CA NetMaster® Network Management for TCP/IP

Release Notes

Release 12.1

CA Technologies Product References

This document references the following CA Technologies products:

- CA Application Performance Management (CA APM)
- CA Cross-Enterprise Application Performance Management (CA Cross-Enterprise APM)
- CA Datacom® /AD (CA Datacom/AD)
- CA Mainframe Software Manager™ (CA MSM)
- CA NetMaster® File Transfer Management (CA NetMaster FTM)
- CA NetMaster® Network Management for SNA (CA NetMaster NM for SNA)
- CA NetMaster® Network Management for TCP/IP (CA NetMaster NM for TCP/IP)
- CA NetSpy™ Network Performance (CA NetSpy)

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- Online and telephone contact information for technical assistance and customer services
- Information about user communities and forums
- Product and documentation downloads
- CA Support policies and guidelines
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Contents

Chapter 1: New Features

This section contains the following topics:

Metrics Feed to CA APM

If you have a CA Cross-Enterprise APM license, you can enable the performance metrics feed to CA APM through the APMEPAGENT parameter group.

Note: For more information, see *Installation Guide* and *CA Cross-Enterprise Application Performance Management Integration Guide*.

syslogd Message Support

Through the SYSLOGD parameter group, you can configure syslogd in UNIX System Services (USS) to pass selected messages to the region. You can then define SYSLOGD event detectors to automate responses to these messages.

Note: For more information, see the *Implementation Guide*.

WebCenter IP Activity Lists

The IP Activity Lists page enables you to download in CSV format all records for a given record type from the Packet Analyzer. The CSV format enables you to analyze the data using a spreadsheet application.

You can download the following types of records:

- Remote Addresses
- Remote Networks
- Business Applications
- TCP Ports
- TCP Applications
- TCP Connections
- UDP Ports
- UDP Connections
- EE Connections
- EE RTP Pipes
- Stack Interfaces
- Stack Home Addresses

To access the page, click History, IP Activity Lists.

USS Command

The USS command issues shell commands in UNIX System Services (USS). You issue the command from Command Entry.

This command has the following format:

USS *shell_command*

Note: The SOLVE SSI issues the shell commands on behalf of the user. The SOLVE SSI user ID authority determines which commands can be issued. To limit who can use the USS command, implement resource-level security. For information about resource-level security, see the *Security Guide*.

Maintenance of the MODS File for MIBs

This maintenance feature enables you to perform the following tasks:

- Copy management information bases (MIBs) from one Managed Object Development Services (MODS) file to another.
- Move MIBs from one MODS file to another.
- Delete MIBs from a MODS file.

You can access these functions from MIB Utility Menu. Use the /MODSAD.MIB panel path to access the menu.

Note: For more information, see the *Administration Guide*.

NMSAFF Security Solution

The NMSAFF security solution provides a full security exit to interface with your external security package. The exit uses the SXCTL parameter file. The file defines the security resources that you use to configure the user security.

To use this solution, specify **NMSAFF** for the SEC region JCL parameter.

Note: For more information, see *Security Guide*.

CA OPS/MVS System State Manager

A CA NetMaster NM for TCP/IP region and the SOLVE Subsystem Interface can automatically communicate both active status events and heart beat events to CA OPS/MVS EMA. The enabling technology is through a generic active status or heartbeat event API call. CA OPS/MVS EMA provides this API to other CA Technologies mainframe products so that they can communicate events consistently to CA OPS/MVS EMA.

Chapter 2: Changes to Existing Features

This section contains the following topics:

Lists From Packet Analyzer Records

The region sources the following activity lists from the Packet Analyzer:

- Address spaces
- Applications
- Applications by interface
- Local TCP ports
- Protocol
- Protocol by stack home address
- Protocol by stack interface
- Remote addresses
- Remote networks
- Stack home addresses
- Stack interfaces
- TCP server ports

You can access these lists from the IP History menu. Use the /IPHIST panel shortcut to access the menu, then select the TRS option. You can also use the /IPTRS panel shortcut to get there directly.

By default, the displayed list is sorted by the byte throughput for the last minute, busiest first. You can use the SORT command to resort the list.

For all lists, the DISPLAY parameter group limits the number of listed entities. You can use the LIMIT command to change this limit, up to a maximum set by the DISPLAY parameter group.

In addition to the LIMIT and SORT commands, the following commands help you to work with the list: FILTER and LOCATE.

Note: For information about the displayed lists and commands, press F1 (Help) on the list panel.

Address Spaces

The listing of address spaces (or TCP applications) has an enhanced display. The /ASMON.TC option also lists the applications in this enhanced display.

In addition, the list panel has a new action, P (Ports), that enables you to list the ports for a TCP application.

Applications

The listing of business applications has an enhanced display. The /BIZ.TRS option also lists the applications in this enhanced display. The display includes connection statistics in addition to the packet and byte throughput.

In addition, the list panel has a new action, C (Connections), that enables you to list the connections for an application.

Note: Use the LIMIT and SORT commands to customize the list for the few busiest applications. The S option (Busiest Application Summary) on the Business Applications menu is no longer available.

Remote Addresses

The listing of remote IP addresses has an enhanced display. The following actions also list the addresses in this enhanced display:

- Enter **RI** next to a remote network under IP Traffic Summary, Remote Network. The RI action replaces the current BI action.
- Enter **RI** next to a STACK-class resource on the IP Resource Monitor.

In addition, the list panel has a new action, C (Connections), that enables you to list the connections for a remote IP address.

Traffic Statistics for a Stack

Where applicable, the Traffic panel includes connection statistics in addition to the packet and byte throughput.

The panel lists the entity for which you request statistics. These lists are enhanced to match the activity lists described in Lists From Packet Analyzer Records (see page 12), but are for the selected stack.

PSYNDBSIZE Packet Analyzer Parameter

The PSYNDBSIZE SOLVE SSI parameter for Packet Analyzer has an increased default value of 30 MB.

SmartTrace

SmartTrace has the following enhancements:

- You can restrict the initial packets that are traced for connections to a reduced minimum value of three.
- For multiple TCP connection traces, the limit on the maximum connections that are traced does not include expired connections. When the limit is reached, SmartTrace waits for a connection trace to expire before starting a new connection trace.

Enterprise Extender Condition Summary

In this release, Enterprise Extender (EE) Condition Summary limits the list of remote control points (CPs) for which an EE connection is active to the ten busiest.

EE Connections Monitoring Limit

The EE resource definition includes a new field, EE Connections Limit. The field lets you restrict the monitoring to a maximum number of connections when no filter on remote control points (CPs) is defined. The field is on the EE Monitoring Definition panel of the definition.

If you are interested in only a number of the busiest connections, reducing the number of connections that are monitored improves performance.

Open Systems Adapters

Open Systems Adapters (OSAs) have the following enhanced support:

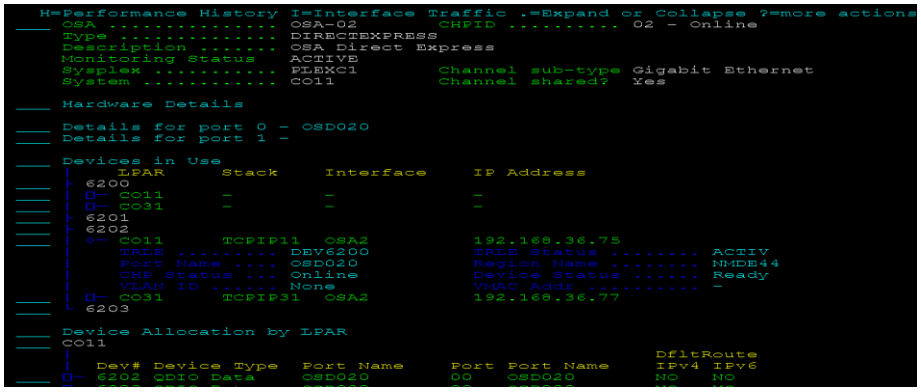
- Support for the OSA-Express for Unified Resource Manager (OSM) and OSA-Express for zBX (OSX) devices

- Enhanced OSA display format

  The following panels have expandable lists. These lists enable you to display what you want to see by expanding the section of interest and collapsing the sections of no interest.

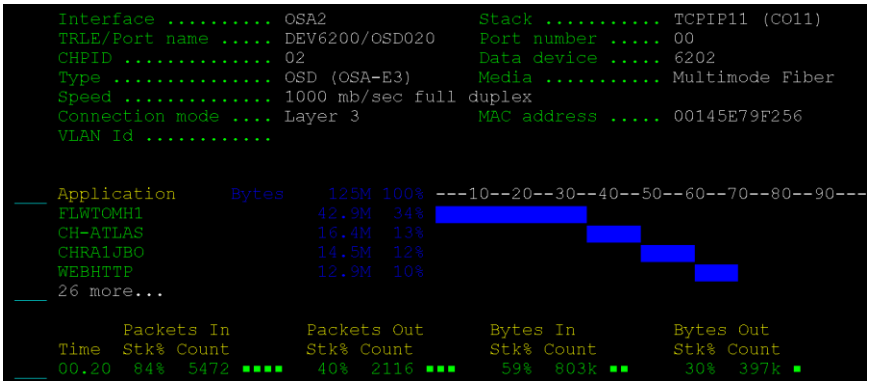
  - Open System Adapter Summary
  - OSA Address Table List
  - OSA Configuration
  - OSA Device List

  For example, entering CF next to an OSA resource on IP Resource Monitor displays the following OSA Configuration panel:



- Additional actions

  - On the panels, you can enter line commands next to the OSA. To list the commands, enter **??** next to the OSA.
  - For a device in use on the OSA Configuration or OSA Device List panel, enter I to display additional information as shown in the following example:



- The OSA Management panel has the following new options:
  - CF to display OSA configuration
  - TRL to list the transport resource list elements (TRLEs) for OSD devices and HiperSockets

    This option has a panel shortcut of /IPTRL.
- Qualifier support for the PriorityQueueDepth and PriorityQueueStatus attributes in OSA resource definitions

  This qualifier has the following format:

  stack_name.interface_name.queue_name

Interface Name Support on ping and traceroute Requests

On the user interface, you can identify the specific physical interface through which you want to send packets on ping and traceroute requests.

Also, the PING, TRACEROUTE, and TRACERTE commands have the following new optional operand: INTERFACE=*interface_name*.

To enable this support, specify **USS** in the TCP/IP Software Type field of the SOCKETS parameter group.

VIPA Detail Display Panel

This panel has the following enhancements:

- Enhanced display format

  The panel has an expandable list. The list enables you to display what you want to see by expanding the section of interest and collapsing the sections of no interest.

- Additional information in the Distribution Port Table section

  Each port includes the following information:

  - Workload distribution method
  - System (LPAR) that owns the target stack
  - Target stack
  - Job name of the listener that is receiving connections
  - Percentage of active and total connections for all ports or an individual port
  - Workload Manager (WLM) weights for CP, zAPP, and zIPP

- Additional actions

  - In the Sysplex Configuration section, you can enter line commands next to a stack. To list the commands, enter **??** next to the stack.
  - In the Distribution Port Table section, when you enter PC next to a distribution port system, the display lists the connections to the port.

Connection List Criteria Panel

The way the connection list criteria is stored or recalled has changed. The panel no longer contains the Criteria Name field.

When you press F11 to store the criteria, you specify the criteria name on the displayed Save Connection List Criteria panel.

When you press F5 to recall a stored criteria definition, a list of stored criteria appears. You then select the criteria that you require.

Connection Information Panel

If the connection is part of a business application, the panel identifies that application.

Device Links List Panel

This panel has the following enhancements:

- The order of the listed devices has changed. The panel lists the devices in the following order:
  - Physical interfaces
  - Virtual IP Addresses (VIPAs)
  - IUTIQDFF IUTIQDIO, IUTSAMEH, and LOOPBACK devices
- Instead of MPCIPA, the device type displays the following better known names:
  - OSA for IPAQENET and IPAQENET6
  - HiperSocket for IPAIQDIO and IPAIQDIO6
- When you enter D or S next to an interface or link (except a VIPADefine type), the display lists the applications using that interface.

Transport Resource List Panel

A listed transport resource list element (TRLE) has the following additional information:

- Name of the VTAM major node that defines the TRLE
- Channel path identifier (CHPID) for an OSA or HiperSockets device
- Type of CHPID

Packets Lost Indication for IP Nodes

When packets are lost for an IP node, the region takes the following actions:

- Log a message in the transient log.
- Show the percentage loss in the NETSTATUS attribute.

To display the transient log, enter **L** next to the node. The log contains messages about PktLoss events.

To display the NETSTATUS attribute, enter **H** next to the node and then enter **S** next to the NETSTATUS attribute.

Attribute- and Event Detector-based Alerting

You can suppress alerting when a resource definition attribute or event detector satisfies the triggering condition. That is, a condition can trigger actions without sending an alert.

To suppress alerting, specify **0** for the alert severity.

IPFILES Parameter Group

You can customize the VSAM options for the data sets in the IPFILES parameter group. As distributed, the options are LSR DEFER SIS.

ReportCenter

ReportCenter supports 64-bit Java. Review the REPORTCENTER parameter group.

Note: If you use CA Datacom/AD, the JDBC class and DLL directories are created as part of the CA Datacom/AD installation. Update the paths in the REPORTCENTER parameter group.

Command Entry

Command Entry on a 3270 terminal has the following enhancements:

- The maximum value for the Limit field has increased to 32767.
- The panel supports a new LOG field. The field enables you to suppress the logging of the response to a local command to the activity log.

In WebCenter, when you issue a command, you can display the response in a separate window and can save the response in a text file. If you use this feature, there is no limit to the number of response lines returned. The value in the Maximum Lines Returned field has no effect.

Alert Monitor

You can add your own actions to the Alert Monitor. You customize the CC2DEXEC($AMCBCMX) exit to specify your actions.

Note: For information about how to customize the $AMCBCMX exit, see the *Reference Guide*.

Alert Forwarding

The CC2DSAMP($AMTRAP) management information base (MIB) definition used by alert forwarding includes the following new object identifiers:

- …
- sourceTime (1.3.6.1.4.1.1126.1.2.1.3.9)
- updateTime (1.3.6.1.4.1.1126.1.2.1.3.10)
- closeTime (1.3.6.1.4.1.1126.1.2.1.3.11)
- lastTime (1.3.6.1.4.1.1126.1.2.1.3.12)
- elapsedTime (1.3.6.1.4.1.1126.1.2.1.3.13)
- occurrences (1.3.6.1.4.1.1126.1.2.1.3.14)
- sourceId (1.3.6.1.4.1.1126.1.2.1.3.15)
- explanationCount (1.3.6.1.4.1.1126.1.2.1.3.16)
- explanationTable (1.3.6.1.4.1.1126.1.2.1.3.17)
  - explanationEntry (1.3.6.1.4.1.1126.1.2.1.3.17.1)
    - explanation (1.3.6.1.4.1.1126.1.2.1.3.17.1.1)
- systemActionCount (1.3.6.1.4.1.1126.1.2.1.3.18)
- systemActionTable (1.3.6.1.4.1.1126.1.2.1.3.19)
  - systemActionEntry (1.3.6.1.4.1.1126.1.2.1.3.19.1)
    - systemAction (1.3.6.1.4.1.1126.1.2.1.3.19.1.1)
- userActionCount (1.3.6.1.4.1.1126.1.2.1.3.20)
- userActionTable (1.3.6.1.4.1.1126.1.2.1.3.21)
  - userActionEntry (1.3.6.1.4.1.1126.1.2.1.3.21.1)
    - userAction (1.3.6.1.4.1.1126.1.2.1.3.21.1.1)
- …
- text2 (1.3.6.1.4.1.1126.1.2.1.3.105)
- text3 (1.3.6.1.4.1.1126.1.2.1.3.106)
- text4 (1.3.6.1.4.1.1126.1.2.1.3.107)
- opSysId (1.3.6.1.4.1.1126.1.2.1.3.201)
- opSysName (1.3.6.1.4.1.1126.1.2.1.3.202)
- sysplex (1.3.6.1.4.1.1126.1.2.1.3.203)
- ipHostName (1.3.6.1.4.1.1126.1.2.1.3.204)
- ipHostAddr (1.3.6.1.4.1.1126.1.2.1.3.205)

Alert Filters

Alert filters have the following enhancements:

- You can use Network Control Language (NCL) system variables in to provide values in the filter expression. For example, the following expression restricts the alerts to those alerts that originate from the local region:

  ```
  SOURCE EQ &ZNMDID
  ```

- The following new filters are available:
  - LOCAL for local alerts
  - REMOTE for alerts from remote regions
  - SYSLOGD for alerts from SYSLOGD event detectors (for use by CA NetMaster NM for TCP/IP)

Knowledge Base Export Utility

You can use the EXPORTRM utility to export one of the following types of definitions:

- A system image with the included resource definitions
- A class of common components

The utility does not support the selection of individual definitions.

The export data set must exist as a sequential file with a record length of at least 80 characters. You can use DISP=MOD to append multiple exports to a single data set.

Use the following format:

```
EXPORTRM DSNAME=data_set_name [DISP=MOD]
       {[OPT=IMAGE SYS=system_image_name VER=version] |
        [OPT=COMMON TYPE=component_type [VER=version]]}
```

Note: For more information, see the *Reference Guide*.

Knowledge Base Import Utility

The IMPORTRM utility imports definitions in a data set to the knowledge base. The data set contains definitions exported by the EXPORTRM utility.

This utility has the following format:

```
IMPORTRM DSNAME=data_set_name
         MODE={REPLACE|OVERLAY|MERGE}
```

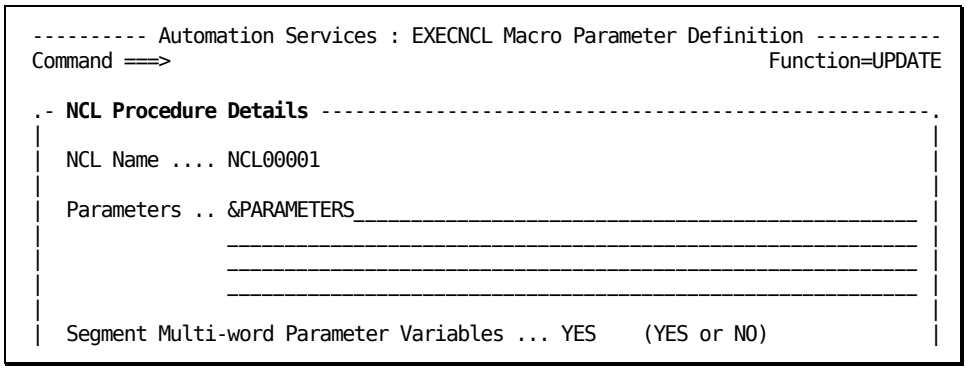
Note: For more information, see the *Reference Guide*.

Multisystem Communication Access Methods

You can update the MULTISYS parameter group to change the communication access methods that can be used without having to unlink the region. When you apply the changes, links with the region are stopped and restarted.

EXECNCL and STARTNCL Macros

You can pass a list of parameters to the EXECNCL and STARTNCL macros using variables. To use this feature, you specify YES in the Segment Multi-word Parameter Variables field on the Macro Parameter Definition panel, for example:



PARSE Macro

The PARSE macro creates a number of variables to hold the parsed input. You can specify a variable to return this number. To use this feature, you specify the name of the variable in the Variable Name for Count of Variables Created field on the Macro Parameter Definition panel.

SETSTATE Macro

The SETSTATE macro provides defaults for the following fields:

- Resource Class has a default of &ZRMDBCLASS.
- Resource Name has a default of &ZRMDBNAME.

SYSCMD Macro

The number of message rules that you can specify to detect responses in the SYSCMD macro is increased to ten.

Panel Shortcuts

You can suppress panel shortcuts or change the shortcut character. You control shortcuts through the PMENUCONTROL parameter group.

NMSAF Security Modeling

The NMSAF security solution is enhanced to build Userid Access Maintenance Subsystem (UAMS) records based on the modeling controls of a user. This build happens each time the user logs in. When the model for a user changes in external security, you no longer need to update the UAMS definitions.

Install Utility

The Install Utility has the following changes:

- The Install Utility is now unloaded into the CC2DJCL data set.
- Field-level online help is available.

Note: For more information, see the *Installation Guide*.

PDS Member Statistics

When you use Dataset Services to create or update a partitioned data set (PDS) member, interactive system productivity facility (ISPF) statistics are generated. The DSSISPST system parameter controls the generation of these statistics.

Note: For information about the system parameter, see the *Reference Guide*.

CA MSM

The Software Configuration Service (SCS) has been added for CA MSM. Use this service to configure CA Technologies mainframe products from the software inventory of the driving system to your target enterprise systems.

The SCS guides you through the configuration creation process, and through the manual steps to implement the configuration. The SCS also includes an address space communications service running on each targeted z/OS system.

Note: For more information, see the *CA Mainframe Software Manager User Guide*.

Documentation

This section contains topics that are related to documentation enhancements.

The following list shows the documentation library changes in this release:

- The *Managed Object Development Services Programmer and Administrator Guide* is renamed the *Managed Object Development Services Guide*.
- The *Network Control Language Programmer Guide* is renamed the *Network Control Language Programming Guide*.

Changes to Data Set Names

The names of the data sets have changed. We recommend that you review the following table to determine the impact to your installation:

Original Name	New Name	Description
CAIJCL	CC2DJCL	This partitioned data set (PDS) contains the installation and maintenance JCL members.
CAILINK	CC2DLINK	This PDS contains various Tivoli NetView exits.
CAILPA	CC2DLPA	This PDS contains modules that must be executed from the link pack area (LPA).

Note: For information about data sets, see the *Reference Guide*.

Removed Feature

The product no longer supports the WebCenter software development kit (SDK).

Product Removed From Family

The following product is not included in this release: CA NetSpy, which remains at r12.

Important! When you upgrade to CA Mainframe Network Management Release 12.1 and you use CA NetSpy r12, do *not* delete the NMC0.CC2DLOAD data set. CA NetSpy requires the data set for health checks.

Appendix A: Changes that Affect Resource-Level Security

Some product resources (for example, commands) have been added or deleted. If you are using resource-level security, review your implementation and modify as required.

This section contains the following topics:

Menu Option Changes

The following list shows the affected menu options:

New

Menu ID: $IP.006 (TCP/IP : Administration Menu)

```
GT     - Show IP Growth Tracker Collection Percentages
```

Menu ID: $IP.014 (TCP/IP : OSA Management)

```
CF     - OSA Configuration
TRL    - List QDIO Transport Resource List Entries
```

Menu ID: $IP.015 (TCP/IP : VIPA Management)

```
CR     - Connection Routing Table
```

Menu ID: $IP.041 (TCP/IP : History Data)

```
GT     - View IP Growth Tracker
TRS    - View Traffic Statistics
```

Menu ID: $RM.029 (Automation Services : RAMDB Utilities Menu)

```
F      - Browse RAMDB Field Descriptions
```

Deleted

Menu ID: $IP.019 (TCP/IP : Business Applications)

```
S      - Busiest Application Summary
```

OCS Command Changes

The following list shows the affected Operator Console Services (OCS) commands:

New

```
USS      - Issue a UNIX System Services command
```

Appendix B: Changes to Distributed Knowledge Base

If you have previously customized any of the changed objects or are using any of the deleted objects, review each instance in your old knowledge base and make modifications in your new knowledge base as required.

Note: For more information about knowledge base migration, see the *Installation Guide*.

This section contains the following topics:

Monitoring Attributes

The following list shows the new, changed, or deleted definitions:

New

No definitions have been added.

Changed

OSA3DEFERREDEVENT - OSA3 deferred event count
OSA3FRAMERCVNOBUF - OSA3 frames received when no buffer
OSA3MISSEDPACKETS - OSA3 missed packets

Deleted

No definitions have been deleted.

Alert Monitor Filters

The following list shows the new, changed, or deleted definitions:

New

```
LOCAL            - Local system alerts only
REMOTE           - Alerts from linked regions only
SYSLOGD          - IP Event Detector SYSLOGD  (USS Syslog daemon messages)
```

Changed

No definitions have been changed.

Deleted

No definitions have been deleted.

Icons

The following list shows the new, changed, and deleted icons. The list has the following format:

icon_name - icon_description

New

No icons have been added.

Changed

The following icon has changed in width so that four icons can fit abreast on the Graphical Monitor:

```
RMPROD     - All Resources Within a Product
```

Deleted

No icons have been deleted.

Appendix C: Changes to Messages

This section lists the changed, deleted, and new messages in Release 12.1.

Note: For information about each message, see the *Message Reference Guide*.

This section contains the following topics:

Changed Messages

The text of the following messages changed:

```
BAIPWI12     Cannot change TCP/IP Software Type: multisystem link(
DFPKG01      Severity &P1 alert for &P2 : &P3
GP0027       ~P1 requires System Base version of ~P2
IPCN4401     No stored criteria
IPINWI27     Invalid Trace Expiry time. Must be between 0:02 and ~
IPLO8247     User ID ~p1 is not authorized to execute the NDB comm
IPPT8512     Trace definition (~P1) found, status ~P2
IPPT8833     Invalid time format or range specified. Valid range i
IPPT9004     SSI ~p1 on ~p2 not contactable or Packet Analyzer not
IPSA1602     OSA &p1 monitoring cannot find IP addr for stack &p2
IPSD0003     No statistics available from &p1
IPTR3502     ~P1
N13218       MPREF REFRESH MRESP- LIMIT ACTION NTFY APPST SESS- -M
N13219       ~P1 ~P2 ~P3 ~P4 ~P5 ~P6 ~P7 ~P8 ~P9 ~P10
N3AN01       TCP/IP SERVER ACTIVE ON type: pppp SOCKET: ssss
N3AN90       TCP/IP SERVER REGISTER FAILED. type: pppp RC: rc FB:
N3AN91       TCP/IP SERVER ACCEPT FAILED. SOCKET: ssss type: pppp
N53H01       POOL NAME USE#
N53H02       ~P1   ~P2
N59006       PANEL panelname EXPANSION ERROR
RE0108       RULESET &P1 INCLUDED BY RULESET &P2
RMAOMNX00    BURST SUPPRESS=> ~P1
RMCALL22     '~P1' COMMAND CANNOT BE ISSUED AGAINST A LOCALLY LOAD
RMDM0038     ARM RESTART FAILED - &p1 - START COMMAND WILL BE ISSU
RMINWI56     No common access method with ~P1
RMINWI60     TCP/IP not available on this system
RMRS0002     No &P1 records found &P2
RMVM0069     OPERATION MODE MUST BE AUTOMATED, STARTAUTO, MANUAL,
RMVM0124     ~p1 selection list not available for this resource
```

Deleted Messages

The following messages were deleted:

IPAS0201	FILTER operand must be an address space mask
IPAS0202	No traffic seen in the last hour for ~p1 on stack ~p2
IPAS0203	Number of address spaces displayed truncated from &p1
IPAS1201	No TCP activity recorded ~p1
IPAS1202	Packet Analyzer statistics not available
IPAS1203	Number of address spaces displayed truncated from &p1
IPRA0201	No traffic to ~p1 seen in the last hour
IPRA1201	No remote IP addresses recorded for stack ~P1 ~P2
IPRA1202	Packet Analyzer statistics not available
IPRA1203	&p1 records retrieved from total available of &p2
NMCP0100	The Minute-Minder Listener is already running
NMCP0101	~P1 must be a number between ~P2 and ~P3 inclusive.
NMCP0102	LOCPU value must be less than HICPU value
NMCP0103	~P1 is not a valid data set name
NMCP0110	Minute-Minder Listener started
NMCP0111	~P1 = ~P2
NMCP0197	Minute-Minder Listener is not active
NMCP0198	Minute-Minder Listener stop requested
NMCP0199	Minute-Minder Listener ended

New Messages

The following messages are new:

```
AMEVFWD27    Invalid parameter to alert forwarding. PARAMETER=~p1
BACP0100     The Minute-Minder Listener is already running
BACP0101     ~P1 must be a number between ~P2 and ~P3 inclusive.
BACP0102     LOCPU value must be less than HICPU value
BACP0103     ~P1 is not a valid data set name
BACP0110     Minute-Minder Listener started
BACP0111       ~P1 = ~P2
BACP0197     Minute-Minder Listener is not active
BACP0198     Minute-Minder Listener stop requested
BACP0199     Minute-Minder Listener ended
CAPKG030W    Server token set failed! &p1="&p2" rc=&p3 fdbk=&p4
CAPKG031W    Server &p1 socket registration failed! &p2 rc=&p3 fdb
CAPKG032I    Server &p1 socket registered on port &p2 &p3 servlet=
CAPKG033W    Server &p1 TCP connection accept failed for port &p2
CAPKG034W    Server &p1 APPC start failed for servlet &p2 rc=&p3 m
CAPKG035W    Server &p1 TCP connection socket transfer failed! Soc
CAPKG036I    Server &p1 has had &p2 TCP connections since &p3
CAPKG037I    Server &p1 stats: &p2 conns, &p3 in error, &p4 bytes
CAPKG038I    &p1
CAPKG039E    Socket call failed in &p1 : rc="&p2" fdbk=&p3 errno=&
CAPKG039I    &P1
CAPKG040W    &p1 servlet socket transfer notification timed out.
CAPKG041W    &p1 servlet received an unexpected socket transfer ms
CAPKG042W    &p1 servlet socket transfer accept failed. rc=&p2 fdb
CAPKG043W    Server &p1 has not yet registered.
CSAP2906     EE data sampling limited to ~P1~records from a total
CSCALLG13    SNA NMI error ~p1, connection RTP status not applied
CSCALLG14    EPS ~p1 error: Errno=~p2 Reason=~p3
CSCALLG15    EPS ID error: Verb=~p1, ID=~p2, SSID=~p3, system=~p4,
CSCALLG16    SSI ~p1 on ~p2 not contactable or Packet Analyzer not
CSCALLG17    Request timed out on SSID=~p1, system=~p2 for ~p3 wit
CSCALLG18    Number of RTPs displayed truncated from ~p1 to 4095
DFAL0523     Alert actions must be defined
DFPKG20      Alert actions executed for &P1 : &P2
EECN4510     Number of UDP connections displayed truncated from ~P
ETJZM001I    NetMaster translator runtime parameters being used ar
ETJZM002I    Using setting from system property &p1=&p2
ETJZM003I    Using setting from environment variable &p1=&p2
ETJZM004I    Ignoring error while canceling NetMaster request. MSG
ETJZM005E    Login to NetMaster failed. RC=&p1 FDBK=&p2 MSG=&p3
ETJZM006E    Unable to establish a connection to NetMaster on host
ETJZM007I    Connection to NetMaster on host=&p1 port=&p2 successf
ETJZM008E    Socket input truncated reading NetMaster response! &p
ETJZM009E    Invalid record length of &p1 received from NetMaster
ETJZM010E    &p1
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ETJZM011E    Socket I/O error while sending/receiving data on NetM
ETJZM012E    Socket I/O error while attempting to read data on Net
ETJZM013E    Exception &p1 encountered while attempting to decode
ETJZM014E    Unable to get SECAPPL for NetMaster region on host=&p
ETJZM015E    Retrieval of SECAPPL for NetMaster failed. RC=&p1 FDB
ETJZM101I    Connecting to host &p1 on port &p2 to negotiate port
ETJZM201E    Exception while retrieving 'more' responses from NetM
ETJZM202E    Request for metadata from NetMaster failed. RC=&p1 FD
ETJZM203I    Retrieving metadata from NetMaster &p1
ETJZM204E    Error encountered while attempting to retrieve metada
ETJZM205I    All metadata from NetMaster processed successfully, &
ETJZM206I    Retrieved metadata for table &p1 with &p2 columns.
ETJZM301E    Unsupported literal type encountered in expression! L
ETJZM302E    Unsupported condition class encountered in expression
ETJZM303E    Aggregate functions are not supported for streamed ta
ETJZM304E    Unsupported aggregate function &p1 encountered in que
ETJZM305E    Limit is not supported for streamed tables.
ETJZM306E    OrderBy is not supported for streamed tables.
ETJZM307E    GroupBy is not supported for streamed tables.
ETJZM308E    Invalid argument type "&p1" to procedure call &p2
ETJZM309E    Translator logic error, unexpected request for more r
ETJZM310E    Query request to NetMaster failed. RC=&p1 FDBK=&p2 MS
ETJZM311E    Streamed table notification failed for table &p1, str
ETJZM312E    Execption while monitoring for data notification for
ETJZM401E    Translator access method error. &p1 - &p2
ETJZM402E    TSF Suffix valid values : A to Z, 0 to 9, PROD or NON
ETJZM403E    TSF Suffix valid values : A to Z, 0 to 9, PROD or NON
ETJZM450E    Product "~p1" not found in TSF registration load modu
ETJZM451E    TSF Data Feed interval value '~p1' is not valid
ETJZM452E    Required input data (~p1) omitted for ~p2
ETJZM453E    TSF PDAPI protocol violation: &p1
ETJZM454E    TCP/IP sockets interface is not active
ETJZM455E    SOCKET &p1 failed rc=&p2 fdbk=&p3 errno/verrin=&p4 &p
ETJZM456E    TSF token set retrieval failed &p1
ETJZM501E    Translator driver logic error: &p1
ETJZM502E    Error processing query. &p1
ETJZM503E    No tables satisfy request for metadata. &p1
ETJZM504E    VARS transfer error: &p1
ETJZM505I    Using RAPPL &p1 from &p2
ETJZM601E    Translator socket receive error. &p1 rc=&p2 fdbk=&p3
ETJZM602E    Translator socket send error. &p1 rc=&p2 fdbk=&p3 err
ETJZM603E    Unsupported Translator encoding prefix &p1
ETJZM604E    Translator decode failed rc=&p1 fdbk=&p2 msg=&p3
ETJZM605E    Translator protocol violation: &p1
ETJZM606E    Translator socket transfer failed! Socket=&p1 NCLID=&
ETJZM607E    Translator encode failed rc=&p1 fdbk=&p2 msg=&p3
ETJZM608E    Translator servlet encountered a fatal processing err
ETJZM609E    Translator server logic error: &p1
ETJZM701E    Product "~p1" not found in TSF registration load modu
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ETJZM702E	TSF Data Feed interval value '~p1' is not valid
ETJZM703E	Required input data (~p1) omitted for ~p2
ETJZM704E	TSF PDAPI protocol violation: &p1
ETJZM705E	TCP/IP sockets interface is not active
ETJZM706E	SOCKET &p1 failed rc=&p2 fdbk=&p3 errno/verrin=&p4 &p
ETJZM707E	TSF token set retrieval failed &p1
ETJZM999I	&p1
FAPKG26	Incompatible Packet Analyzer level ~p1 found. Level ~
FAPKG61	A XSCAN Compile Check Expression failed, Result=~p1
GP1021	Invalid locate value specified
IPCALL76	~p1 is not a valid interface name
IPCHPKG01	Datasource &p1 in &p2 encountered an error for transl
IPDI5280	Checking UNIX System Services SYSLOGD Interface
IPDI5281	Syslogd pipe receiver is ~P1
IPFA0601	Record type ~p1 is not valid
IPFA0602	~p1 is not a valid filter expression
IPFA0603	Limit set to ~p1
IPFA0604	No active connections for the selected item
IPFA0605	No ports in use for ~p1
IPFA1201	No Packet Analyzer records were found matching your s
IPFA1202	Packet Analyzer statistics not available
IPGP1241	OPERATION FAILED - INTERFACE NAME NOT SUPPORTED
IPGP1242	OPERATION FAILED - INTERFACE ~P1 IS NOT A PHYSICAL IN
IPGP1243	OPERATION FAILED - INTERFACE ~P1 IS NOT DEFINED TO ~P
IPNM0213	~p1 percent packet loss from ~p2 ping requests
IPNS1198	NMIFR ~P1. U=~P2. RC=~P3. FDBK=~P4
IPNS1199	NMIFR Filter=~P1
IPPKG030	~P1 is not a valid IPv~P2 ~P3 for ~P4
IPPKG031	OPERATION FAILED - INTERFACE NAME NOT SUPPORTED
IPPKG032	Address not supported as source IP address
IPPM5231	Alert actions must be defined
IPPM5232	Detector type &p1 is not available
IPPT5047	Parameter group $IP SMARTTRACE requires re-initializa
IPPT8538	Parameter group $IP SMARTTRACE requires re-initializa
IPSA1701	No devices found for &p1
IPSA1702	OSA/SF returned: ~p1
IPSA1703	No OAT details returned from OSA/SF
IPSA1704	Selected device has no performance history
IPSA1705	Selected device has no interface traffic data
IPTSFFD01	Chorus TSF initialization failed
IPTSFFD02	TSF Data Feed cannot obtain exclusive lock
IPTSFFD03	TSF Data Feed administratively disabled
IPTSFFD04	No data collected for TSF Data Feed
IPTSFFD05	TSF Data Feed for TSF Suffix "~P1" ended with errors.
IPVP0203	Display limit ~P1 reached for number of VIPA connecti
NF8A90	P/A S/T REQ STALLS... #CR: aaa #SR: bbb #NSR: ccc
NH0080	HC INTERFACE SETUP FAILURE: code - desc
NH0310	HC INTERFACE INSTALLED AND AVAILABLE
NH0311	HC INTERFACE UNAVAILABLE. REASON: reason

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NH0312      HC INTERFACE STATUS UNKNOWN
NH0319      IBM HC REGION STATUS IS: aaa PROC NAME IS: bbb
NH0410      HC INTERFACE STATUS INFORMATION FOLLOWS...
NH0411      CHECK I/F STATUS: aaa QUERY I/F STATUS: bbb CHECKS DE
NH0412      IBM HC REGION STATUS IS: aaa  PROC NAME IS: bbb
NH0413      TYP CHECK NAME              HANDLER   F-CODE  NM-PARM
NH0414      typ check name              handler   f-code  nm-parm
NH0420      HZSQUERY REQUEST=aaa SCHEDULED...
NH0421      HZSQUERY REQUEST=aaa RESULT: bbb-ccc ddd eee fff
NH0428      DUMP OF RETURNED HZSQUAA.  @=aaa XL=bbb DL=ccc
NH0429      hex dump data
NH0430      HZSQUAA HEADER FIELD NAME..... VALUE
NH0431      field-name                     value
NH0432      HZSQUAAG FIELD NAME.............. VALUE
NH0433      field-name                     value
NH0440      LIST OF CHECKS FOLLOWS.  NUMBER: nnn
NH0441      CHECK-NAME                     OWNER           S
NH0442                                     MSGTOKEN
NH0445      check-name                     owner           s
NH0446                                     msgtoken
NH0450      CHECK LINES FOLLOW.  BUFFERS: aaa NUMBER LINES: bbb
NH0455      line-data
NH0610      HC DEFINE COMMAND COMPLETE. CHECK: aaa DEFINED
NH0620      HC DELETE COMMAND COMPLETE. CHECK: aaa DELETED
NH0621      HC DELETE COMMAND FAILED. CHECK: aaa NOT FOUND
NH0622      HC DELETE COMMAND COMPLETE. CHECK: aaa MARKED FOR PEN
NH0670      INVALID HEALTH CHECK NAME
NH0671      INVALID HEALTH CHECK REASON
NH0673      INVALID INTERVAL FORMAT
NH0680      HC DEFINE COMMAND FAILED - STORAGE SHORTAGE (1)
NH0681      HC DEFINE COMMAND FAILED - CHECK ALREADY EXISTS: aaa
NH0682      HC DEFINE COMMAND FAILED - STORAGE SHORTAGE (2)
NH2101      SCHEDULING PROCEDURE (pppp) FOR HEALTH CHECK: cccc
NH2201      PROCESS pppppp FOR CHECK: cccc HAS COMPLETED.  RESULT
NH2210      PROCESS pppppp FOR CHECK: cccc RESULT ERROR.  INFO FO
NH2211      NO RESULT SET
NH2212      RESULT: aaaa NO TEXT SET FOR bbbb
NH2213      RESULT: aaaa NO MSGID SET FOR bbbb
NH2214      RESULT: aaaa NO DIAG VALUE SET
NH2288      PROCESS pppppp FOR CHECK: cccc TERMINATED IN ERROR
NH2289      PROCESS pppppp FOR CHECK: cccc FLUSHED DUT TO TIMEOUT
NH2980      HC_UTIL VERB ONLY VALID IN A HCPROC PROCEDURE
NH2981      NO RESULT SET
NH2982      RESULT: aaa NO TEXT SET FOR bbb
NH2983      RESULT: aaa NO MSGID SET FOR bbb
NH2984      RESULT: aaa NO DIAG VALUE SET
NH2988      STEM. VARNAME TOO LONG
NH2989      STEM. VALUE LENGTH EXCEEDS 255
NH3010      LOAD FAILED FOR aaaaaaaa - HC CHECK API DISABLED
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NH3011      HC CHECK API FAILED TO INITIALISE, RC: rrr, R0/1 (HEX
NH3020      CHECK: aaaaaaa DEFINED.  CORR: bbbb
NH3021      CHECK: aaaaaaa DEFINE FAILED.  RC: rr  R0/1 (HEX): bb
NY6001      SSM support initialized for ~P1
NY6002      SSM support initialization failed - Not supported on
NY6101      SSM SUPPORT STATUS
NY6102      SSM SUPPORT ACTIVE
NY6103      SSM ~P1 STATUS COMPLETE
NY6104      SSM HEARTBEAT ACTIVE
NY6105      SSM SUPPORT FAILED
NY6106      SSM ~P1 STATUS FAILED
NY6107      SSM ~P1 STATUS PENDING
NY6501      SSM support initialized for ~P1
NY6502      SSM support initialization failed- ~P1
NY6503      SSM STATUS attach failed RC:~RC
NY6504      SSM support may not be active
NY6505      SSM subtask error during detach, RC: ~RC, RS: ~RS
NY6506      SSM heartbeat active
NY6601      SSM support initialized for ~P1
NY6602      SSM support initialization failed- ~P1
NY6603      SSM STATUS attach failed RC:~RC
NY6604      SSM support may not be active
NY6605      SSM subtask error during detach, RC: ~RC, RS: ~RC
NY6606      SSM heartbeat active
NY6701      SSM support initialized for ~P1
NY6702      SSM support initialization failed - Not supported on
NY6801      SSM SUPPORT STATUS
NY6802      SSM SUPPORT ACTIVE
NY6803      SSM ~P1 STATUS COMPLETE
NY6804      SSM HEARTBEAT ACTIVE
NY6805      SSM SUPPORT FAILED
NY6806      SSM ~P1 STATUS FAILED
NY6807      SSM ~P1 STATUS PENDING
N09709      ~P1 ACTIVE AS GENERIC RESOURCE ~P2
N14E01      XOPT command processed, option: ~P1 set
N14E02      XOPT command ignored, missing option name
N14E03      XOPT command ignored, option: ~P1 name invalid
N14E04      XOPT command ignored, option: ~P1 can not be changed
N14E05      XOPT command ignored, option: ~P1 is not used
N16C59      INVALID DSNAME, DSN=aaaaaa
N2D001      Datacom interface is now ~P1
N2D002      Datacom ~P1 failed with return code ~P2 and internal
N2D801      The OML/DATACOM interface status is: ~P1
N2D802      NCLID  OWNER
N2D803      ~P1 ~P2
N2D901      State is already ~P1
N2D902      Disconnecting - ~P1 users currently connected
N2D903      Command ignored - currently ~P1
N2D904      Command accepted
```

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N3AF18       UNIX   TYPE OWNER    CLIENTID LOCAL-PATH
N3AF19       socket type owner    clientid lpath
N3AF43
N3AF44       ------ ---- -------- -------- ----------------------
N3AF45       ------ ---------------------------------- ----------
N3AF46
N3C106       TAKEOVER=YES required if SERVER= and PATH= specified
N3ZB18       UNDEFINED DOMAIN NAME FOR INCOMING CONN REQ VIA PROXY
N32912       LINK DEFINITION ~P1 TO ~P2 COMPLETED USING DEFINITION
N33D01       BIND OF LINK ATTEMPT FROM luname REJECTED: RUSIZE OUT
N33201       BIND OF LINK ATTEMPT TO luname REJECTED: RUSIZE OUT O
N80519       PASSTICKET GENERATION ENTRY POINT NOT ACCESSIBLE
N80520       PASSTICKET GENERATION FAILED FOR APPL=~p1, RC=X'~p2'
N99792       SHOW EPS COMMAND NOT PROCESSED, SSI ~P1 NOT CONNECTED
RMAD0115     CANNOT DELETE SYSTEM IMAGE WITH A HOME SYSTEM OF &P1
RMAMAPI02    CANNOT LOCATE ALERT
RMDBMS31     CANNOT COPY A ~p1 SYSTEM IMAGE TO AN EXISTING ~p2 SYS
RMDB0206     Export rejected - the export dataset is not in the co
RMDB0207     Export rejected - dataset contains data from a differ
RMDM0041     ARM RESTART DENIED - ~p1 - START COMMAND WILL NOT BE
RMINWI89     Invalid value, must be REGION, SERVER or USER
RMINWI90     Invalid value for ~P1
RMINWI91     ~P1 is not a named pipe
RMINWI92     ~P1 is required if ~P2 is set
RMINWI94     Could not ~P1 named pipe ~P2, RC=~P3
RMINWI95     ~P1
RMINWI96     Could not restart the SYSLOG daemon
RMIPAPI16    Function not available on this z/OS version
RMSL0101     SYSLOGD Pipe Receiver initialization complete
RMSL0102     ~P1 is a required parameter
RMSL0103     Could not open pipe ~P1, RC=~P2
RMSL0104     SYSLOGD Pipe Receiver read error, RC=~P1
RMSL0105     ~P1
RMVM0125     ~P1 must start with ~P2
SD3947       OML globals excluded because this environment is bein
SD3948       Message overflow, some variables not displayed, use N
SYMS1230     Review Userid ~P1 not defined
WRINWI53     Datacom JDBC DLL directory does not contain required
WRINWI54     Datacom JDBC Class directory does not contain require
```

Appendix D: Published Fixes

The complete list of published fixes for this product can be found through MyCA or Published Solutions at the CA Support Download Center.

If you have CA MSM, use it to download the fixes.