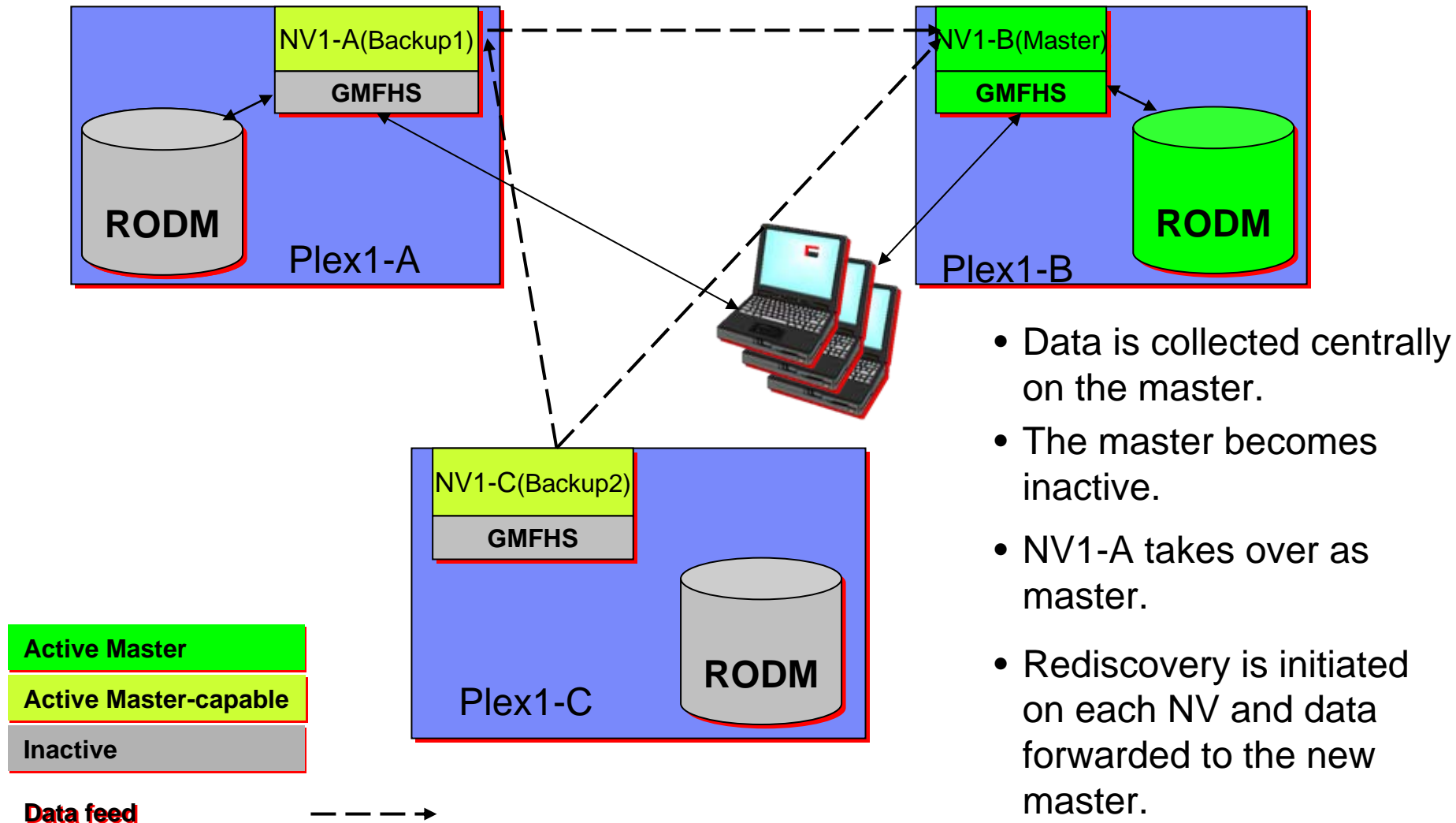


Sysplex and DVIPA Management

- Provides consolidated sysplex management including topology and automation.
- Uses z/OS XCF services to create "master" and "backup" NetViews for failover.
- Improves notification of changes in the DVIPA environment, as well as providing better PD capabilities.
- UIs
 - ▶ Additional sysplex topology views in NMC
 - ▶ TEP
 - New workspaces to depict topology information
 - New cross-product links to
 - OMEGAMON XE for Mainframe Networks
 - OMEGAMON XE on z/OS
 - ▶ 3270



Sysplex and DVIPA

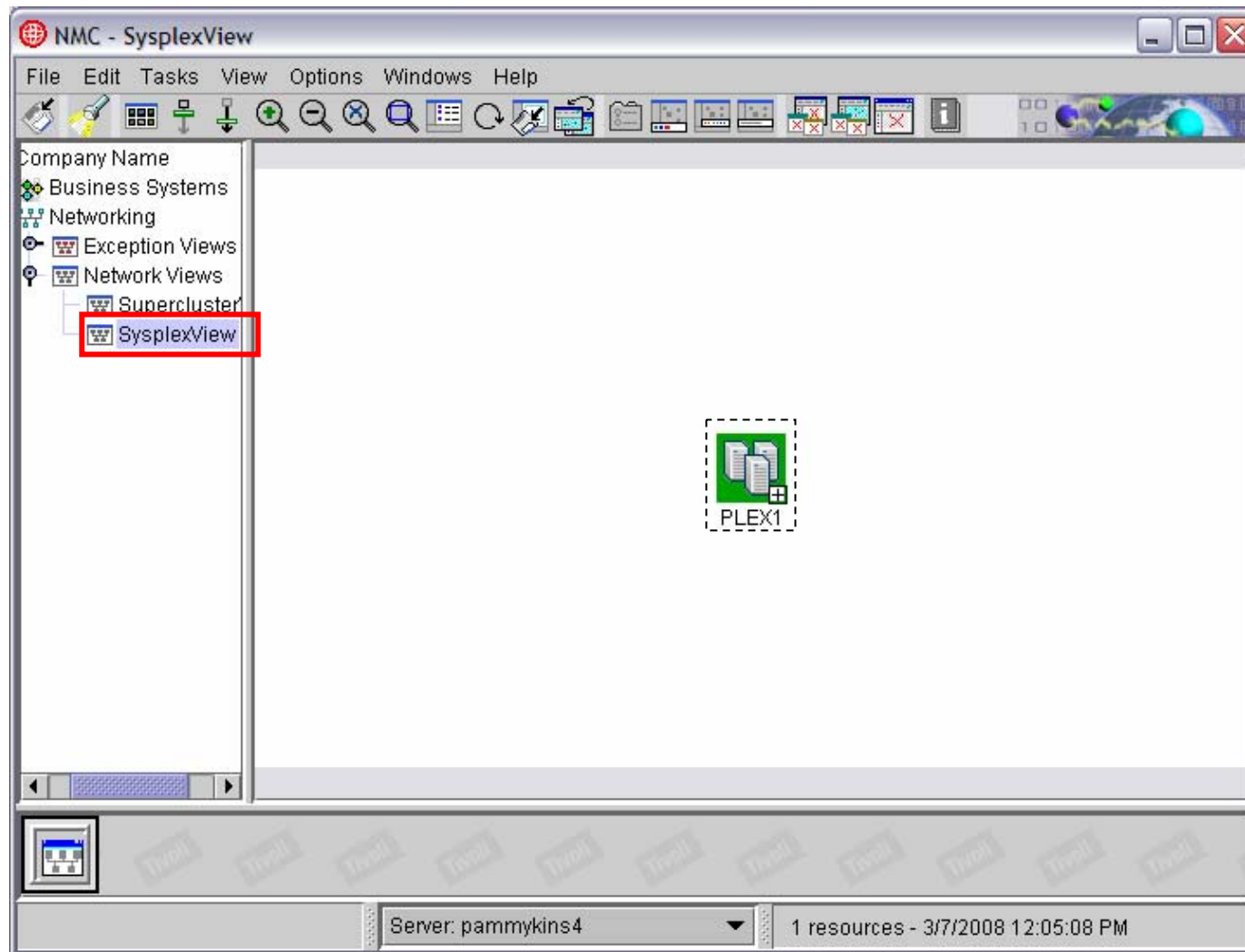


Discovery

- Enabled by default
 - ▶ Sysplex
 - ▶ Coupling Facility
 - ▶ System (z/OS image)
 - ▶ NetView Application
 - ▶ TCP/IP Stack
 - ▶ TCP/IP subplex
- Optional
 - ▶ TCP/IP Interface
 - ▶ Telnet Servers and Ports
 - ▶ OSA and HiperSockets (requires RODM; HiperSockets requires z/OS 1.11)
 - ▶ DVIPA, Distributed DVIPA (DDVIPA), DVIPA Connections, VIPA Routes, and DDVIPA Connection Routing
 - Determine if you will use DVIPA Events
 - Determine if you will use DDVIPA Statistics
- Each z/OS image would need to enable discovery for the particular function to provide a complete view of the sysplex



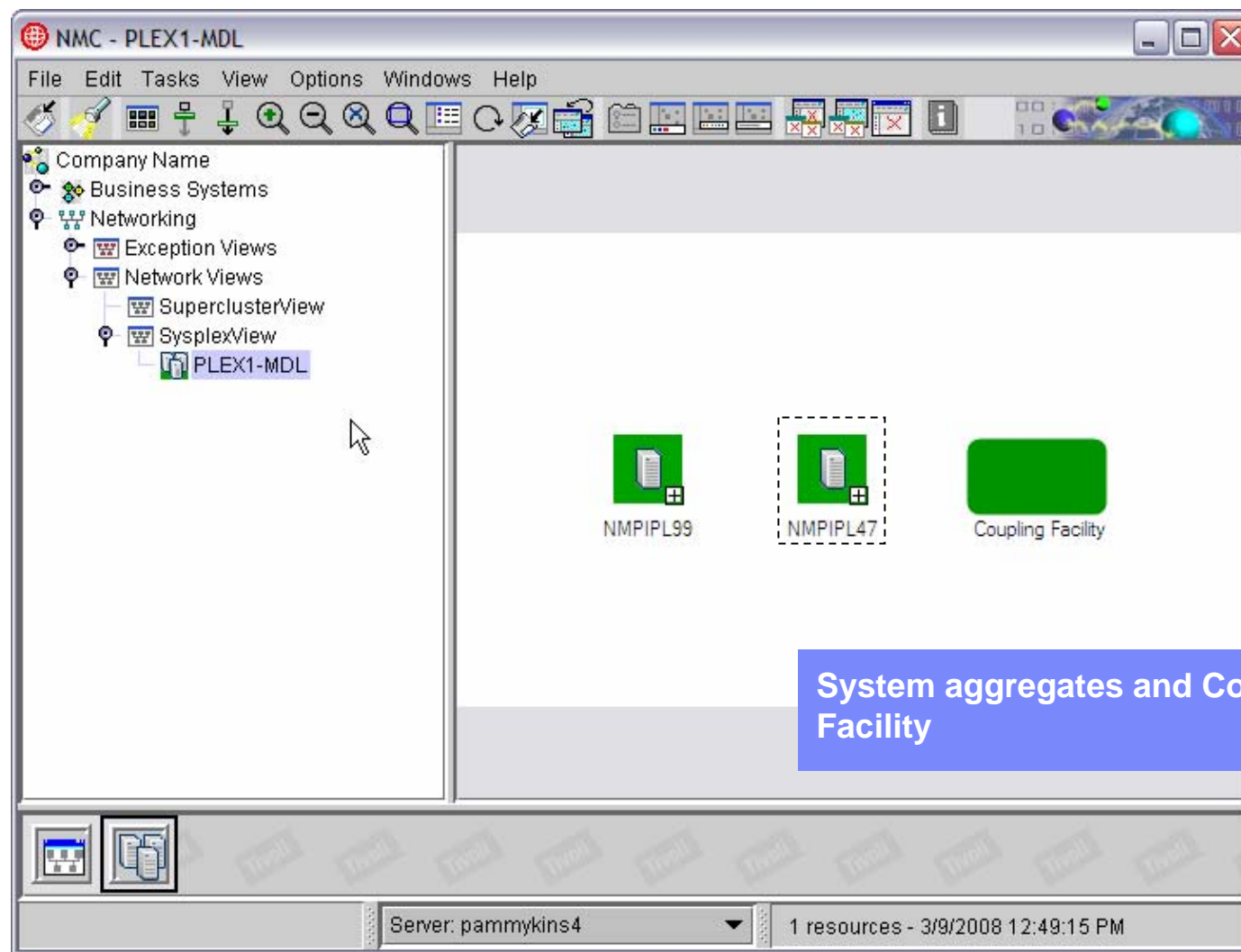
NMC Views: Sysplex Aggregate



Sysplex Aggregate

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

NMC Views: Sysplex More Detail Logical



System Aggregates

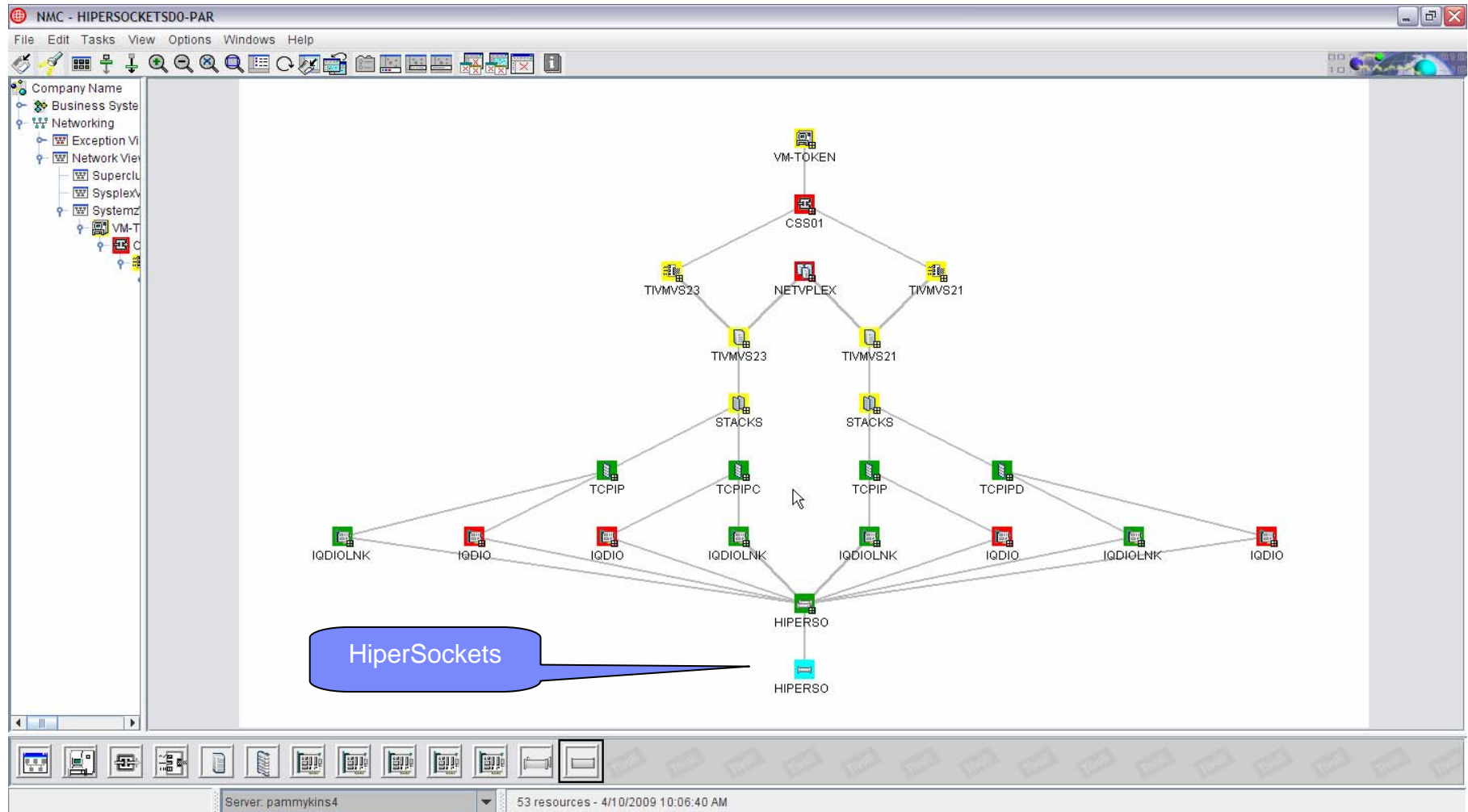
- Domain
- NetID

Coupling Facility

- CEC ID
- Node type
- Model #
- LPAR Partition #
- Mode
- CFLEVEL

System aggregates and Coupling Facility

NMC Views: Hipersockets Interfaces Parent View



Hipersockets Configuration and Status (TEP)

Hipersockets Configuration and Status - EDDIE - SYSADMIN

File Edit View Help

View: Physical

Navigator

- DVIPA Application-Insta
- DVIPA Connections
- DVIPA Definition and St
- DVIPA Distributor Target
- 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:

Arguments...

Destination Systems

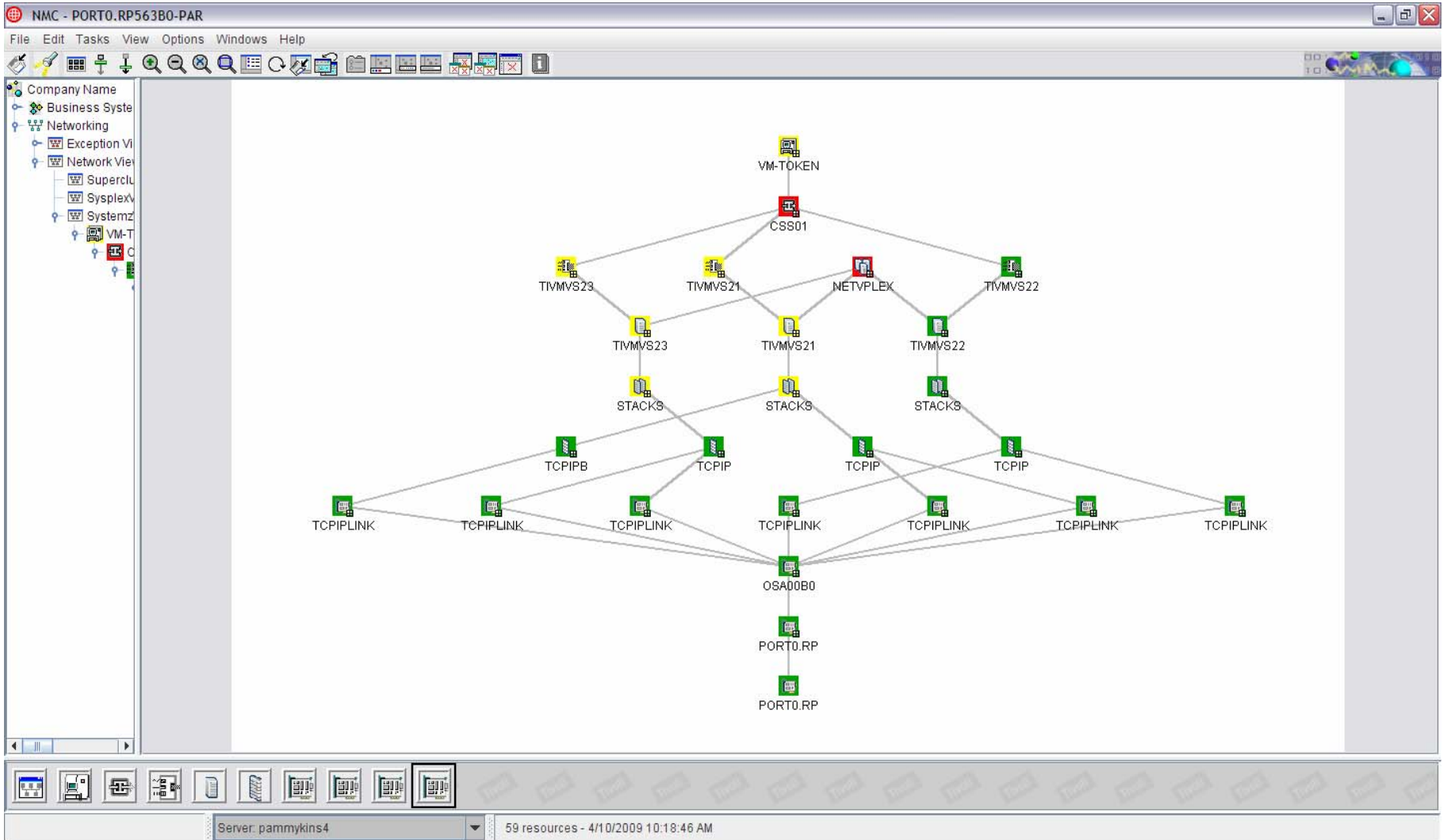
Hipersockets Configuration and Status Summary

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 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

Config. data for OSA ports

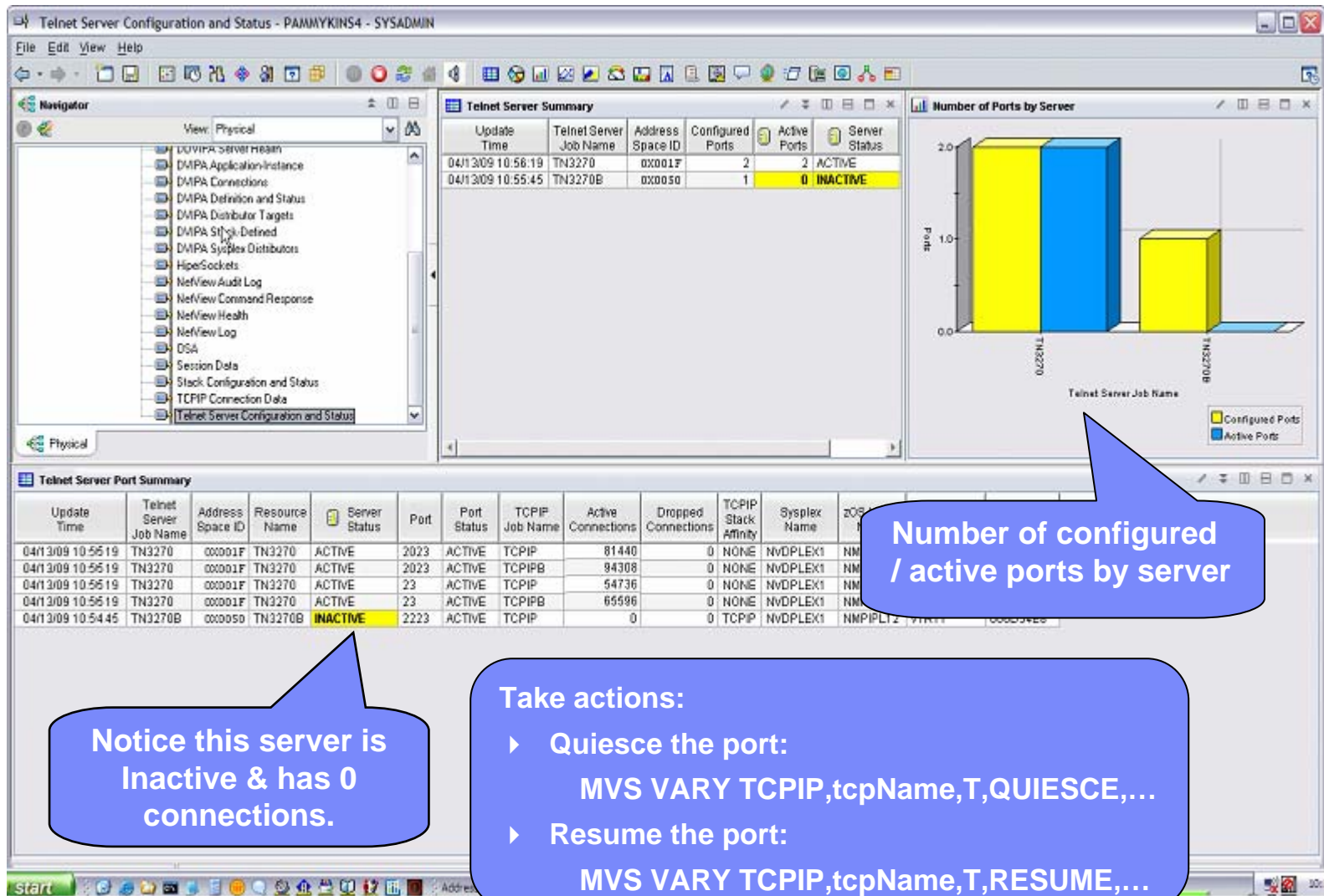
Hub Time: Mon, 07/27/2009 02:20 PM Server Available ADMIN

OSA and RODM

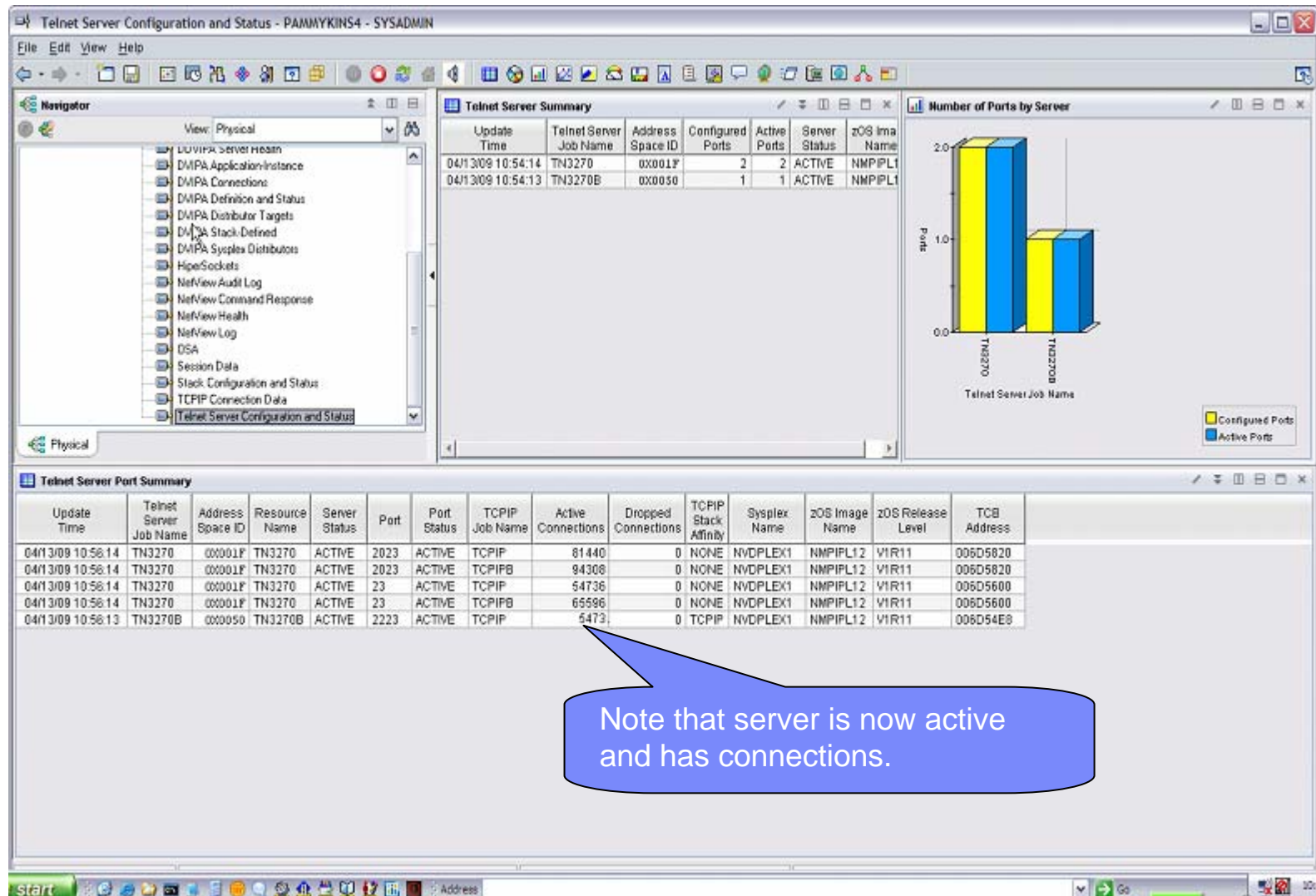
- RODM required for
 - ▶ NMC topology views
 - ▶ OSA workspaces in TEP
- Not required for OSA trace



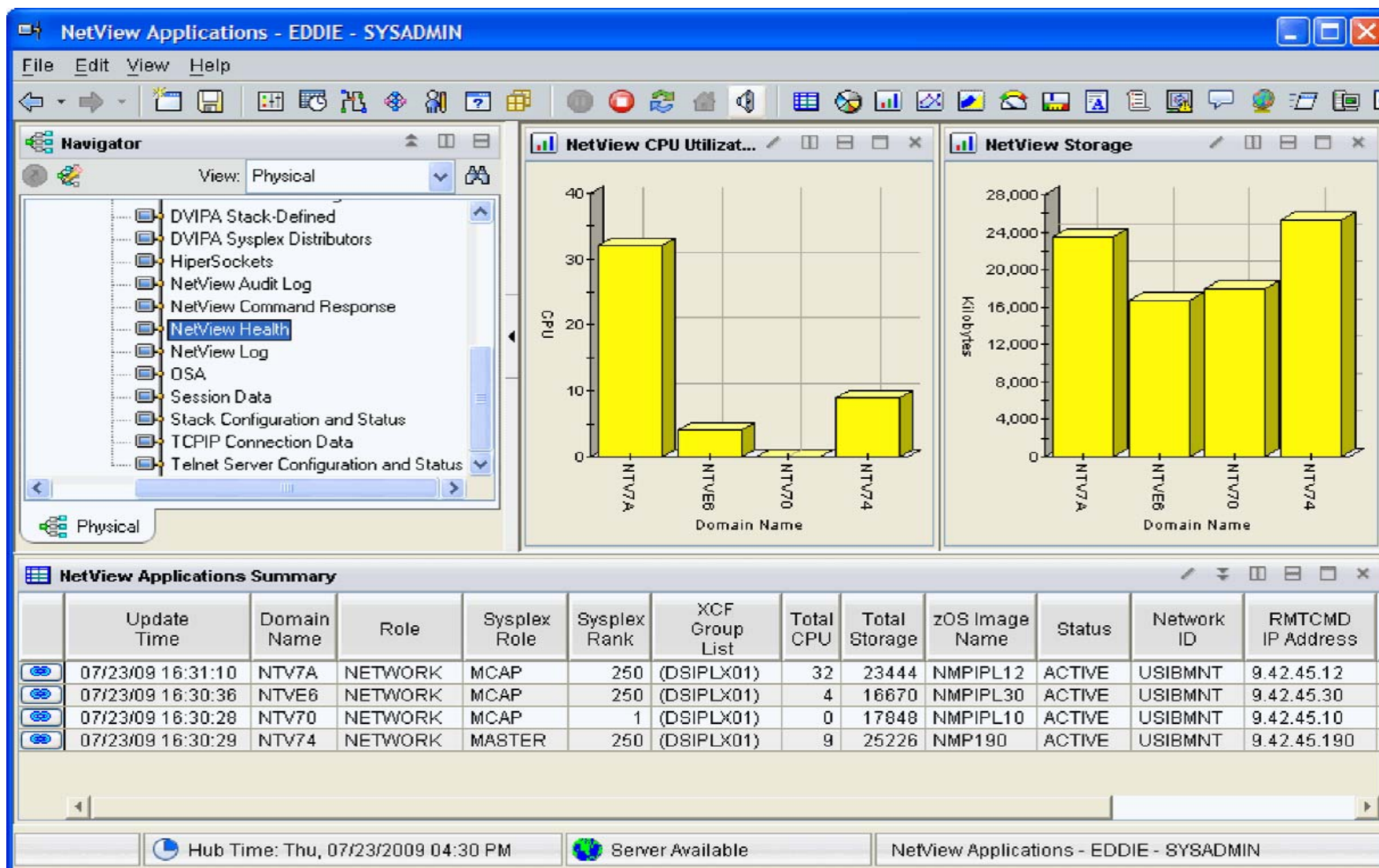
Telnet Server Configuration & Status (TEP)



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



NetView Applications (TEP)



Sysplex and DVIPA

- Data stored in RODM, but available in both NMC and TEP
- XCF
 - ▶ Signaling capabilities used to discover other NetViews in the sysplex
 - ▶ Provides automated capability to switch from a primary NetView to a backup NetView
 - ▶ Not used to communicate large volumes of data between NetViews



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

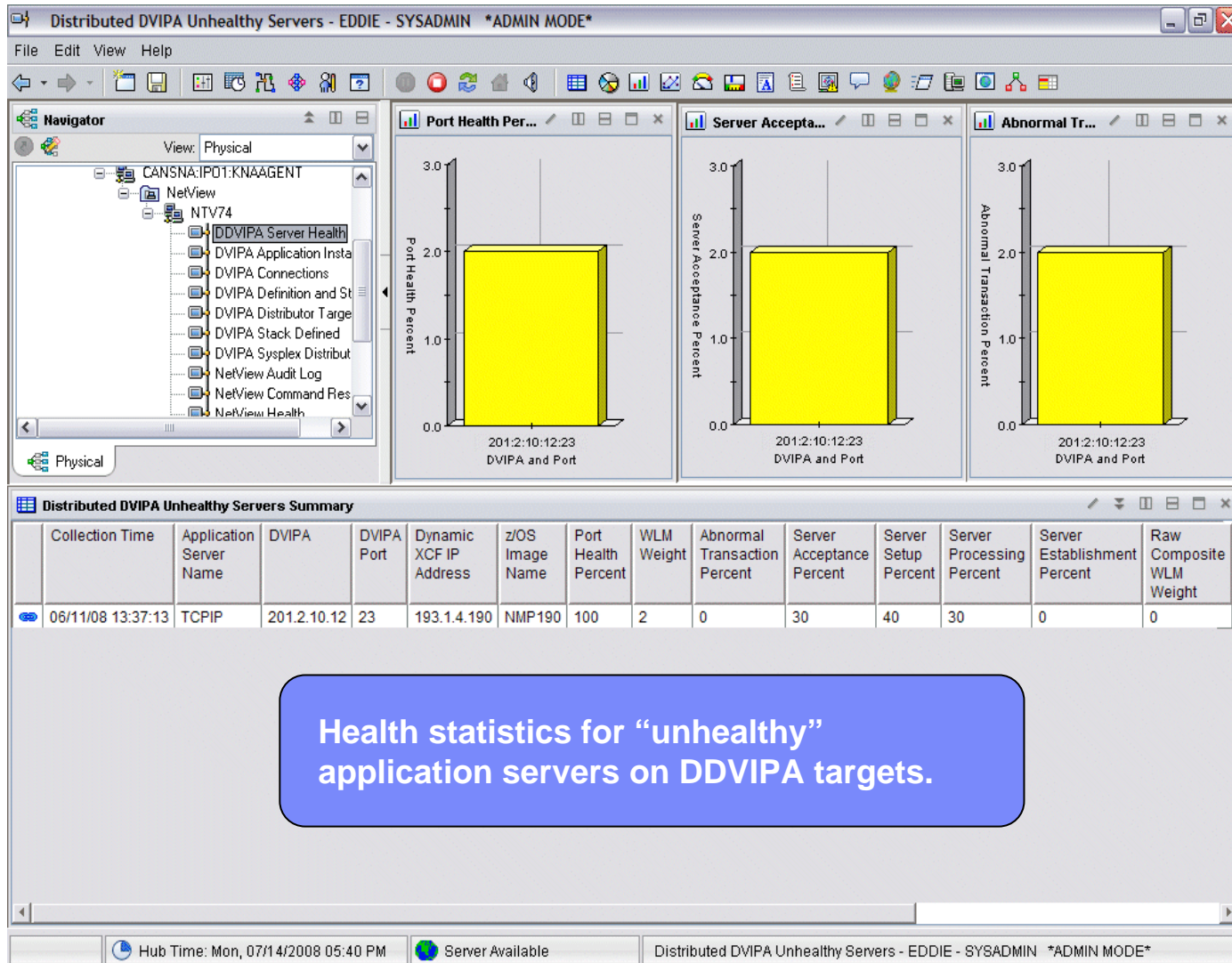


NetView in the TEP

- 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



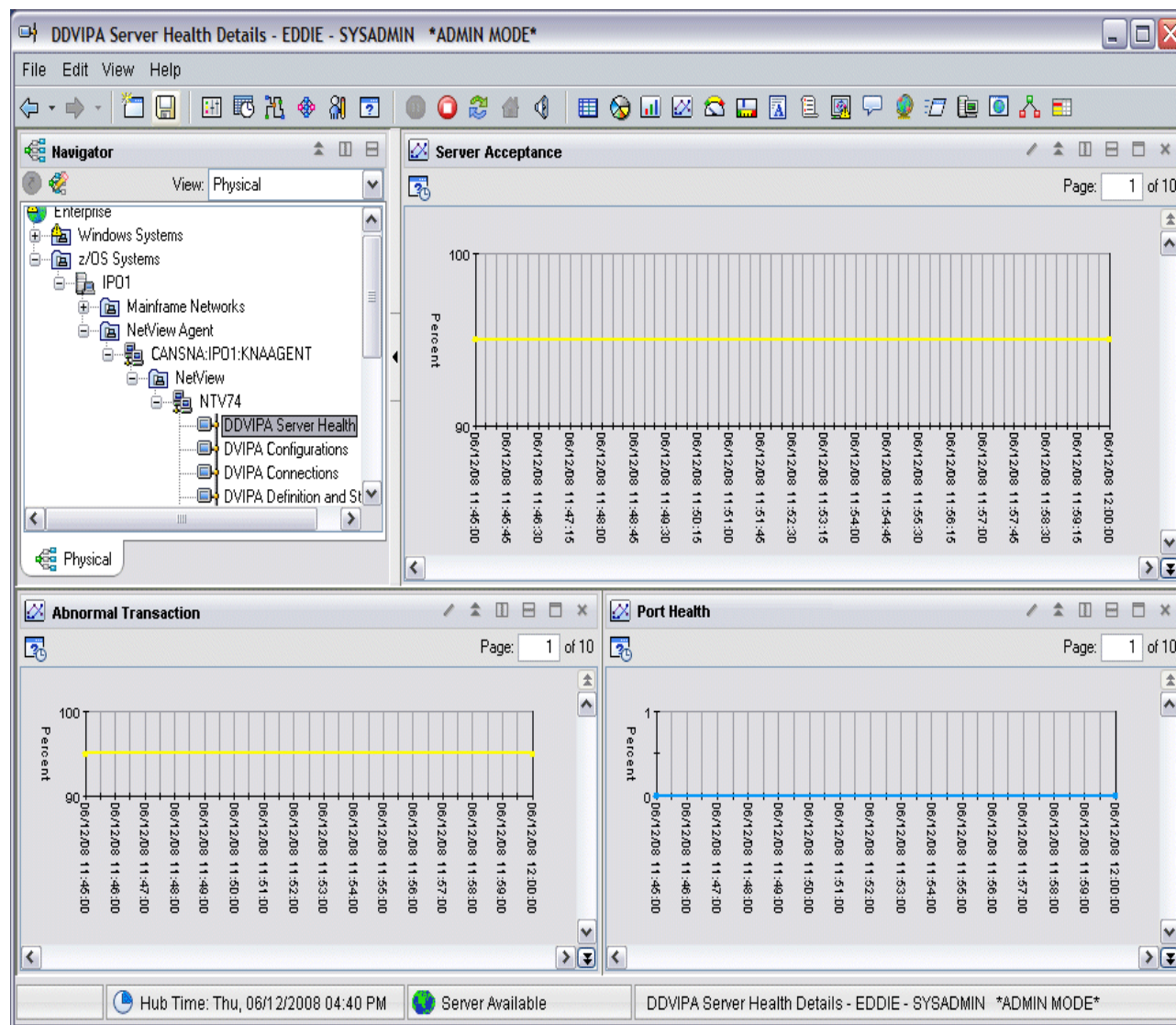
Distributed DVIPA Unhealthy Servers (TEP)



Unhealthy = 1 or more of:

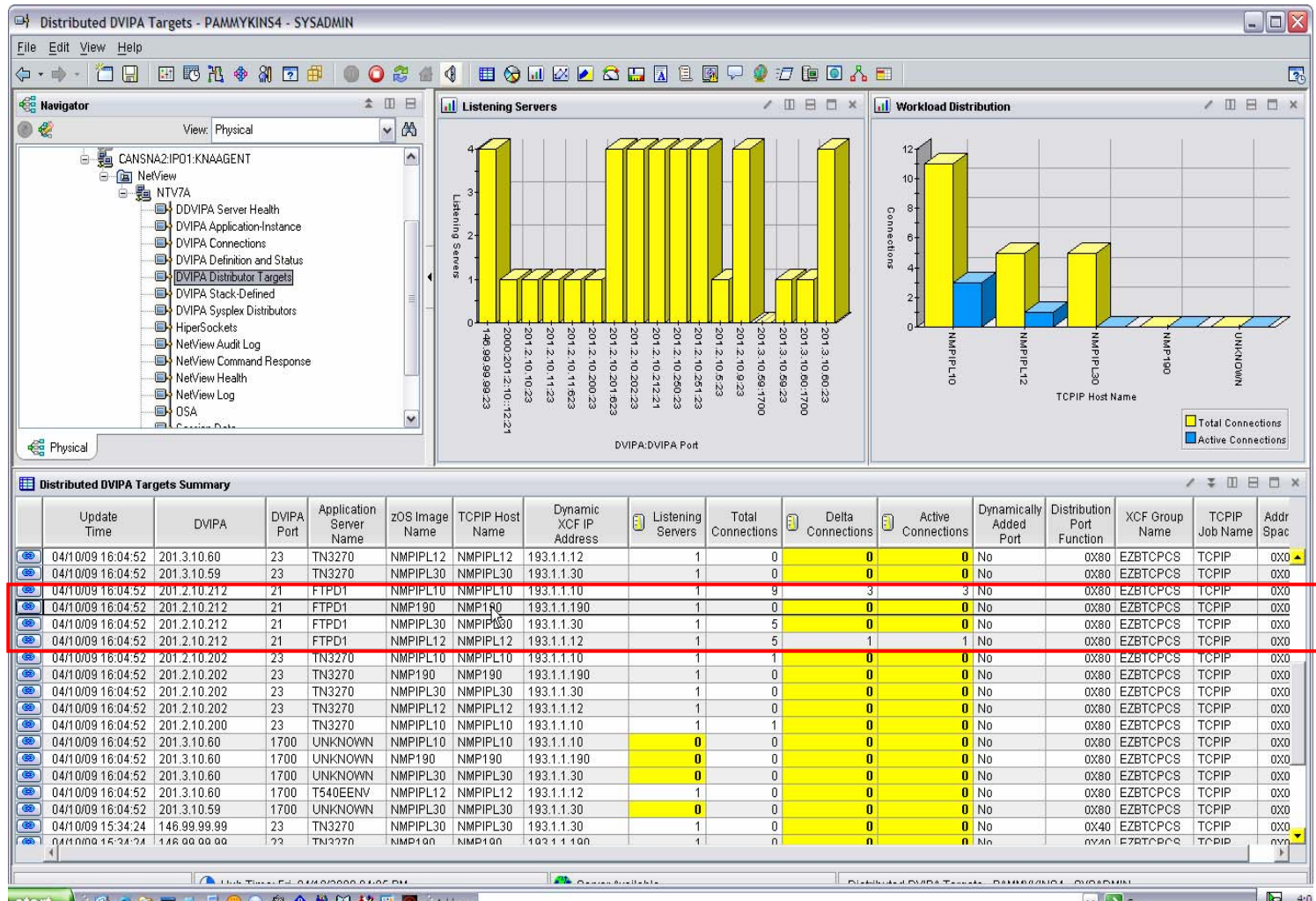
- WLM Weight = 0
- Port Health % < 90
- Server Acceptance % < 80
- Abnormal Transaction % > 25

Distributed DVIPA Server Health Details (TEP)



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

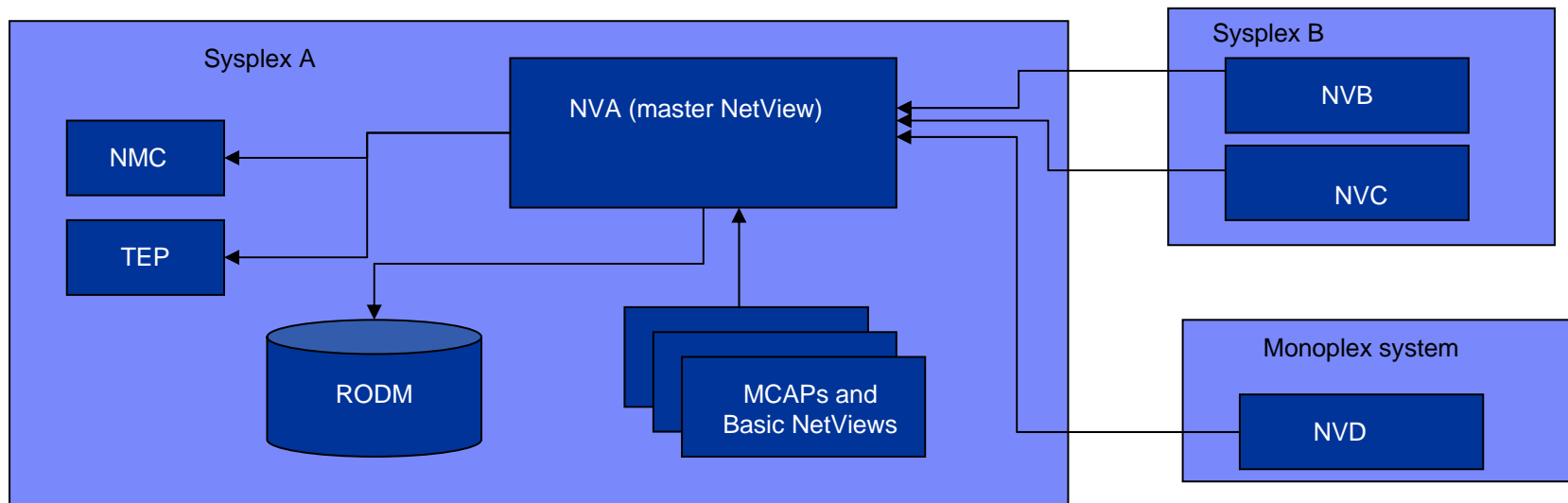
DDVIPA Targets (TEP)



Note the 4 rows for FTPD1.

Enterprise-wide Management

- Allows data forwarding to a master NetView from NetViews outside its sysplex.
- Applications, stack, telnet and systems data
 - ▶ Not DVIPA data
- Supports enterprise-wide view of data in NMC and the NetView EMA
- RODM at the master used as enterprise-wide data cache



Major Functional Enhancements

- Expanded IP management
- Broader sysplex and DVIPA management, Enterprise-wide management
- Core functionality



- Core functionality
 - ▶ Automation of SMF 30 records
 - ▶ Support for long password phrases
 - ▶ Command revision
 - ▶ NetView Web Services Gateway
 - ▶ NLDM PIU trace update

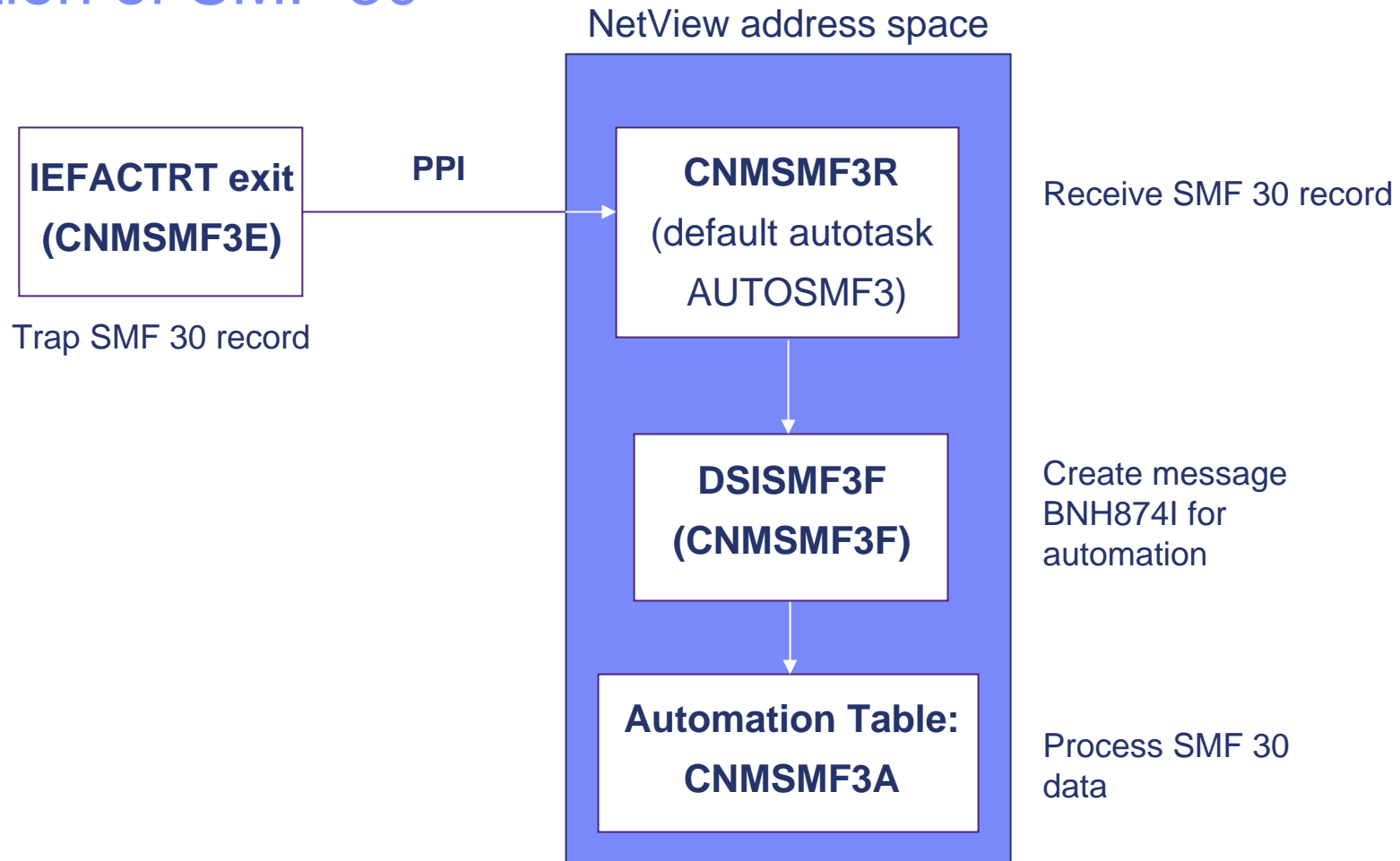


Automation of SMF 30

- 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
 - ▶ NetView Web Services Gateway
 - ▶ NLDM PIU trace update



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                                01/001
Connected to remote server/host rai/vmr.raleigh.ibm.com using port 23

```

- Core functionality

- ▶ Automation of SMF 30
- ▶ Support for long password phrases
- ▶ **Command revision**
- ▶ NetView Web Services Gateway
- ▶ NLDM PIU trace update



Command Revision

- Identify / shield sensitive or complex commands and/or desired synonyms
- Supersedes existing “MVS Command Management” function
- 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.

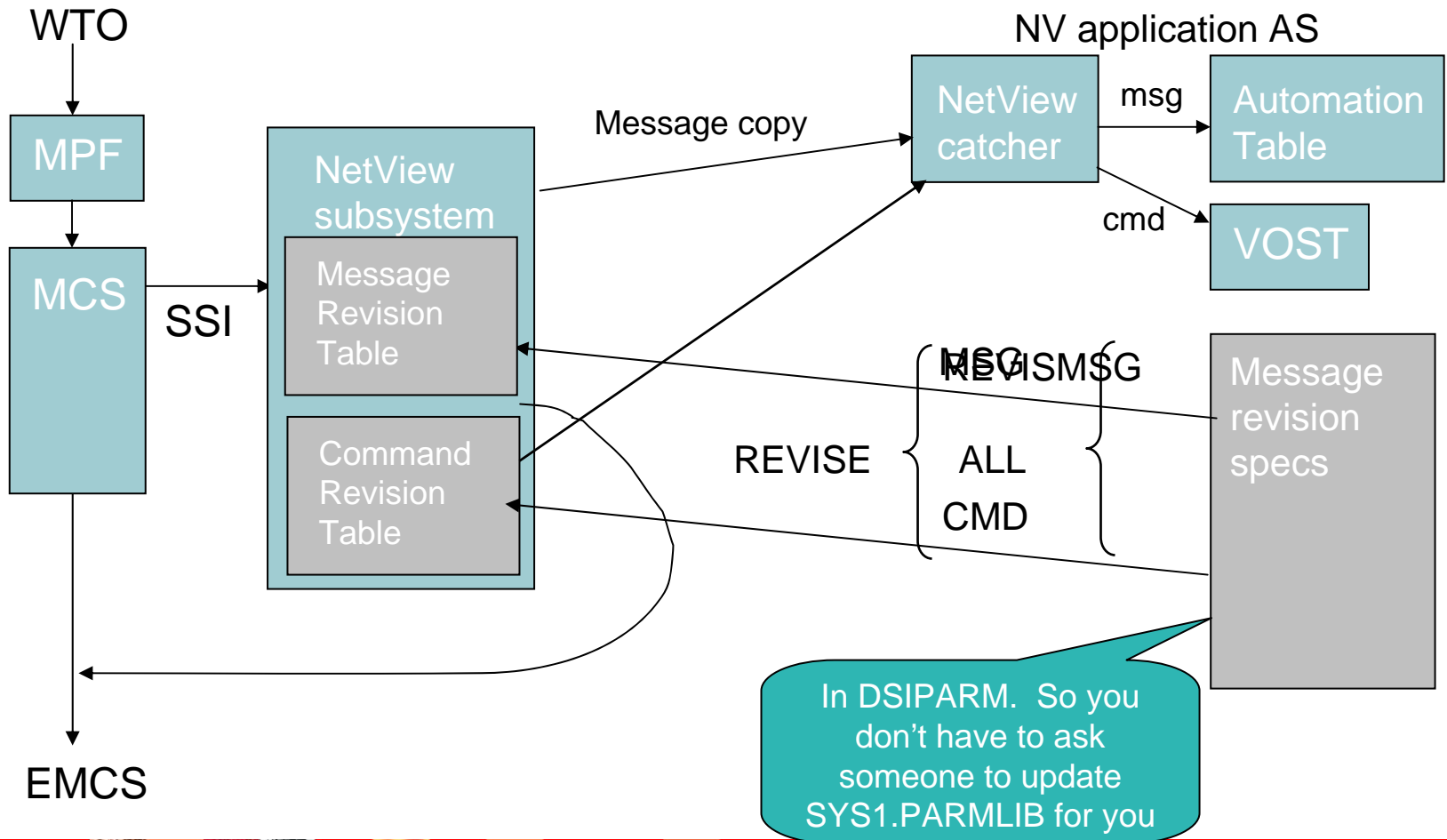


Command Revision

- 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
- ▶ **NetView Web Services Gateway**
- ▶ NLDM PIU trace update



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.

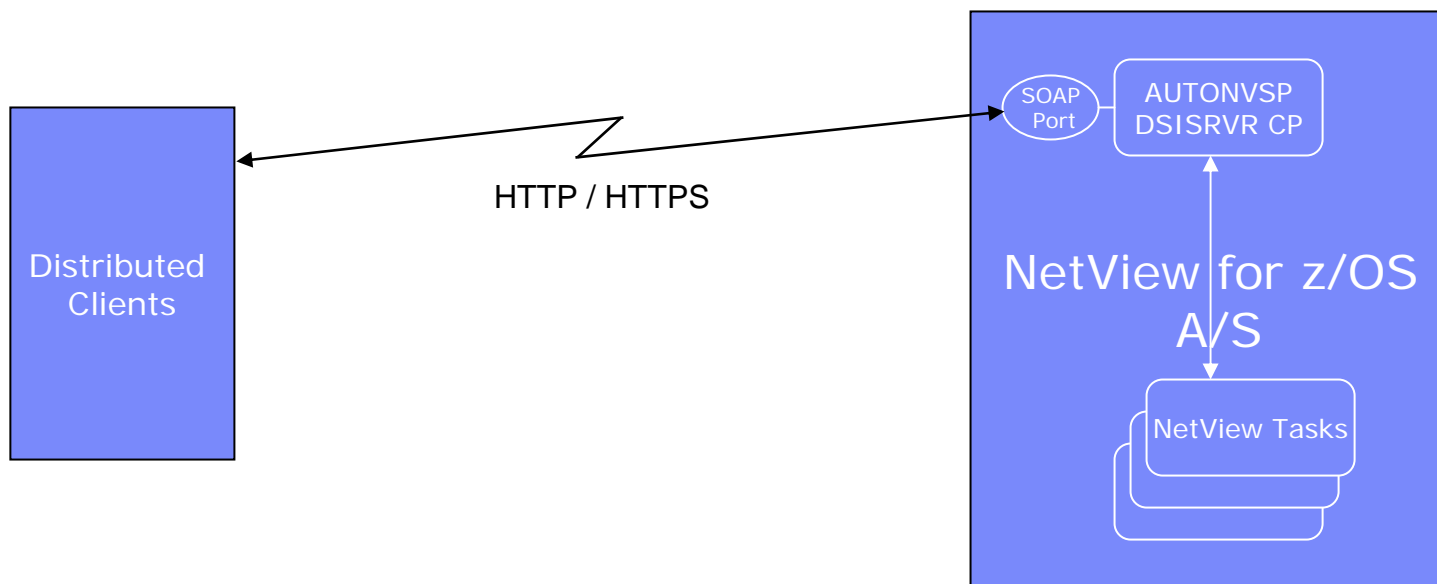


What kind of data can be accessed via the Gateway?

- 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



- Core functionality

- ▶ Automation of SMF 30
- ▶ Support for long password phrases
- ▶ Command revision
- ▶ NetView Web Services Gateway
- ▶ NLDM PIU trace update



NLDM PIU Trace Update

- Customizable format for PIU timestamp display
 - ▶ Examples: MM/DD/YYYY, DD/YYYY/HR, HR/MIN/SEC, MIN/SEC/ 1/10 / 1/100, etc.
 - ▶ Allows for determining exact timing of trace data being viewed.
- Provides full date of trace entry, along with existing timestamp.
 - ▶ Helps when correlating problems (e.g., looking at syslogs, other traces, etc.)



NetView 5.4

■ Major Themes

- ▶ Major Functional Enhancements
- ▶ **Product Portfolio Integration**
- ▶ Enterprise Integration

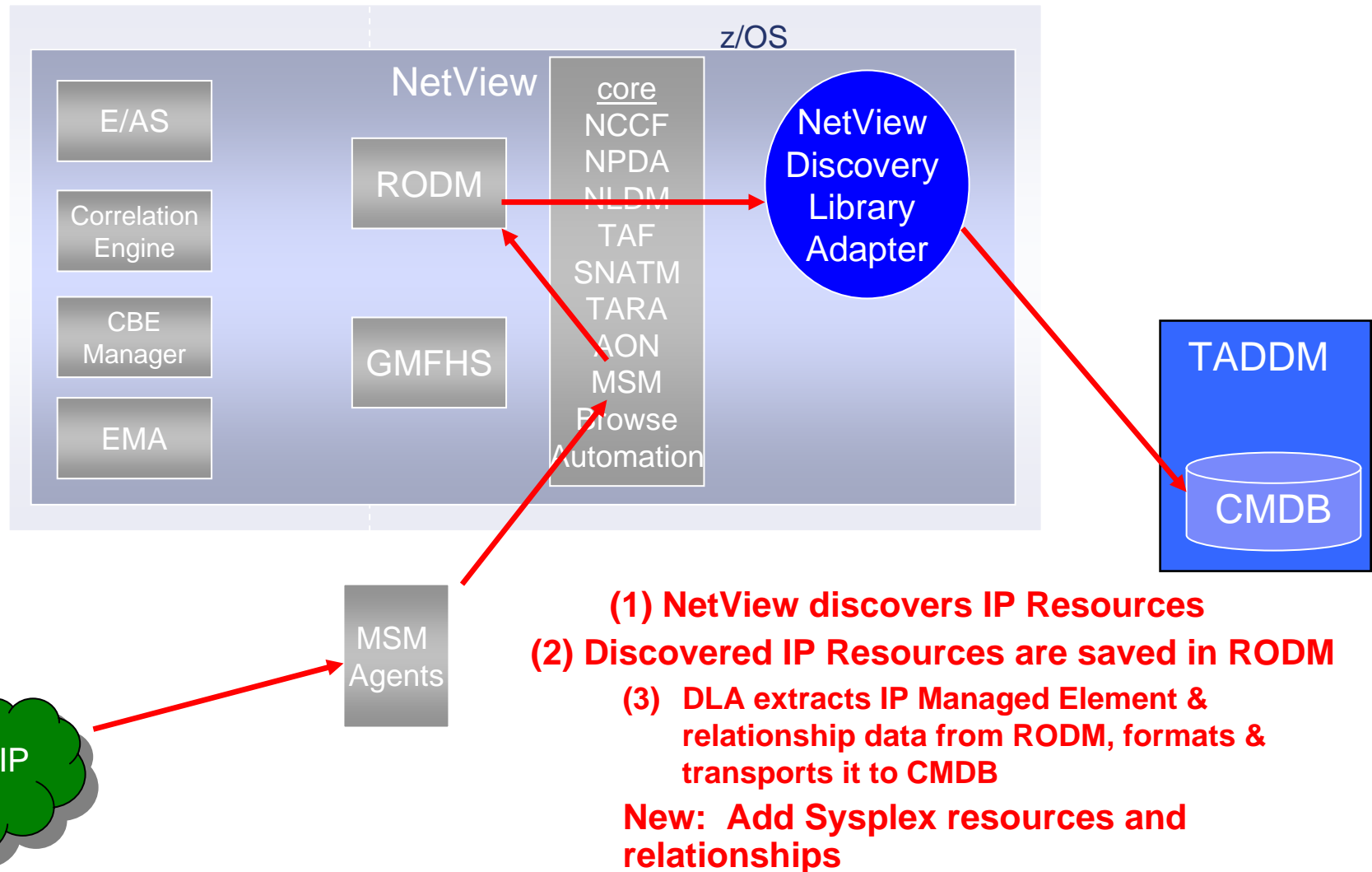


Product Portfolio Integration

- Expanded Discovery Library Adapter (DLA)



New: Add Sysplex Data



NetView 5.4

■ Major Themes

- ▶ Major Functional Enhancements
- ▶ Product Portfolio Integration
- ▶ Enterprise Integration

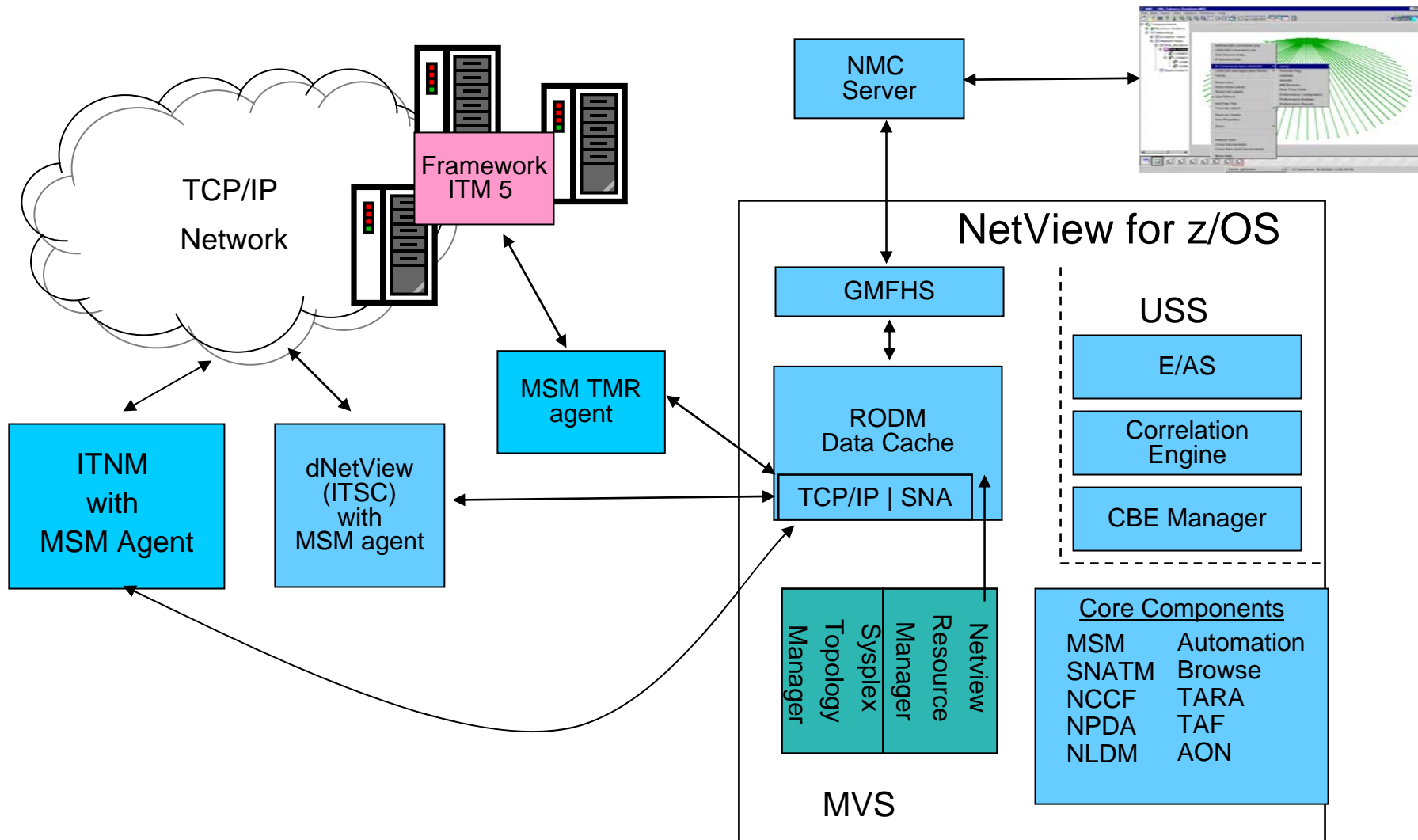


Enterprise Integration

- 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.

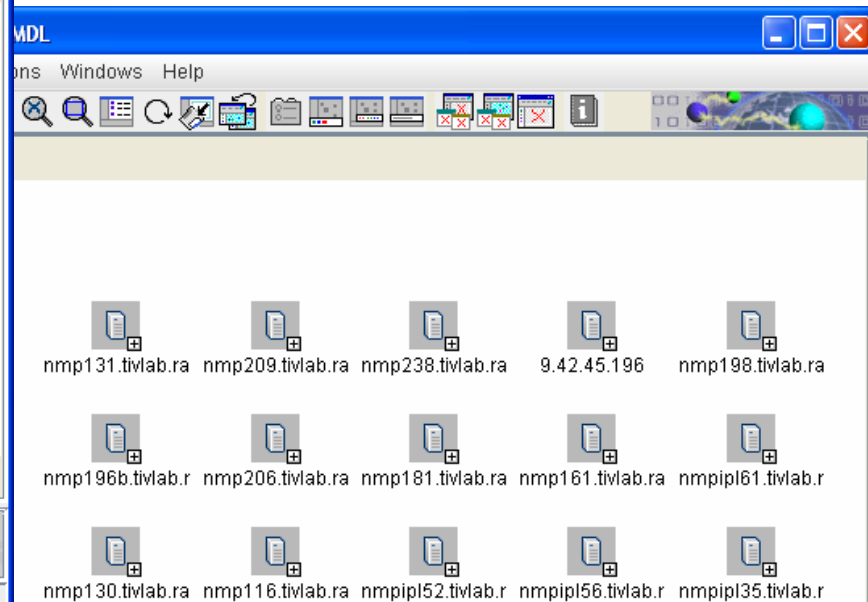
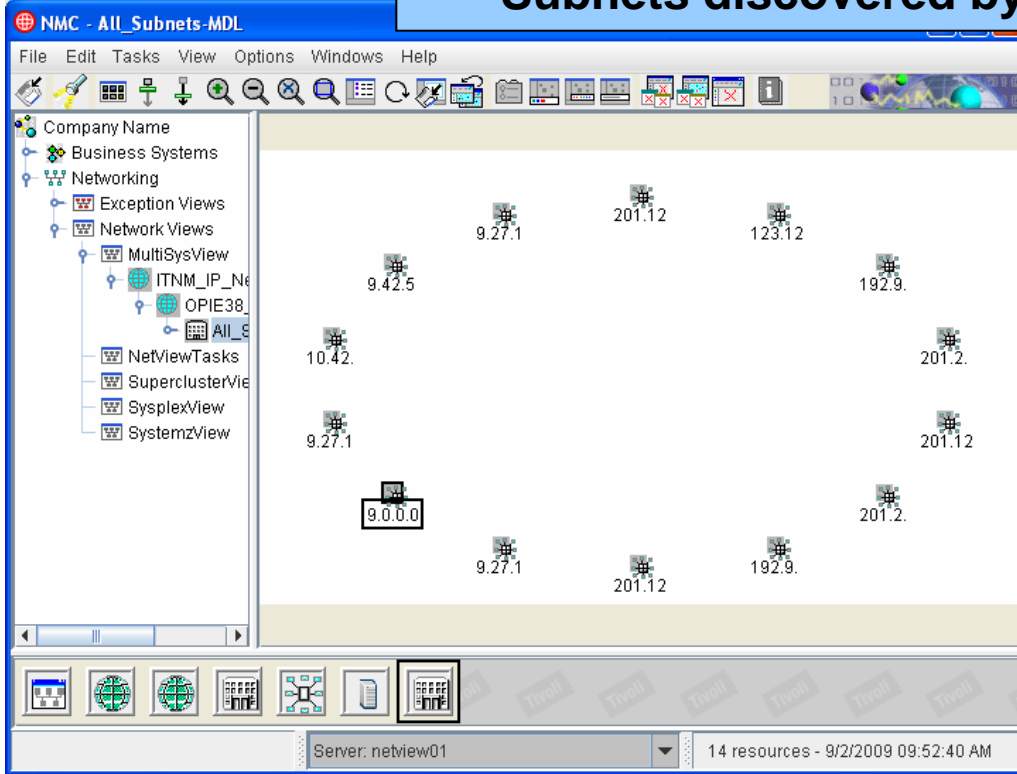


NetView for z/OS environment



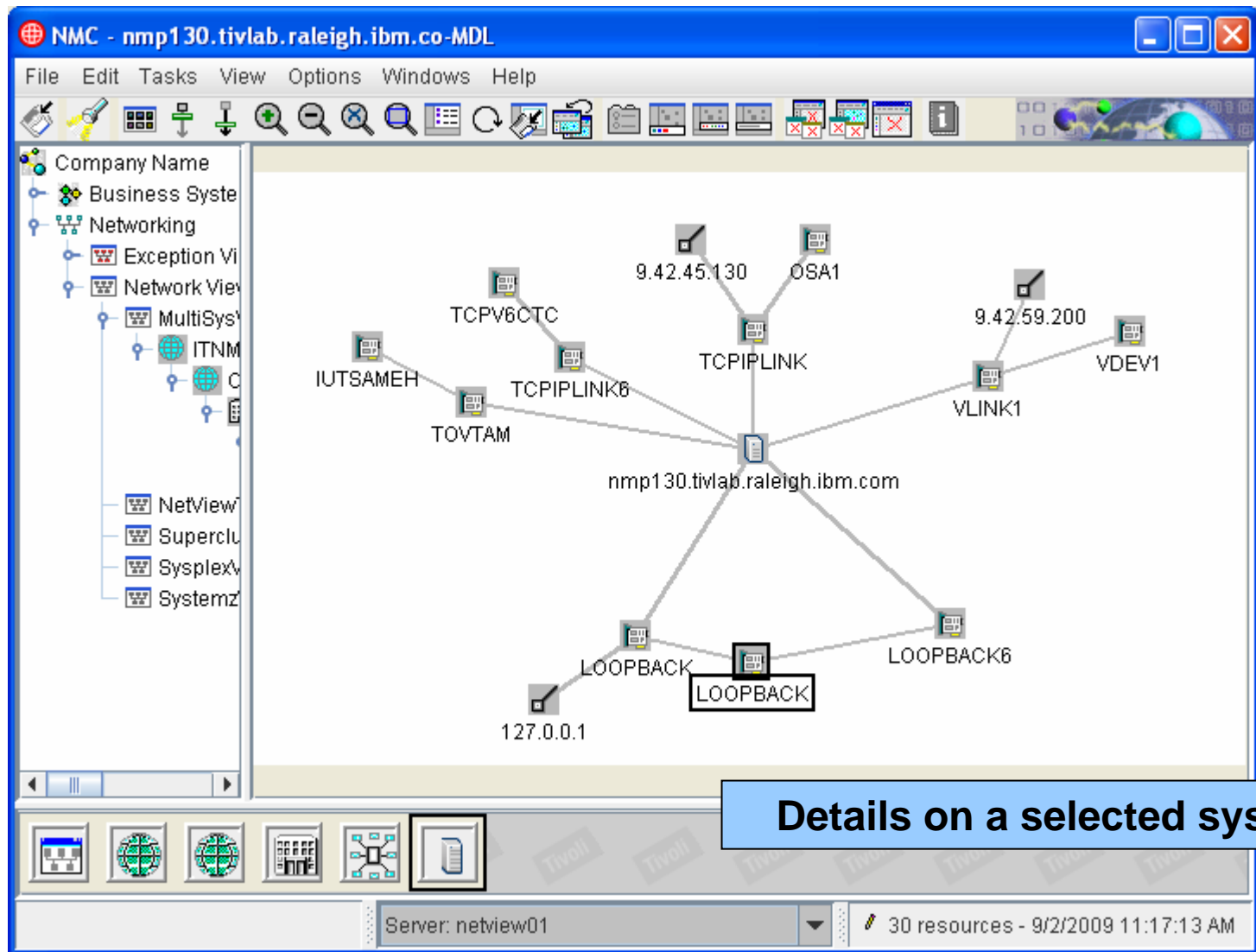
Views in NMC

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

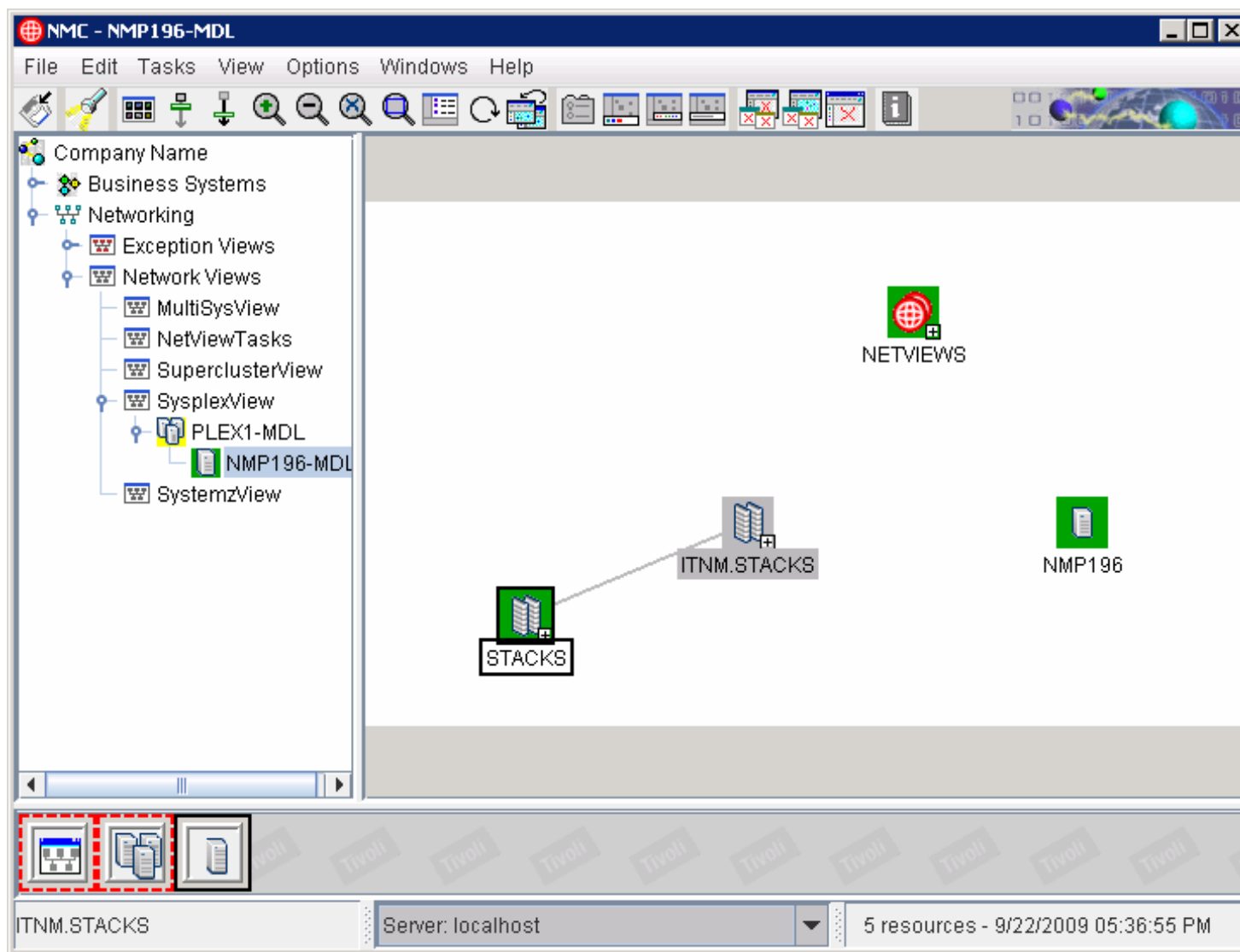
Unsat	MedUns	SevDeg	LowUns	Deg	IntMed	MedSat	Sat	Unk	Open	Ack	Closed
-------	--------	--------	--------	-----	--------	--------	-----	-----	------	-----	--------

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/>



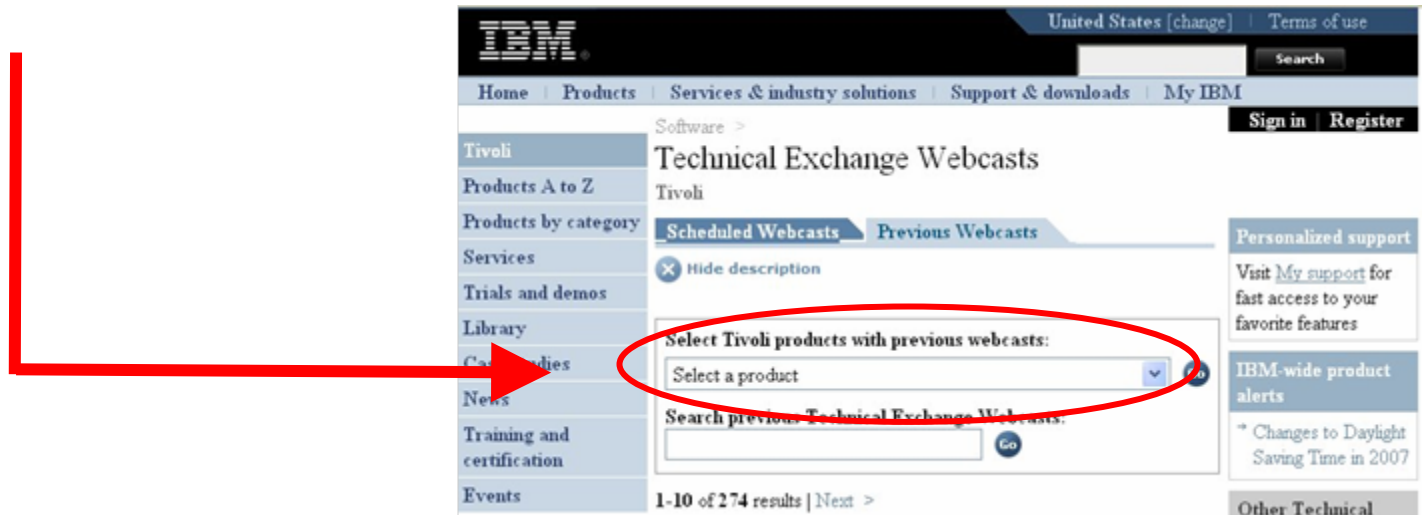
Classes

- New / updated classes
 - ▶ NetView for z/OS 5.3 Technical Update
 - October 27-28, Zurich, Switzerland
 - [http://www.ibm.com/services/learning/de/ta-iris.nsf/\(ExtCourseNr\)/TM78D0DE](http://www.ibm.com/services/learning/de/ta-iris.nsf/(ExtCourseNr)/TM78D0DE)
 - ▶ NetView for z/OS 5.3 Workshop: Fundamentals, Automation, REXX and PIPEs
 - October 13-17, Pittsburgh
 - November 3-7, Dallas
 - November 10-14, Stuttgart, Germany
 - December 1-5, Raleigh
 - <http://www.ibm.com/software/tivoli/education/U188790N96197Y71.html>
 - ▶ NetView for z/OS 5.3 Workshop: Fundamentals
 - ▶ NetView for z/OS 5.3 Workshop: Automation Techniques
 - ▶ NetView for z/OS 5.3 Workshop: REXX Programming
 - ▶ NetView for z/OS 5.3 Workshop: NetView PIPEs



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

- 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



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=V&met=inli&re=Imiitsm>



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