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

Pam McLean
IBM, Tivoli
pamm@us.ibm.com

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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

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

<table>
<thead>
<tr>
<th>Service Point/Stack</th>
<th>Proc Name</th>
<th>NetView Domain</th>
<th>Trace Status</th>
<th>PKT/ACT</th>
<th>OSA/ACT</th>
</tr>
</thead>
<tbody>
<tr>
<td>NMP101</td>
<td>TCPIP</td>
<td>LOCAL</td>
<td>CTRACE/ACT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NMP217</td>
<td>TCPIP</td>
<td>NTVE1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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.

**Issue IPTRACE * to display this panel**
## Status of All Traces on Selected Stack

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

<table>
<thead>
<tr>
<th>Status/Owner</th>
<th>Start</th>
<th>For</th>
<th>Writer</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTRACE</td>
<td>NONE/NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>PKTTRACE</td>
<td>ACTIVE/PHK</td>
<td>2009-08-14 08:18:37 NA</td>
<td><em>NONE</em></td>
</tr>
<tr>
<td>OSATRACE</td>
<td>ACTIVE/PHK</td>
<td>2009-08-14 08:18:56 NA</td>
<td><em>NONE</em></td>
</tr>
</tbody>
</table>

**Command====>**
- F1=Help
- F2=Main Menu
- F3=Return
- F5=Refresh
- F6 =Roll
- F7=Backward
- F8=Forward
- F12=Cancel
Packet Trace Control

Packet Tracing is active
Existing packets (if any) can be viewed.

NetView domain and z/OS level
Packet Tracing is active
Existing packets (if any) can be viewed.

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

Stop packet tracing (SYSTCPDA)

NetView is collecting traced packets.

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

Stop packet tracing (SYSTCPDA)

NetView domain and z/OS level
Packet Tracing is active
Existing packets (if any) can be viewed.
**OSA Trace Control**

![Session D - [24 x 80]](image)

- OSA Trace Control Panel
  - **SYSTCPOT** is active for **NVDomain: LOCAL**
  - **/OS** is **V1R11**

**Service Point/Stack:** TVT2007  **TCPNAME:** TCPI
*OPKTS: ACTIVE on Task: AUTOOPKT GTF: No*

- **Start Time:** 56
- **Writer:** *NONE*

**Options:**  1-SETMK  2-STOP  3-VIEW PACKETS

<table>
<thead>
<tr>
<th>OSA Port</th>
<th>Stat/ Length Data</th>
<th>Record</th>
<th>Time</th>
<th>Discard</th>
<th>NoFilter</th>
</tr>
</thead>
<tbody>
<tr>
<td>_OSA</td>
<td>ON 224 1024</td>
<td>2147483647</td>
<td>10080</td>
<td>EXCEPTION</td>
<td>ALL</td>
</tr>
<tr>
<td>_OSA</td>
<td>LOGICAL 0</td>
<td>118</td>
<td>6</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>_OSA1</td>
<td>OFF 224 1024</td>
<td>2147483647</td>
<td>10080</td>
<td>EXCEPTION</td>
<td>NONE</td>
</tr>
<tr>
<td>_OSA1</td>
<td>UNKNOWN 0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

- **NetView is collecting traced packets.**
- **Apply filters**
- **Stop OSA tracing (SYSTCPOT)**
- **NetView domain and z/OS level**

Command: = >>
- F1=Help
- F2=Return
- F3=Refresh
- F4=Stop SYSTCPOT
- F5=Roll
- F7=Backward
- F8=Forward
- F9=Filters
- F10=PKTS Management
- F12=Cancel

**SHARE in Boston**

10
## OSA Trace Filters

**Service Point/Stack:** TVT2007  
**Proc:** TCPIP7  
**OSA Port Name:** OSAR  
**Clear Filters:** NO  
**z/OS:** V1R11

<table>
<thead>
<tr>
<th>Protocol Type</th>
<th>Port</th>
<th>Device ID</th>
<th>VLAN ID</th>
<th>Mac Address</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>

**Filter by IP address(es)**

**Up to 8 entries for each type**

**Command buttons:**
- **F1=Help**
- **F2=Exit**
- **F3=Return**
- **F4=Update Filters**
- **F5=Clear Filters**
- **F6=Roll**
- **F7=Cancel**

**Notes:**
- Connected to remote server host tivm2.raleigh.ibm.com using port 23
- MA d 05/054
OSA Trace Filters: IP Addresses

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

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

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

Up to 8 IPv4 addresses and 8 IPv6 addresses
Packet Display Options

View summary list of packets that meet criteria

The name of the Interface selected on Packet Trace Control panel (FKXXK2A22)

“Last” says to show the most recent 100 packets.
“First” says to show the oldest 100 packets.

This panel contains all of the base FMTPACKT command options
Summary View of Packets

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.

F1 = Help
F2 = Backward
F3 = Return
F4 = Details
F5 = Refresh
F6 = Roll
F7 = Forward
F8 = Commands
F9 = Commands
F11 = Right
F12 = Cancel
Windowed Packet Detail

<table>
<thead>
<tr>
<th>RcdNr</th>
<th>Sysname</th>
<th>Mnemonic</th>
<th>Entry Id</th>
<th>Time Stamp</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>250</td>
<td>TVT2007</td>
<td>PACKET</td>
<td>00000004</td>
<td>08:21:22.979387</td>
<td>Packet Trace</td>
</tr>
</tbody>
</table>

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

Use window PF Keys and functions to navigate detail data.
Additional Functions

• Managing packet collection (PKTS) settings
• Commands from PKTS Summary
• Extended Options
• Modifying TCPIP PKT Trace
Manage PKTS (note OA31808 - ALL)

NetView collection of traced packets is active. To stop/change, go to PKTS Management screen.
Use: Manage the PKTTRACE function

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

Select packet 250
Use PF 9 to get Command menu
### Commands from Packets Summary

**Option 1 – Ping**

1. **Ping** (RAddr)
2. **TraceRte** (RAddr)
3. **Hostnames**
4. **Connections**
5. **SNMP** (RAddr)
6. **SNMP** (Stack)

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
Ping Results

Ping results returned in a window
Additional Functions

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

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.
Extended Options

<table>
<thead>
<tr>
<th>Service Point/Stack:</th>
<th>TVT2007</th>
<th>Proc:</th>
<th>TCPIP7</th>
<th>Info Name:</th>
<th>TCPIPLINK</th>
</tr>
</thead>
</table>

1. 1-Summary
2. Full
3. Short
4. Tally

Format: ___ 1-Detail Stats: 2-Summary

Reassem: 65535 , 1 1-Summary 2-Detail 3-NoReassem

Streams: 128 , ___ 1-Summary 2-Detail

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

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

See z/OS 1.10 Communications Server IP Diagnosis Guide, chapter 5, for description (http://publibz.boulder.ibm.com/epubs/pdf/f1a1c580.pdf)
Windowed Data Returned
Additional Functions

- Managing PKTS settings
- Commands from PKTS Summary
- Extended Options
- Modifying TCP/IP PKT Trace
Use : Adding Traces

FKXK2A22 PKTTRACE Control SYSTCPDA ACTIVE for NVDomain: LOCAL
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

<table>
<thead>
<tr>
<th>Infc/Link</th>
<th>Stat</th>
<th>Prot</th>
<th>IP Address/Prefix</th>
<th>Src</th>
<th>PortNm</th>
<th>Dest</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>TCPIPLINK</td>
<td>ON</td>
<td>TCP</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>7</td>
</tr>
<tr>
<td>TCPIPLINK</td>
<td>ON</td>
<td>UDP</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>0</td>
</tr>
<tr>
<td>TCPIPLINK2</td>
<td>OFF</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>0</td>
</tr>
<tr>
<td>We now have two entries for TCPIPLINK, one for TCP and the other for UDP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EZXCF06</td>
<td>OFF</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>0</td>
</tr>
<tr>
<td>EZ6XCF06</td>
<td>OFF</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>0</td>
</tr>
</tbody>
</table>

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
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

System A

- RODM A
- NetView A Master
- PPI A
- GMFHS A
- EMA A

System B

- RODM B
- NetView B Master Capable
- PPI B
- EMA B
- GMFHS B

System C

- NetView C Basic
- PPI C
- EMA C

Single Sysplex
“Mini Enterprise” – Enterprise Level RODM

System A
- RODM A
- NetView A Master
- PPI A
- GMFHS A
- EMA A

SYSPLEX A
- Coupling Facility

System B
- RODM B
- NetView B Master Capable
- PPI B
- GMFHS B
- EMA B

System C
- NetView C Master
- PPI C
- GMFHS C
- EMA C

SYSPLEX B
- Coupling Facility

System D
- NetView D Master Capable
- PPI D
- GMFHS D
- EMA D

DVIPA data not forwarded to Enterprise Master.
Additional SYSDEF required.

RODM A
- NetView A Master
- PPI A
- GMFHS A
- EMA A

RODM B
- NetView B Master Capable
- PPI B
- GMFHS B
- EMA B

System A System B
SYSPLEX A SYSPLEX B

Local Data Only
RMTCMD connection or session

RMTCMD connection or session
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

Note that there are 2 TCP/IP subplexes
NMC Views: Subplex – More Detailed Logical

System Aggregate
- Domain
- NetID

Stack TCPIP on NMIPL12 is in subplex EZBTCPCS

Stack TCPIP on NMIPL30 is in subplex EZBTCP11
NMC Views: HiperSockets Interfaces Parent View
HiperSockets Configuration and Status (TEP)
OSA Channels and Ports Workspace (TEP)

- 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
Telnet Server Configuration & Status (TEP)

Notice this server is Inactive and has 0 connections.

Take action:
- Start the TN3270B server.
Note that server TN3270B is now active and has connections.
NetView Applications (TEP)
DVIPA Stack Summary (TEP)

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

Health statistics for “unhealthy” application servers on DDVIPA targets. Note that Server Acceptance Percent is 30.
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
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.
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 (and other reasons)

- Note: Also available in NetView V5.3 via APAR OA25962
Automation of SMF 30

IEFACTRT exit (CNMSMF3E)

Trap SMF 30 record

PPI

CNMSMF3R
(default autotask AUTOSMF3)

Receive SMF 30 record

DSISMF3F
(CNMSMF3F)

Create message BNH874I for automation

Automation Table: CNMSMF3A

Process SMF 30 data
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
• 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
In DSIPARM. So you don’t have to ask someone to update SYS1.PARMLIB for you.
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

Distributed Clients

HTTP / HTTPS

NetView for z/OS

AUTONVSP

DSISRVR CP

SOAP Port

NetView Tasks

SHARE inBoston

75
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

TCP/IP
Network

Framework
ITM 5

NMC
Server

GMFHS

RODM
Data Cache

TCP/IP | SNA

ITNM with
MSM Agent

dNetView (ITSC) with MSM agent

MSM TMR
agent

NetView for z/OS

USS

E/AS

Correlation
Engine

CBE Manager

Core Components
MSM Automation
SNATM Browse
NCCF TARA
NPDA TAF
NLDM AON

MVS

Sysplex Manager

Resource Manager

Discovery Manager

SHARE in Boston
Views in NMC

Subnets discovered by ITNM

Systems in the selected subnet
Views in NMC

Details on a selected system
Event Viewer

Events for a selected resource
Integration with Sysplex
Questions?
For More Information

- NetView Home Page
  - Downloads (NMC, MSM agents, tools)
  - Release comparison
  - Link to Announcement letter
  - Links to other online information sources
  - More

- NetView Documentation

- 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:
- Search Previous Webcasts
  - NetView for z/OS
Webinars/Classes

- Webinar Descriptions and Recordings
- 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
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

NetView Demos

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