Extended Parameters
NetPerformer® System Reference

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Published Date: October 10, 2016

Document # 1613

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1.1 About Extended Parameters

The Extended Parameters set includes functions and enhancements that are required by a small number of network applications. These parameters are normally used by technical personnel only. **Extended parameters can be defined using console access only.**

1.1.1 Extended Parameters Command

Use the Extended Parameters (**EP**) command to activate, deactivate or list the current values of extended parameters on the console.

- To execute this command, enter **EP** on the console command line.

  You must have **FULL** access to the console to view or change the extended parameters. The EP command is not available to users with **MONITOR** console access (refer to the chapter *Controlling Access to the NetPerformer* in the *Quick Configuration* module of this document series).

- The extended parameter set is not available through SNMP access or text-based configuration entries.

Console	SNMP	Text-based Config
EP	(not available)	(not available)

If you enter only **EP**, with no argument, the NetPerformer displays all extended parameters which have been changed from their default value. For an example of this, see "Viewing Extended Parameters Changed from Default" on page 1-8.

NOTE: The **ALL** option of the Display Parameters command also lists all currently active extended parameters. Enter **DP** ↵ **ALL**.

Other extended parameter displays can be generated by entering an argument after **EP**. The various possibilities are shown in Table 1-1.

1.2 EP Command Options

The **EP** command can be used in several ways. Table 1-1 provides the format of typical input strings and the resulting actions. For the desired result, enter the corresponding input string at the console command prompt.

Input String	Result
EP	Displays all currently active extended parameters. After executing the Factory Setup (FS) command, no extended parameters are displayed.
EP ALL	Displays a list of all the extended parameters that are available for this NetPerformer model, its software options and interface cards installed. For an example, see "Viewing All Extended Parameters" on page 1-10.
EP ?	Provides a list of all extended parameter subtypes available. When you enter a subtype before the question mark, the NetPerformer responds with a list of all extended parameters in that subtype: • **BRG** (for BRIDGE parameters) • **GLOBAL** • **GPS** (on unit installed with a GPS module only) • **IP** • **IPX** • **LAN** • **NAT** • **PORT** (or **PORT** *number* for a specific data port/channel) • **PU** (or **PU** *number* for a specific PU; available only when at least one PU is configured) • **PVC** (or **PVC** *number* for a specific PVC) • **SIP** (when *Voice transport method* global parameter is set to **SIP VoIP)** • **VPORT** (or **VPORT** *number* for a specific voice channel; available only when at least one voice channel is configured)

Table 1-1: EP command options

Input String	Result
EP >	Executes a parameter by parameter listing that goes through all available subtypes. After each extended parameter listed, enter a question mark to view the possible values for that parameter.
EP GLOBAL	Displays all currently active GLOBAL extended parameters. Enter any subtype to view the extended parameters for that subtype.
EP GLOBAL TELNETECHO	Provides a brief description of the **TELNETECHO** parameter with its current value (after the **def:** indicator). Enter any subtype followed by an extended parameter name to view the current value of that parameter. Enter a question mark after the current value for a list of valid values.
EP GLOBAL TELNETECHO ECHOOFF	Changes the value of the global **TELNETECHO** parameter to **ECHOOFF**, and displays that value. To use this method, you must use the exact spelling of the valid parameter values. Refer also to “Changing an Extended Parameter Value” on page 1-6.
EP PORT	Displays all extended parameters that are currently active on all serial ports and digital data channels. The PVC and VPORT subtypes can also be summarized in this way, by entering EP PVC and EP VPORT, respectively.
EP PORT 1	Displays all extended parameters that are currently active on Port 1. Valid port identifiers are a port or channel number, ETH and CSL. Individual PVCs and voice channels can be targeted in the same way, e.g. EP PVC 5, EP VPORT 221.

Table 1-1: EP command options

Input String	Result
EP PORT 1 MAXCOST	Provides a brief description of the MAXCOST parameter with its current value (after the **def:** indicator) for Port 1. You can enter any subtype, number and extended parameter name to view the current value of that parameter for that individual connection. The number is required for the PORT, PVC and VPORT subtypes only. Enter a question mark after the current value for a list of valid values.
EP PORT 1 MAXCOST 100	Changes the value of the MAXCOST parameter for Port 1 to 100, and displays that value.

Table 1-1: EP command options

1.3 Using the EP Command

The command options shown in Table 1-1 above can be used to:

- Change an extended parameter value (see next section)
- Find the extended parameter you need, and view all valid values for that parameter (see "Finding the Extended Parameter You Need" on page 1-7)
- View extended parameters that have been changed from their default value (see "Viewing Extended Parameters Changed from Default" on page 1-8)
- Set an extended parameter back to its default value (see "Setting an Extended Parameter Back to its Default Value" on page 1-9)
- View all extended parameters available on a particular unit (see "Viewing All Extended Parameters" on page 1-10).

1.3.1 Changing an Extended Parameter Value

To change the value of an extended parameter to another valid value:

- At the NetPerformer console command prompt, enter:

  EP *subtype number parameter_name*, where:

  - *subtype* is one of the extended parameter subtypes: **BRG** (BRIDGE), **GLOBAL**, **GPS**, **IP**, **IPX**, **LAN**, **NAT**, **PORT**, **PU**, **PVC**, **SIP** or **VPORT**
  - *number* is required for the **LAN**, **PORT**, **PU**, **PVC** and **VPORT** subtypes only, and specifies the port, PVC, PU or voice channel you would like to configure
  - *parameter_name* is the name of the specific extended parameter that you would like to change

NOTE: To view a list of all extended parameter names, enter **EP ALL** at the console command prompt.

- The console will echo the extended parameter subtype, number and name, and provide a brief description of the extended parameter with its current value (after the **def:** indicator).
- For a list of all valid values, enter a question mark (**?**) at the prompt.
- Enter the new value at the prompt.

EP/GLOBAL example: with request for valid values

```
SDM-9230>EP GLOBAL ACTACCESS
EXTENDED PARAMETERS
GLOBAL> (ACTACCESS) Unit Technical Support Access (def:FULL) ? ?
CHOICE: FULL    CONSOLE DISABLE

GLOBAL> (ACTACCESS) Unit Technical Support Access
        (Default value:FULL, Current value:FULL) ? CONSOLE
```

EP/VPORT/# example

```
SDM-9230>EP VPORT 301 FAXONLY
EXTENDED PARAMETERS
VPORT 301> (FAXONLY) FAX ONLY enable (def:NO) ? YES
```

If you already know the value you want for an extended parameter, you can enter it directly after the parameter name:

EP *subtype number parameter_name value*

EP/GLOBAL examples: with direct entry of valid values

```
SDM-9230>EP GLOBAL EXTENDEDALARM YES

SDM-9230>EP GLOBAL TELNETECHO ECHOOFF

SDM-9230>EP GLOBAL WATCHDSP ENABLE
```

1.3.2 Finding the Extended Parameter You Need

If you do not know the name of the extended parameter you need to finetune the NetPerformer configuration, enter **EP ?** to view a list of all available subtypes.

- At the *Item* prompt, enter the name of the subtype that contains the extended parameter you need

  If the subtype is **PORT**, **PU**, **PVC** or **VPORT**, you must also enter the number of the port, PU, PVC or voice channel you want to configure.
- The NetPerformer responds with a second *Item* prompt, listing all extended parameters in that subtype
- Enter the name of the extended parameter you want to change
- The console will echo the extended parameter subtype, number and name, and provide a brief description of the extended parameter with its current value (after the **def:** indicator)
- For a list of all valid values, enter a question mark (**?**) at the prompt
- Enter the new value at the prompt.

EP ? example

```
SDM-9230>EP ?
EXTENDED PARAMETERS
Item (BRG/GLOBAL/IP/IPX/LAN/NAT/PORT/PVC/VPORT,def:BRG) ? GLOBAL
CHOICE: ACCEPTTIMER           ACTACCESS             ADJUSTCLKRECOV
       ALWAYSWAITDIALTIMER   BCXRIPUPDTIMER        BRIQSIG1BYTECREF
       BRIQSIG3BYTESCHID     CAPTURESIZE           CCSDATACALLTIMER
        COPSPOOF              CRROUTING             CSLECHO
        CUTOFF                DEBUGUDPSOCKET        DIGINPUTLEVEL
        DIGOUTPUTLEVEL        DISCONNECTTIMER       DSPDEBUG
        DSPINACTIVETIMER      EMINPUTLEVEL          EMOUTPUTLEVEL
        EMTESTGROUNDLEAD      EXTENDEDALARM         FRCHECKTIMER
        FROVERIPPACKETIZATION FXOINPUTLEVEL         FXOOUTPUTLEVEL
        FXORINGOFFDELAY       FXSINPUTLEVEL         FXSONHOOKDETECT
        FXSOUTPUTLEVEL        HANGOVERTIME          IPRIPUPDTIMER
        IPXRIPUPDTIMER        IPXSAPUPDTIMER        JOURNALACTIVE
        JOURNALMAXBUFFER      KEEPDSPLOCALCALL
KEEPPROFILEONSERESET
        LINKUPDATECOUNTER     LINKUPDATETIMER       LOCALISDNSTATUS
        LOCALTIMER            LOGALARMNODSP         LOGVERSION
       MAXCHPERDSP           PROXYARP             PVCRDELAYINTERVAL
       RESETPORTNODSP        RIPBCXV2ACKTIMER      SEBLASTFILTERLOW
        SEEVENTLOGENABLE      SEIFSAVEFULLMSGPOOL   SENDRENAMEFILE
        SORTERTIMEOUTOVERIP   STANDBYMODE           STANDBYNAME
        TAPCOUNT              TELNETECHO        TEMPTHRESHOLD
        VTRLOOP               WATCHDSP

Item (Current value:ACCEPTTIMER) ? ACTACCESS
GLOBAL> (ACTACCESS) Unit Technical Support Access (def:FULL) ? ?
CHOICE: FULL    CONSOLE DISABLE

GLOBAL> (ACTACCESS) Unit Technical Support Access
        (Default value:FULL, Current value:FULL) ? CONSOLE
```

1.3.3 Viewing Extended Parameters Changed from Default

To view a list of *all* extended parameters whose values have changed from the factory default configuration:

- Enter **EP** at the console command prompt.

Each line of the display includes:

- The extended parameter subtype, followed by **>**
- The name of the extended parameter that has been changed from its default value, in parentheses **( )**
- A brief description of the parameter
- The current value of the parameter.

EP example: showing parameters changed from default

```
SDM-9230>EP
EXTENDED PARAMETERS
GLOBAL> (DSPDEBUG) Enable DSP debug packets.....YES
GLOBAL> (EXTENDEDALARM) Extended alarms.........YES
IP> (MULTIHOMEDTYPE) Multihomed type............DISABLED
SIP> (ALARMS) Log Sip Alarms....................ENABLE
```

To view a list of extended parameters in a particular subtype whose values have changed from the factory default:

- At the console command prompt, enter **EP** *subtype*

  where: *subtype* is one of the extended parameter subtypes: **BRG** (BRIDGE), **GLOBAL**, **GPS**, **IP**, **IPX**, **LAN**, **NAT**, **PORT**, **PU**, **PVC**, **SIP** or **VPORT**.

EP subtype example: showing parameters changed from default

```
SDM-9230>EP GLOBAL
EXTENDED PARAMETERS
GLOBAL> (DSPDEBUG) Enable DSP debug packets.....YES
GLOBAL> (EXTENDEDALARM) Extended alarms.........YES
```

For the **PORT**, **PU**, **PVC** and **VPORT** subtypes you can refine this list by entering the number of the specific port, PVC or voice channel you would like to inspect.

```
SDM-9230>EP PORT 101
EXTENDED PARAMETERS
PORT 101> (MARKDELAY) MARK delay................25
```

1.3.4 Setting an Extended Parameter Back to its Default Value

To return an extended parameter to its default factory value, enter the following at the console command prompt:

EP *subtype subtype_number parameter_name* **OFF**

where:

- *subtype* can be **BRG** (BRIDGE), **GLOBAL**, **GPS**, **IP**, **IPX**, **LAN**, **NAT**, **PORT**, **PU**, **PVC**, **SIP** or **VPORT**
- the *subtype_number* is required for the **LAN**, **PORT**, **PU**, **PVC** and **VPORT** subtypes only.

For example, enter the following to return the IP Extended parameter **MULTIHOMEDTYPE** parameter to its default factory value:

```
SDM-9230>EP IP MULTIHOMEDTYPE OFF
EXTENDED PARAMETERS
IP> MULTIHOMEDTYPE..........................
```

NOTE: An extended parameter is displayed only if its value has been changed from the default value. In the example above the **MULTIHOMEDTYPE** parameter is returned to its default value (**STANDARD**), therefore its value is no longer displayed. The next time you enter **EP** at the console command prompt, the **MULTIHOMEDTYPE** parameter will not be listed.

1.3.5 Viewing All Extended Parameters

To view a complete list of all available Extended Parameters, enter **EP ALL** at the console command prompt.

NOTE: The list of available extended parameters will vary depending on the NetPerformer model, its software options, current configuration and which interface cards have been installed.

EP/ALL example: SDM-9230 running V10.3.5 installed with Abis/Ater licensed software option, PowerCell voice transport mode, no PUs configured

```
POWERCELL_V10.3.5>EP ALL
EXTENDED PARAMETERS
BRIDGE>  (MODE)              Bridge mode
GLOBAL>  (ACCEPTTIMER)       Voice calls accept timer
GLOBAL>  (ACTACCESS)         Unit Technical Support Access
GLOBAL>  (ADJUSTCLKRECOV)    Adjust clock recovery on dual
interfaces
GLOBAL>  (ALWAYSWAITDIALTIMERAlways wait dial timer
GLOBAL>  (BCXRIPUPDTIMER)    BCX RIP update interval
GLOBAL>  (BRIQSIG1BYTECREF)  BRI QSIG 1 byte call ref values
GLOBAL>  (BRIQSIG3BYTESCHID) BRI QSIG 3 bytes long chan id IEs
GLOBAL>  (CAPTURESIZE)       Size of capture buffer (Kb)
GLOBAL>  (CCSDATACALLTIMER)  CCS data calling timer
GLOBAL>  (COPSPOOF)          COP spoofing enable
GLOBAL>  (CRROUTING)         CR routing type
GLOBAL>  (CSLECHO)           Display console echo
GLOBAL>  (CUTOFF)            Cut off
GLOBAL>  (DEBUGUDPSOCKET)    Debug UDP socket
GLOBAL>  (DIGINPUTLEVEL)     Digital input level offset
GLOBAL>  (DIGOUTPUTLEVEL)    Digital output level offset
GLOBAL>  (DISCONNECTTIMER)   Disconnect voice channel
GLOBAL>  (DSPDEBUG)          Enable DSP debug packets
GLOBAL>  (DSPINACTIVETIMER)  DSP timer for reload
GLOBAL>  (EMINPUTLEVEL)      E&M input level offset
GLOBAL>  (EMOUTPUTLEVEL)     E&M output level offset
GLOBAL>  (EMTESTGROUNDLEAD)  E&M Test ground all E-leads
GLOBAL>  (EXTENDEDALARM)     Extended alarms
GLOBAL>  (FRCHECKTIMER)      Frame Relay Check Timer
GLOBAL>  (FROVERIPPACKETIZATIUse cell packetization
GLOBAL>  (FXOINPUTLEVEL)     FXO input level offset
GLOBAL>  (FXOOUTPUTLEVEL)    FXO output level offset
GLOBAL>  (FXORINGOFFDELAY)   FXO Ring Off Delay
GLOBAL>  (FXSINPUTLEVEL)     FXS input level offset
GLOBAL>  (FXSONHOOKDETECT)   FXS onhook detection
GLOBAL>  (FXSOUTPUTLEVEL)    FXS output level offset
GLOBAL>  (HANGOVERTIME)      Hangover time
GLOBAL>  (IPRIPUPDTIMER)     IP RIP update interval
GLOBAL>  (IPXRIPUPDTIMER)    IPX RIP update interval
GLOBAL>  (IPXSAPUPDTIMER)    IPX SAP update interval
GLOBAL>  (JOURNALMAXBUFFER)  Enable maximum journal buffer size
GLOBAL>  (KEEPDSPLOCALCALL)  Keep DSP on local call
GLOBAL>  (KEEPPROFILEONSERESEKeep profile on SE reset
GLOBAL>  (LINKUPDATECOUNTER) Link update counter
```

```
GLOBAL>  (LINKUPDATETIMER)   Link update timer
GLOBAL>  (LOCALISDNSTATUS)   Local ISDN STATUS msgs management
GLOBAL>  (LOCALTIMER)        Voice calls local timer
GLOBAL>  (LOGALARMNODSP)     Log alarm on NO DSP error
GLOBAL>  (LOGVERSION)        Call log version
GLOBAL>  (MAXCHPERDSP)       Max channel per DSP for reload
GLOBAL>  (OSCILLATORSOURCE)  Oscillator source selector
GLOBAL>  (PROXYARP)          Proxy ARP
GLOBAL>  (PVCRDELAYINTERVAL) PVCR delay interval
GLOBAL>  (RESETPORTNODSP)    Reset port on NO DSP error
GLOBAL>  (RIPBCXV2ACKTIMER)  Ripbcx V2 ack timer
GLOBAL>  (SEBLASTFILTERLOW)  Set SE in Blast mode with filter low
GLOBAL>  (SEEVENTLOGENABLE)  Enable/Disable event log in the SE
GLOBAL>  (SEIFSAVEFULLMSGPOOLSEIF saves the MSG pool and restart
GLOBAL>  (SENDRENAMEFILE)    Rename file when retrieving
GLOBAL>  (SORTERTIMEOUTOVERIPFR over IP sorter timer
GLOBAL>  (STANDBYMODE)       Standby mode
GLOBAL>  (STANDBYNAME)       Standby unit name
GLOBAL>  (TAPCOUNT)          Tap count
GLOBAL>  (TELNETECHO)        Display telnet echo
GLOBAL>  (TEMPTHRESHOLD)     Temperature threshold (C)
GLOBAL>  (VTRLOOP)           Enable looping with VTR
GLOBAL>  (WATCHDSP)          Watch DSP behavior
GSM>     (BYPASSUDP)         Bypass UDP
GSM>     (DSPCOMP)           DSP compression
GSM>     (ETHTXOPT)          ETH TX optimized
GSM>     (FLOWCTLACCUMULATIONPackets to accumulate in congestion
situation
GSM>     (FROIPTXOPT)        FRoIP TX optimized
GSM>     (IDLEMARK)          Continuous autodetect IDLE MARK
GSM>     (IDLESTOP)          IDLE STOP functionality
GSM>     (INTFSTATEVALIDATIONInterface state validation
GSM>    (NBRXBUFFER)       Nb of buffer available to store DSP RX
packet
GSM>     (SIGBYPASSCR)       SIG Bypass CR
GSM>     (TRAFFICPRIO)       Traffic Prioritization
GSM>     (VOICEONLY)         Block all the data frame
IP>      (ARPCACHESIZE)      ARP cache size
IP>      (ARPCACHETTL)       ARP cache TTL
IP>      (ICMPREDIRECT)      icmp redirect
IP>      (LOSTROUTEALARM)    Lost route alarm
IP>      (MULTIHOMEDDELAY)   Multihomed Delay
IP>      (MULTIHOMEDTYPE)    Multihomed type
IP>      (RIPSENDHOSTADDR)   RIP send host address
IP>      (RIPSIMPLESPLIT)    RIP simple split enable
IPX>     (ADDPACING)         Add pacing enable
IPX>     (RIPMAXROUTE)       RIP max route
IPX>     (SAPMAXROUTE)       SAP max route
LAN>     (GSMRXTIMER)        GSM traffic RX processing timer
NAT>     (DNS)               dns binding entry timeout
NAT>     (FRAGMENT)          Fragment entry timeout
NAT>     (SEQUENCE)          Sequence entry timeout
PORT>    (BLOCSIZE)          Block size
PORT>    (CLOCKDELTA)        PASSTHRU tuning delta
PORT>    (CLOCKRECOVERY)     Clock Recovery
PORT>    (COPMODE)           COP mode
PORT>    (COST)              PVCR cost
```

```
PORT>    (DATAJITTERBUFFER)  Constant delay
PORT>    (DLESYN)            Enable
PORT>    (FASTTIMEOUT)       Fast NULL DATA enable
PORT>    (FLAGSHARING)       Flag sharing
PORT>    (FORWARDSPEED)      Forward speed
PORT>    (GSMTXQTHRESHOLD)   Tx queue GSM traffic threshold
PORT>    (HDLCMODE)          HDLC mode
PORT>    (IGNOREMODEMSIGNAL) Ignore FR modem signal
PORT>    (MARKDELAY)         MARK delay
PORT>    (MAXCOST)           Maximum cost
PORT>    (MINIMUMFIFO)      Set the tx/rx fifo to its minimal value
PORT>    (MODEMCALLCLEAR)    active=call clear
PORT>    (PACKDELAY)         PACK delay
PORT>    (REVERSEDATA)       Reverse Data for digital channel
PORT>    (TOD)               Transmit on demand enable
PORT>    (TXMAXDELAY)        TX Max delay
PORT>    (TXMAXFRAMESIZE)    TX Max frame size
PORT>    (TXQDATALEVEL)      Tx queue level for discarding data
PORT>    (TXQLOWLEVEL)       Tx queue low level threshold
PORT>    (TXQVOICELEVEL)     Tx queue level for discarding voice
PORT>    (ISDNRESTART)       Initialize/Restart B-channels
PORT>    (PRESENTATION)      ISDN ANI Presentation bit
PORT>    (R2I15TIMERDELAY)   R2 I15 timer delay (ms)
PVC>     (COST)              PVCR cost
PVC>     (FRAGMENT)          Fragmentation mode
PVC>     (IRFACTOR)          Information rate factor
PVC>     (MAXCOST)           MULTIPLEX Maximum cost
PVC>     (PACKDELAY)         PACK delay
PVC>     (PRIORITY)          Priority
PVC>     (PVCRFS)            PVCR Frame Size
PVC>     (TXONFRCHECKTIMER)  Frame transmitted on frchecktimer
PVC>     (TXQDATALEVEL)      Tx queue level for discarding data
PVC>     (TXQLOWLEVEL)       Tx queue low level threshold
PVC>     (TXQVOICELEVEL)     Tx queue level for discarding voice
PVC>     (UDPCHECKSUM)       Enable UDP checksum
VPORT>   (ANSWERDELAY)       Answer delay (ms)
VPORT>   (ANSWERMODE)        Answer mode
VPORT>   (FAXONLY)           FAX ONLY enable
VPORT>   (FORCEDFALLBACK)    Rate fallback
VPORT>   (ISDNASCIICALLINGNB)Ascii characters in Calling Nb IE
VPORT>   (ISDNOVERLAPSENDING)ISDN Overlap Sending
VPORT>   (MFSENDWINKONST23P) MF Send wink on ST2P/ST3P reception
VPORT>   (POUNDSIGNPASS)     Send pound sign to remote
VPORT>   (R2ACCEPTI11TOI14)  R2 Accept I-11 to I-14 as digits
VPORT>   (R2EARLYANI)        R2 Early Ani Request
VPORT>   (R2FORCEDDISC)      Support R2 forced disconnect
VPORT>   (R2GRPBSWTOGRPIA)   R2 Group B Switch to Group I/A
VPORT>   (R2GRPCSWTOGRPIA)   R2 Group C Switch to Group I/A
VPORT>   (R2NEXTANIDIGIT)    R2 Next ANI Digit
VPORT>   (R2REMOTEANICATEGORYR2 Enable Remote ANI Category
VPORT>   (R2REMOTEGRPB)      R2 Enable Remote Group B
VPORT>   (R2RESTARTANI)      R2 Restart ANI Sequence On Reentry to
ANI
VPORT>   (R2SENDI15)         R2 Send I-15
VPORT>   (STUENCRYPTION)     STU encryption support
VPORT>   (T30TRANSPARENTNSF) T30 transparent fax NSF packet
VPORT>   (V32RATESIGNALCODINGV.32 rate signal coding
```

1.4 Extended Parameter Reference Information

For specific information on what the extended parameters control and how to adjust them, refer to the following sections:

- "BRIDGE Extended Parameters" on page 2-1
- "GLOBAL Extended Parameters" on page 3-1
- "GPS Extended Parameters" on page 4-1
- "GSM Extended Parameters" on page 5-1
- "IP Extended Parameters" on page 5-1
- "IPX Extended Parameters" on page 6-1
- "LAN Extended Parameters" on page 7-1
- "NAT Extended Parameters" on page 8-1
- "PORT Extended Parameters" on page 9-1
- "PU Extended Parameters" on page 10-1
- "PVC Extended Parameters" on page 11-1
- "SIP Extended Parameters" on page 12-1
- "VPORT Extended Parameters" on page 13-1.

BRIDGE Extended Parameters

2.1 About the BRIDGE Extended Parameter

NOTE: The **BRG** (**BRIDGE**) extended parameter subtype is available on all NetPerformer products. It is used to fine-tune bridging operations for special applications involving legacy NetPerformer products.

To adjust the value of a BRIDGE extended parameter, enter:

EP BRIDGE *parameter_name parameter_value*

If you do not know the extended parameter name:

1. Enter **EP ?**
2. At the *Item* prompt, enter **BRG**. The list of all BRIDGE extended parameters is displayed (only one parameter for this subtype)
3. Enter a carriage return to select the current parameter choice
4. Enter a question mark (**?**) to view all valid values for this parameter
5. Enter the new value.

EP ?/BRG example

```
SDM-9230>EP ?
EXTENDED PARAMETERS
Item (BRG/GLOBAL/IP/IPX/LAN/NAT/PORT/PU/PVC/VPORT,def:BRG) ? BRG
CHOICE: MODE

Item (Current value:MODE) ? MODE
BRIDGE> (MODE) Bridge mode (def:NORMAL) ? ?
CHOICE: NORMAL  SPECIAL

BRIDGE> (MODE) Bridge mode
        (Default value:NORMAL, Current value:NORMAL) ? SPECIAL
```

The BRIDGE extended parameter subtype includes the following:

2.1.1 MODE

Bridge mode

Determines whether normal or special bridging will be performed on data from a Token-Ring LAN.

- Select **NORMAL** for a normal bridge setup. This is the default value.
- Select **SPECIAL** when the local MAC address must be equal to the MAC address of the end user device attached to the remote LAN.

NOTE: The **MODE** extended parameter subtype is used only on legacy NetPerformer products that support Token-Ring. Special bridging circumstances are quite rare.

Values: NORMAL, SPECIAL

Default: NORMAL

GLOBAL Extended Parameters

3.1 About the GLOBAL Extended Parameter Subtype

The **GLOBAL** extended parameter subtype is available on all NetPerformer products.

To adjust the value of a GLOBAL extended parameter, enter:

EP GLOBAL *parameter_name parameter_value*

If you do not know the extended parameter name:

1. Enter **EP ?**
2. At the *Item* prompt, enter **GLOBAL**. The list of all GLOBAL extended parameters is displayed
3. Enter the specific parameter name at the command line prompt
4. Enter a question mark (**?**) to view all valid values for this parameter
5. Enter the new value.

EP ?/GLOBAL example

```
SDM-9230>EP ?
EXTENDED PARAMETERS
Item (BRG/GLOBAL/IP/IPX/LAN/NAT/PORT/PVC/VPORT,def:BRG) ? GLOBAL
CHOICE: ACCEPTTIMER           ACTACCESS             ADJUSTCLKRECOV
       ALWAYSWAITDIALTIMER   BCXRIPUPDTIMER        BRIQSIG1BYTECREF
       BRIQSIG3BYTESCHID     CAPTURESIZE           CCSDATACALLTIMER
        COPSPOOF              CRROUTING             CSLECHO
        CUTOFF                DEBUGUDPSOCKET        DIGINPUTLEVEL
        DIGOUTPUTLEVEL        DISCONNECTTIMER       DSPDEBUG
        DSPINACTIVETIMER      EMINPUTLEVEL          EMOUTPUTLEVEL
        EMTESTGROUNDLEAD      EXTENDEDALARM         FRCHECKTIMER
        FROVERIPPACKETIZATION FXOINPUTLEVEL         FXOOUTPUTLEVEL
        FXORINGOFFDELAY       FXSINPUTLEVEL         FXSONHOOKDETECT
        FXSOUTPUTLEVEL        HANGOVERTIME          IPRIPUPDTIMER
        IPXRIPUPDTIMER        IPXSAPUPDTIMER        JOURNALACTIVE
        JOURNALMAXBUFFER      KEEPDSPLOCALCALL
KEEPPROFILEONSERESET
        LINKUPDATECOUNTER     LINKUPDATETIMER       LOCALISDNSTATUS
        LOCALTIMER            LOGALARMNODSP         LOGVERSION
       MAXCHPERDSP           PROXYARP             PVCRDELAYINTERVAL
       RESETPORTNODSP        RIPBCXV2ACKTIMER      SEBLASTFILTERLOW
        SEEVENTLOGENABLE      SEIFSAVEFULLMSGPOOL   SENDRENAMEFILE
        SORTERTIMEOUTOVERIP   STANDBYMODE           STANDBYNAME
        TAPCOUNT              TELNETECHO        TEMPTHRESHOLD
        VTRLOOP               WATCHDSP

Item (Current value:ACCEPTTIMER) ? ACTACCESS
GLOBAL> (ACTACCESS) Unit Technical Support Access (def:FULL) ? ?
CHOICE: FULL    CONSOLE DISABLE

GLOBAL> (ACTACCESS) Unit Technical Support Access
        (Default value:FULL, Current value:FULL) ? CONSOLE
```

The GLOBAL extended parameter subtype includes the following:

3.1.1 ACCEPTTIMER

Voice calls accept timer

Increases the QSIG T.310 timers to accommodate the extra time required for long distance voice call setup.

The ACCEPTTIMER is used at the destination of the NetPerformer-to-NetPerformer connection. It starts when the NetPerformer places a call to the PBX (or attached device). It stops when the PBX or device responds with a message.

NOTE: ACCEPTTIMER is used in digital signaling environments such as ISDN, QSIG, CAS, RBS and R2 on the SDM-9400 legacy product only. It does not affect the Transparent Signaling mode of operation (TRSP-ORIG and TRSP-ANSW).

Values: 10 - 15

Default: 15

3.1.2 ACTACCESS

Unit Technical Support Access

Permits restricting the way Memotec's Technical Support personnel can access the NetPerformer unit. This parameter can be set to:

- **FULL**: ACT access is fully enabled. Memotec's Technical Support can access the NetPerformer unit with a special service password. The advantage of this is that if you lose or forget the configured password for the unit, a means of bypassing that password and accessing the unit is still available to you. Contact Memotec's Technical Support to request that a bypass procedure be performed on your unit. The disadvantage of this setting is that if unauthorized users know the service password, these users will have full access to all units in your network. For this reason, we recommend that you change the **ACTACCESS** parameter setting from **FULL** to **CONSOLE** or **DISABLE** on all NetPerformer units in your network.
- **CONSOLE**: ACT access is enabled via the console only. Memotec's Technical Support can use the service password to access the NetPerformer unit only if direct access to that unit's console port is available. This setting provides greater security for your network than the **FULL** setting.
- **DISABLE**: ACT access is disabled. Memotec's Technical Support personnel will require the customer-configured password to access the unit. **This setting provides greater security for your network than the FULL setting**.

Caution: If ACTACCESS is set to **DISABLE**, Memotec's Technical Support cannot access your NetPerformer without entering the password you have programmed for the unit. **If you lose this password, the unit can no longer be managed and must be returned to Memotec for repair.** Therefore, if you intend to disable ACT Access, **first make sure that the configured password for the unit is saved in a known place**, or that you have a dependable, independent means of retrieving the password in case of loss.

Values: FULL, CONSOLE, DISABLE

Default: FULL

3.1.3 ADJUSTCLKRECOV

Adjust clock recovery on dual interfaces

Provides the ability to suppress automatic *Clock Recovery* adjustment on dual E1/T1 or BRI interfaces when the *Digital port clock source* parameter is set to a slot number.

- **ENABLE:** When the unit is restarted or the clock source changed, the clock received on one port of a dual interface card (E1/T1 or BRI) provides the clock for the other port. This is the default value.
- **DISABLE:** One port is the clock source and the other is not under all circumstances, including when the primary source fails. This permits independent configuration of the *Clock recovery* parameter on each port of the interface when the clock source is driven from this interface.

Values: DISABLE, ENABLE

Default: ENABLE

3.1.4 ALWAYSWAITDIALTIMER

Always wait dial timer

Controls whether the dial timer must expire before a MAP entry will be selected for connecting a call.

A compulsory delay before dialing may be required in applications where wild card entries are configured, that is, where the *Entry digits* parameter is set to a string of asterisks. In selecting a MAP entry, wild card entries are examined after all other entries. If the dial timer is not used, the unit will start dialing as soon as it finds the first MAP entry that matches the first digits entered by the user, and *before* the unit can examine the wild card MAP entries. However, in some networks with double MAP matching the wild card entry may provide the desired destination.

In the following example, the Dialing Plan includes three MAP entries starting with the digits **25**, and two wild card entries: **1******* and *******. The preferred destination is **MASTER** when the dialed digits do not exactly match the *Entry digits* of any MAP entry, including cases where more than 4 digits are dialed.

```
MAP 2537> Map type.............................NAME
MAP 2537> Entry digits.........................2537
MAP 2537> Destination name.....................SITE4
MAP 2537> Destination extension source.........MAP
MAP 2537> Destination extension................2537
MAP 2537> Extended digits source...............NONE
MAP 2537> Use SVC connection...................NO

MAP 2536> Map type.............................NAME
MAP 2536> Entry digits.........................2536
MAP 2536> Destination name.....................SITE4
MAP 2536> Destination extension source.........HUNT
MAP 2536> Hunt group...........................A
MAP 2536> Extended digits source...............NONE
MAP 2536> Use SVC connection...................NO

MAP 2534> Map type.............................NAME
MAP 2534> Entry digits.........................2534
MAP 2534> Destination name.....................SITE13
MAP 2534> Destination extension source.........MAP
MAP 2534> Destination extension................2534
MAP 2534> Extended digits source...............NONE
MAP 2534> Use SVC connection...................NO

MAP 1******> Map type..........................NAME
MAP 1******> Entry digits......................1******
MAP 1******> Destination name..................MASTER
MAP 1******> Destination extension source.......HUNT
MAP 1******> Hunt group........................A
MAP 1******> Extended digits source.............USER
MAP 1******> Number of user extended digits.....4
MAP 1******> Use SVC connection................NO

MAP *******> Map type..........................NAME
MAP *******> Entry digits......................*******
MAP *******> Destination name..................MASTER
MAP *******> Destination extension source.......HUNT
MAP *******> Hunt group........................A
MAP *******> Extended digits source.............NONE
MAP *******> Use SVC connection................NO
```

In this application, if the user dials **2534111**, MAP entry **2534** will be selected after the 4th digit dialed, and a call to **SITE13** will be made *before* the unit sees the wild card entry **********, which provides the desired destination for this call. To ensure that the unit has enough time to examine and select the wild card entry, it must wait for the dial timer to expire *before* it starts the call connect procedure.

- If this is the required scenario for your application, set **ALWAYSWAITDIAL-TIMER** to **YES**.
- If **ALWAYSWAITDIALTIMER** is left at its default value, **NO**, the first match to be found will be the one that is selected, e.g. **2534** in the example above.

Values: NO, YES

Default: NO

3.1.5 BCXRIPUPDTIMER

BCX RIP update interval

Specifies the duration of time, in seconds, between each update of RIP frames on the routing table of all NetPerformer PowerCell destinations. This routing table is displayed using the Display Destination Table (DD) console command.

Values: 20 - 120

Default: 30

3.1.6 BRIQSIG1BYTECREF

BRI QSIG 1 byte call ref values

Determines the size of call reference values for ISDN-BRI QSIG messages. By default, 2 bytes are used (**DISABLE** value). To reduce the size of call reference values to 1 byte, set **BRIQSIG1BYTECREF** to **ENABLE**.

Values: DISABLE, ENABLE

Default: DISABLE

3.1.7 BRIQSIG3BYTESCHID

BRI QSIG 3 bytes long chan id IEs

Determines the size of channel ID information elements for ISDN-BRI QSIG transmissions, excluding the bytes required for the information element number and the content length. By default, 2 bytes are used (**DISABLE** value). To enlarge the format to that of ISDN-PRI QSIG transmissions, or 3 bytes, set **BRIQSIB3BYTESCHID** to **ENABLE**.

Values: DISABLE, ENABLE

Default: DISABLE

3.1.8 CAPTURESIZE

Size of capture buffer (Kb)

Determines the size of the buffer used for the traffic capture commands: Setup Capture (**SC**), Start Capture (**STC**), View Capture (**VC**) and End Capture (**EC**). Enter the maximum buffer size required, in bytes.

Caution: If you change the value of CAPTURESIZE, make sure you execute the Setup Capture (SC) command immediately afterward. Otherwise, the traffic capture buffer may take up too much of the allocated memory to allow for operations such as file download.

Values: 131072 - 4194304

Default: 131072

3.1.9 CCSDATACALLTIMER

CCS data calling timer

Controls the length of time, in seconds, allotted for establishment of an ISDN data call before the call is timed out. By default, **5** seconds are allotted. This can be increased to a maximum of **50** seconds.

Values: 5 - 50

Default: 5

3.1.10 CCTHRESH

Center clipper threshold

> **NOTE:** This parameter is listed only on a NetPerformer unit that is running software version 10.2.3 R11 or earlier.

One of the five extended parameters for fine tuning the echo canceller to control double talk clipping: **CCTHRESH**, **CENTERCLIPPER**, **CUTOFF**, **HANGOVERTIME** and **TAPCOUNT**.

The **CCTHRESH** extended parameter controls the center clipper threshold. This threshold is related to the output power and in particular, the difference in dB between the residual error power and the output power. Its value should be slightly higher than the residual echo power.

- If **CCTHRESH** is set too low the residual echo will be heard. If it is set too high, background noise clipping may occur.
- Trial and error is probably the quickest way to determine an acceptable **CCTHRESH** level if the default value is inadequate for the application. In live applications the **CCTHRESH** parameter has been set as low as **100** with no echo problem.

Values: 0000 - 7FFF

Default: 1000

3.1.11 CENTERCLIPPER

Center clipper state

> **NOTE:** This parameter is listed only on a NetPerformer unit that is running software version 10.2.3 R11 or earlier.

One of the five extended parameters for fine tuning the echo canceller to control double talk clipping: **CCTHRESH**, **CENTERCLIPPER**, **CUTOFF**, **HANGOVERTIME** and **TAPCOUNT**.

The adaptive filter of the echo canceller cannot simulate the frequency response of the echo path exactly. This results in the presence of a residual echo.

- When **CENTERCLIPPER** is set to **ENABLE** (the default value), the center clipper suppresses this residual echo by completely blocking it. This process is also referred to as non-linear processing (NLP). This is the usual setting for a *single-talk* scenario.
- If you set **CENTERCLIPPER** to **DISABLE**, it will not block the residual echo (*doubletalk*).

Values: DISABLE, ENABLE

Default: ENABLE

3.1.12 COPSPOOF

COP spoofing enable

NOTE: This parameter is not available on a NetPerformer unit operating in SIP VoIP voice transport mode (global parameter *Voice transport method* set to **SIP VoIP**).

COP Spoofing is used to reduce retransmissions on links that are subject to delays, for example, in satellite and Frame Relay networks. It applies to the COP protocol only.

The **COPSPOOF** parameter determines whether COP Spoofing will be used for all COP ports on this unit. If **COPSPOOF** is set to **YES**, the NetPerformer evaluates the control field of each frame and decides whether to transmit the frame. In this way, only certain frame types are retransmitted, depending on how the *COP spoof type* parameter is configured (see Table 3-2). Also, the transmission of a series of identical frames is blocked.

Values: NO, YES

Default: NO

When COP Spoofing is enabled, the following parameters are added to the configuration of a COP port (using **SETUP/PORT** or **SETUP/SLOT/CHANNEL**).

```
BOSTON>SE
SETUP
Item (BRIDGE/CALLER ID/CLASS/CUSTOM/FILTER/GLOBAL/HUNT/IP/IPX/MAP/
PHONE/
PORT/PU/PPPOE/PPPUSER/PVC/REDUNDANCY/SCHEDULE/SLOT/USER/VLAN,
def:BRIDGE) ? PORT
```

```
Port type (DATA/VOICE,def:DATA) ? DATA
Port number (CSL/1/2/3/4,def:1) ?
PORT #1> Protocol (def:COP) ? COP
PORT #1> COP Spoof type (def:NONE) ? TYPE1
PORT #1> COP Spoof Timer 1 (msec) (1-5000,def:1000) ? 1000
PORT #1> COP Spoof Timer 2 (msec) (0-100,def:100) ? 100
PORT #1> COP Spoof Timer 3 (msec) (1-5000,def:1000) ? 1000
PORT #1> COP Spoof Timer 4 (msec) (100-5000,def:100) ? 100
PORT #1> COP Spoof EOT max retry (1-255,def:8) ? 8
...
```

- *COP Spoof type*: Determines the type of COP Spoofing that will be used. The value **NONE** disables COP Spoofing on this port. **TYPE1**, **TYPE2** and **TYPE3** are distinguished by different control characters and hexadecimal codes used for the COP control sequences, as summarized in the table below:

SDL Term	Data Link Control Sequence	Control Characters & Hexadecimal Codes for each TYPE:					
		TYPE 1 (e.g. FTS-2)		TYPE 2 (e.g. DT-48)		TYPE 3 (e.g. JCA)	
ENQ Seq	Selection sequence	SA, UA, ENQ	xx.xx.85	SA, UA, ENQ	xx.xx.85	ENQ	2D
ENQ_ENQ	Response enquiry	DLE, ENQ	10.85	ENQ, ENQ	85.85	ENQ	2D
STX_DATA	Start of text	DLE, STX	10.02	STX	02	STX	02
EOT_EOT	End of transmission	EOT, EOT	04.04	EOT, EOT	04.04	EOT	37
		DLE, EOT	10.04			DLE, EOT	10.37
DLE_ACK/ DLE_NAK	Alternating affirmative acknowledgment	DLE, ACK / DLE, NAK	10.86/ 10.15	DLE, ACK / DLE, NAK	10.86/ 10.15	ACK0/ ACK1	10.70/ 10.61
NAK	Negative acknowledgment	(n/a)	(n/a)	(n/a)	(n/a)	NAK	3D
ENQ Seq	Selection sequence	SA, UA, ENQ	xx.xx.85	SA, UA, ENQ	xx.xx.85	ENQ	2D

Table 2COP Spoofing Types

- *COP Spoof Timer 1 to 4 (msec):* Determines the duration in milliseconds of the four COP Spoof timers, **T1** to **T4**:

  - **T1:** The first timer starts when a selection (**ENQ**) sequence is sent from the local side. If T1 has not expired when the remote COP driver receives the **ENQ** sequence, the **ENQ** sequence will be transmitted to the remote station. All subsequent **ENQ** sequences will be discarded until T1 has expired. The timer is reset when an acknowledgment of the **ENQ** sequence is received from the remote FRAD.

  T1 prevents **ENQ** sequences from going to the remote side without possibility of acknowledgment. It compensates for overall network delays, since the COP driver discards all retransmissions of the **ENQ** sequence from the terminal while T1 is running.

  T1 must be longer than the delay on the link, and should take into account the processing delay that can occur at the remote station. To view the link delay, execute the **PORT** option of the Display States (**DS**) command. The delay to the remote unit, in milliseconds, is displayed next to the *State* statistic when the port is in **DATA** mode. The round trip link delay is approximately twice this figure.

Values: 1 - 5000

Default: 1000

  - **T2:** The second timer starts when an alternating affirmative acknowledgment (**DLE_ACK**) is received from the remote side in response to an **ENQ**. If an **ENQ** sequence is received while T2 is still running, it will be discarded. Thus T2 serves to discard any received messages that cross with a transmitted message.

NOTE: T2 is much shorter than T1, but must be long enough to let the **DLE_ACK** reach its destination, taking into account the propagation delay on the link.

Values: **0 - 100**

Default: 100

  - **T3:** The third timer starts when a text frame is sent from the local side. While it is running, all subsequent response enquiries (**ENQ_ENQ**) are discarded, which ensures uninterrupted transmission of the text block. T3 helps compensate for overall network delays, since the COP driver discards all response enquiries until a reply to the text block has safely arrived from the remote station. It is reset when an acknowledgment of the text block is received from the remote FRAD.

NOTE: T3 must be greater than the delay on the link. Since a new T3 timer is started with each text frame, you do not need to account for the length of the text when setting the timer value.

Values: **1 - 5000**

Default: 1000

- **T4:** The fourth timer starts when an end of transmission sequence (**EOT_EOT**) is sent to the remote FRAD. If no acknowledgment is received from the remote side for the duration of T4, the local side retransmits the **EOT** sequence and restarts timer T4. If a COP internal acknowledgment is received, T4 is cancelled.

T4 functions as a receive timeout to monitor the internal reply packet to an **EOT** sequence from the remote FRAD. T4 ensures that the **EOT_EOT** arrives at the remote side, and prevents disconnection from only one side.

Values: **100 - 5000**

Default: 100

- *COP Spoof EOT max retry:* Determines the maximum number of times that an **EOT** sequence can be retransmitted from the local side when no acknowledgment is received.

Values: 1 - 255

Default: 8

3.1.13 CRROUTING

CR routing type

Determines whether this NetPerformer unit transmits PowerCell routing table updates to other units. These updates take place via PVCR links or the unit backplane. Select **STANDARD** to transmit routing table updates, or **NONE** to prevent transmission.

Values: STANDARD, NONE

Default: STANDARD

3.1.14 CSLECHO

Display console echo

Authorizes echo mode for a direct console connection. Select **ECHOON** to turn echo on, or **ECHOOFF** to turn echo off.

Values: ECHOON, ECHOOFF

Default: ECHOON

3.1.15 CUTOFF

Cut off

One of the five extended parameters for fine tuning the echo canceller to control double talk clipping: **CCTHRESH**, **CENTERCLIPPER**, **CUTOFF**, **HANGOVERTIME** and **TAPCOUNT**.

When very little power is going out to the phone, for example, no one is talking at the far end, there is no echo and no need to update the filter taps. The **CUTOFF** parameter determines the threshold at which this condition will occur. **This parameter should be left at its default value.**

Values: 0000 - 7FFF

Default: 7FFF

3.1.16 DEBUGUDPSOCKET

Debug UDP socket

Controls a debugging procedure that was developed to prevent the UDP socket pool from going empty when SNMP is continuously polling the unit.

Caution: This parameter is intended for the use of NetPerformer Technical Support personnel only. Changing the value of DEBUGUDPSOCKET can have serious repercussions for your network.

Values: NO, YES

Default: NO

3.1.17 DIGINPUTLEVEL

Digital input level offset

Configures the input level offset on a digital voice interface, in dB. The input level offset is added to the value of the *Local inbound voice level (db)* parameter on reception at a digital voice interface.

NOTE: You can also set this parameter to **OFF**, which is equivalent to an input level offset of 0 dB.

This parameter is one of the *Auto Level Adjustment* parameters which enable automatic adjustment of inbound and outbound voice levels between the NetPerformer and the

attached voice equipment (phone, PBX, etc.) when one unit is running V8.0.x or higher, and the other is running an earlier NetPerformer version (V7.x.x).

If you are running a NetPerformer with V8.0.x or higher together with an SDM-9350 or SDM-9400 equipped with VFC-03 cards in a switched voice call environment (any-to-any voice interface), you will probably find that the voice levels need to be adjusted.

NOTE: If you use Auto Level Adjustment, you do not need to change the values of the *Local inbound voice level (db)* and *Local outbound voice level (db)* digital voice channel parameters from their default values.

Values: -22, -21, -20, -19, -18, -17, -16, -15, -14, -13, -12, -11, -10, -9, -8, -7, -6, -5, -4, -3, -2, -1, 0, 1, 2, 3, 4, 5, 6

Default: 0

3.1.18 DIGOUTPUTLEVEL

Digital output level offset

Configures the output level offset on a digital voice interface, in dB. The output level offset is added to the value of the *Local outbound voice level (db)* parameter on transmission from a digital voice interface.

NOTE: You can also set this parameter to **OFF**, which is equivalent to an output level offset of 0 dB.

This parameter is one of the *Auto Level Adjustment* parameters which enable automatic adjustment of inbound and outbound voice levels between the NetPerformer and the attached voice equipment (phone, PBX, etc.), when one unit is running V8.0.x or higher, and the other is running an earlier NetPerformer version (V7.x.x).

If you are running a NetPerformer with V8.0.x or higher together with an SDM-9350 or SDM-9400 equipped with VFC-03 cards in a switched voice call environment (any-to-any voice interface), you will probably find that the voice levels need to be adjusted.

NOTE: If you use Auto Level Adjustment, you do not need to change the values of the *Local inbound voice level (db)* and *Local outbound voice level (db)* digital voice channel parameters from their default values.

Values: -22, -21, -20, -19, -18, -17, -16, -15, -14, -13, -12, -11, -10, -9, -8, -7, -6, -5, -4, -3, -2, -1, 0, 1, 2, 3, 4, 5, 6

Default: 0

3.1.19 DISCONNECTTIMER

Disconnect voice channel

A timer, in seconds, which allows a voice channel in **DISCONNECT** state to be set back to **IDLE** state if the **ON HOOK** condition is not reported to the NetPerformer baseboard. Use the **DISCONNECTTIMER** to release a voice channel that has become stuck in the **DISCONNECT** state. Once the timer expires, if the voice channel is not yet idle it is forced to the **IDLE** state.

When the **DISCONNECTTIMER** is set to a non-zero value, the voice channel goes into **DISCONNECT** state after a **DISCONNECT INDICATION** is received, and is set to **IDLE** after the timer expires.

The default value is **0** seconds. At this setting, the voice channel stays in **DISCONNECT** state indefinitely after a **DISCONNECT INDICATION** is received from the remote site.

NOTE: **In most cases this extended parameter should not be used, as an ON HOOK condition is normally reported to the NetPerformer baseboard.** Set the **DISCONNECTTIMER** to a non-zero value only if a voice channel does not go back to **IDLE** after a **DISCONNECT INDICATION** is received from the remote site.

Values: 0 - 255

Default: 0

3.1.20 DSPDEBUG

Enable DSP debug packets

The **DSPDEBUG** extended parameter is used for debugging purposes or in special applications only.

Caution: Do not change the value of this parameter unless advised to do so by NetPerformer Technical Support.

Values: NO, YES

Default: NO

3.1.21 DSPINACTIVETIMER

DSP timer for reload

Controls the delay, in milliseconds, before the DSP will reload automatically. This parameter is for the use of NetPerformer Technical Support in troubleshooting cases where the DSP responds in an unusual way.

Caution: Do not change **DSPINACTIVETIMER** from its default setting, **5000**, as this may negatively affect DSP behavior on your unit.

Values: 1000 - 30000

Default: 5000

3.1.22 EMINPUTLEVEL

E&M input level offset

Configures the input level offset on an E&M interface, in dB. The input level offset is added to the value of the *Local inbound voice level (db)* parameter on reception at an E&M interface.

NOTE: You can also set this parameter to **OFF**, which is equivalent to an input level offset of 0 dB.

This parameter is one of the *Auto Level Adjustment* parameters which enable automatic adjustment of inbound and outbound voice levels between the NetPerformer and the attached voice equipment (phone, PBX, etc.), when one unit is running V8.0.x or higher, and the other is running an earlier NetPerformer version (V7.x.x).

If you are running a NetPerformer with V8.0.x or higher together with an SDM-9350 or SDM-9400 equipped with VFC-03 cards in a switched voice call environment (any-to-any voice interface), you will probably find that the voice levels need to be adjusted.

NOTE: If you use Auto Level Adjustment, you do not need to change the values of the *Local inbound voice level (db)* and *Local outbound voice level (db)* parameters from their default values.

Values: -22, -21, -20, -19, -18, -17, -16, -15, -14, -13, -12, -11, -10, -9, -8, -7, -6, -5, -4, -3, -2, -1, 0, 1, 2, 3, 4, 5, 6

Default: 0

3.1.23 EMOUTPUTLEVEL

E&M output level offset

Configures the output level offset on an E&M interface, in dB. The output level offset is added to the value of the *Local outbound voice level (db)* parameter on transmission from

an E&M interface.

NOTE: You can also set this parameter to **OFF**, which is equivalent to an output level offset of 5 dB.

This parameter is one of the *Auto Level Adjustment* parameters which enable automatic adjustment of inbound and outbound voice levels between the NetPerformer and the attached voice equipment (phone, PBX, etc.), when one unit is running V8.0.x or higher, and the other is running an earlier NetPerformer version (V7.x.x).

If you are running a NetPerformer with V8.0.x or higher together with an SDM-9350 or SDM-9400 equipped with VFC-03 cards in a switched voice call environment (any-to-any voice interface), you will probably find that the voice levels need to be adjusted.

NOTE: If you use Auto Level Adjustment, you do not need to change the values of the *Local inbound voice level (db)* and *Local outbound voice level (db)* parameters from their default values.

Values: -22, -21, -20, -19, -18, -17, -16, -15, -14, -13, -12, -11, -10, -9, -8, -7, -6, -5, -4, -3, -2, -1, 0, 1, 2, 3, 4, 5, 6

Default: 5

3.1.24 EMTESTGROUNDLEAD

E&M Test ground all E-leads

Performs a test of the E&M E-leads. When **EMTESTGROUNDLEAD** is enabled, all the E-leads of all E&M interfaces in the unit are grounded. **This extended parameter is for the use of NetPerformer Technical Support only.**

Caution: Do not change **EMTESTGROUNDLEAD** from its default setting, **DISABLE**, as the unit will be unable to complete voice calls using its E&M interfaces.

Values: DISABLE, ENABLE

Default: DISABLE

3.1.25 EXTENDEDALARM

Extended alarms

Permits a more detailed display of alarm situations for analysis by NetPerformer Technical Support personnel. For example, instead of a single message indicating the failure of a PVC:

```
SDM-9230>DA
DISPLAY ALARMS
Time> MON   2003/11/17 13:34:03
Alarm>    PVC 12 DOWN (CHICAGO)            MON   2003/11/17 10:21:49
```

If EXTENDEDALARM is set to **YES**, the full details of the problem leading to the PVC failure will be displayed:

```
SDM-9230>DA
DISPLAY ALARMS
Time> MON   2003/11/17 10:26:23
Alarm>    PVC 12 DOWN (CHICAGO)            MON   2003/11/17 10:21:49
Alarm>    PVC 12 LNKCTL HANG (reason)      MON   2003/11/17 10:21:45
Alarm>    PVC 12 PVCR DOWN (reason)        MON   2003/11/17 10:21:38
```

Values: NO, YES

Default: NO

3.1.26 FRCHECKTIMER

Frame Relay Check Timer

Specifies the duration, in milliseconds, between updates of the check timer. The lower the value, the more often slow bit rate, high priority traffic such as voice traffic can be transmitted. This results in reduced delays between voice cells on networks that integrate constant, low bit rate traffic and bursty, high bit rate traffic.

The default **FRCHECKTIMER** value is **20** ms, which is ideal for:

- Frame Relay networks based on switches with a very low capacity for storing frames. Reducing the amount of characters helps avoid the loss of packets, as the bursting capacity of the Frame Relay network is not fully utilized.
- Bursty traffic mixed with a constant bit rate traffic, e.g. networks that integrate LAN + Voice, LAN + Passthrough, High speed WAN + Voice, etc. When the **FRCHECKTIMER** is has a low value, the maximum delay between voice cells is significantly reduced.

You can raise the **FRCHECKTIMER** value; however, if the **FRCHECKTIMER** is set too high:

- The number of characters in the switch may approach the capacity allowed by the CIR and BIR. This means that the capacity of the switch will be fully used.
- The delay between voice cells will be expanded dramatically by a sudden burst of LAN traffic. If the LAN traffic is kept steady (without bursting) the delay between voice cells will remain at normal interframe levels.

Values: 1 - 250

Default: Base unit: 20

3.1.27 FROVERIPPACKETIZATION

Use cell packetization

Controls whether the *Cell Packetization* feature is operative on PVCR over IP connections on this unit. By default, Cell Packetization is active on all connections (**FROVERIPPACKETIZATION** set to **YES**). In some applications Cell Packetization should be disabled on PVCRoIP connections to reduce transmission delays. To do this, set **FROVERIPPACKETIZATION** to **NO**.

Values: NO, YES

Default: YES

3.1.28 FXOINPUTLEVEL

FXO input level offset

Determines the input level offset on an FXO interface. The input level offset is a dB value that is added to the *Local inbound voice level* during reception on an FXO interface.

NOTE: You can also set this parameter to **OFF**, which is equivalent to an input level offset of 0 dB.

This parameter is one of the *Auto Level Adjustment* parameters, which enable automatic adjustment of inbound and outbound voice levels between the NetPerformer and the attached voice equipment (phone, PBX, etc.), when one unit is running V8.0.x or higher, and another is running an earlier NetPerformer version (V7.x.x).

If you are running V8.0.x or higher together with an SDM-9350 or SDM-9400 equipped with VFC-03 cards in a switched voice call environment (any-to-any voice interface), you will probably find that the voice levels need to be adjusted.

NOTE: If you use Auto Level Adjustment, you do not need to change the values of the *Local inbound voice level* and *Local outbound voice level* parameters from their default values.

Values: -22, -21, -20, -19, -18, -17, -16, -15, -14, -13, -12, -11, -10, -9, -8, -7, -6, -5, -4, -3, -2, -1, 0, 1, 2, 3, 4, 5, 6

Default: 0

3.1.29 FXOOUTPUTLEVEL

FXO output level offset

Determines the output level offset on an FXO interface. The output level offset is a dB value that is added to the *Local outbound voice level* during transmission on an FXO interface.

NOTE: You can also set this parameter to **OFF**, which is equivalent to an output level offset of 5 dB.

This parameter is one of the *Auto Level Adjustment* parameters, which enable automatic adjustment of inbound and outbound voice levels between the NetPerformer and the attached voice equipment (phone, PBX, etc.), when one unit is running V8.0.x or higher, and another is running an earlier NetPerformer version (V7.x.x).

If you are running V8.0.x or higher together with an SDM-9350 or SDM-9400 equipped with VFC-03 cards in a switched voice call environment (any-to-any voice interface), you will probably find that the voice levels need to be adjusted.

NOTE: If you use Auto Level Adjustment, you do not need to change the values of the *Local inbound voice level* and *Local outbound voice level* parameters from their default values.

Values: -22, -21, -20, -19, -18, -17, -16, -15, -14, -13, -12, -11, -10, -9, -8, -7, -6, -5, -4, -3, -2, -1, 0, 1, 2, 3, 4, 5, 6

Default: 5

3.1.30 FXORINGOFFDELAY

FXO Ring Off Delay

Determines the delay, in milliseconds, that must expire before the unit can confirm that the ring on an FXO interface has terminated.

Values: 0 - 65535

Default: 1000

3.1.31 FXSINPUTLEVEL

FXS input level offset

Determines the input level offset on an FXS interface. The input level offset is a dB value that is added to the *Local inbound voice level* during reception on an FXS interface.

NOTE: You can also set this parameter to **OFF**, which is equivalent to an input level

offset of 0 dB.

This parameter is one of the *Auto Level Adjustment* parameters, which enable automatic adjustment of inbound and outbound voice levels between the NetPerformer and the attached voice equipment (phone, PBX, etc.), when one unit is running V8.0.x or higher, and another is running an earlier NetPerformer version (V7.x.x).

If you are running V8.0.x or higher together with an SDM-9350 or SDM-9400 equipped with VFC-03 cards in a switched voice call environment (any-to-any voice interface), you will probably find that the voice levels need to be adjusted.

NOTE: If you use Auto Level Adjustment, you do not need to change the values of the *Local inbound voice level* and *Local outbound voice level* parameters from their default values.

Values: -22, -21, -20, -19, -18, -17, -16, -15, -14, -13, -12, -11, -10, -9, -8, -7, -6, -5, -4, -3, -2, -1, 0, 1, 2, 3, 4, 5, 6

Default: 0

3.1.32 FXSONHOOKDETECT

FXS onhook detection

Sets the delay, in milliseconds, that will transpire between the time an FXS voice channel goes **ON HOOK** and the time the On Hook condition is detected. This can be used to reduce the debounce time for On Hook detection, particularly when the **FLASH HOOK** telephone function is required.

NOTE: On some telephones with the **FLASH HOOK** function, the On Hook condition may not last long enough to be detected. If this occurs, **reduce the detection time by selecting a lower FXSONHOOKDETECT value**.

Values: 80 - 1000

Default: 500

3.1.33 FXSOUTPUTLEVEL

FXS output level offset

Determines the output level offset on an FXS interface. The output level offset is a dB value that is added to the *Local outbound voice level* during reception on an FXS interface.

NOTE: You can also set this parameter to **OFF**, which is equivalent to an output level offset of 5 dB.

This parameter is one of the *Auto Level Adjustment* parameters, which enable automatic adjustment of inbound and outbound voice levels between the NetPerformer and the attached voice equipment (phone, PBX, etc.), when one unit is running V8.0.x or higher, and another is running an earlier NetPerformer version (V7.x.x).

If you are running V8.0.x or higher together with an SDM-9350 or SDM-9400 equipped with VFC-03 cards in a switched voice call environment (any-to-any voice interface), you will probably find that the voice levels need to be adjusted.

NOTE: If you use Auto Level Adjustment, you do not need to change the values of the *Local inbound voice level* and *Local outbound voice level* parameters from their default values.

Values: -22, -21, -20, -19, -18, -17, -16, -15, -14, -13, -12, -11, -10, -9, -8, -7, -6, -5, -4, -3, -2, -1, 0, 1, 2, 3, 4, 5, 6

Default: 5

3.1.34 HANGOVERTIME

Hangover time

NOTE: One of two extended parameters for fine tuning the echo canceller to control double talk clipping (see also "TAPCOUNT" on page 3-31).

The **HANGOVERTIME** parameter extends the *Double Talk* condition in cases of very short *Single Talk*. This prevents toggling in and out of Single Talk too quickly. Set **HANGOVERTIME** to the hexadecimal extension of the Double Talk condition.

- If the **HANGOVERTIME** is too long, a residual echo may be heard. If it is too short, the filter may diverge and echo will result.
- In most circumstances, there is no need to change this parameter from its default value.

Values: 0000 - 7FFF

Default: 0070

3.1.35 IPRIPUPDTIMER

IP RIP update interval

Specifies the duration of time, in seconds, between RIP updates for IP routing.

Values: 20 - 120

Default: 30

3.1.36 IPXRIPUPDTIMER

IPX RIP update interval

Specifies the duration of time, in seconds, between RIP updates for IPX routing.

Values: 20 - 120

Default: 60

3.1.37 IPXSAPUPDTIMER

IPX SAP update interval

Specifies the duration of time, in seconds, between SAP updates for IPX routing.

Values: 20 - 120

Default: 60

3.1.38 JOURNALACTIVE

Journal active

NOTE: This parameter is available in NetPerformer V10.4.0 R04 and higher.

JOURNALACTIVE controls whether entries will be logged in the configuration journal (**JOURNAL.TXT**). By default, the configuration journal is active (**YES**). Set to **NO** to prevent further entries from being logged to the journal file.

NOTE: Under the **NO** setting, journal entries will nevertheless be logged for **UNIT RESTART** and **CURRENT CONFIG FILE USED**.

Values: NO, YES

Default: YES

3.1.39 JOURNALMAXBUFFER

Enable maximum journal buffer size

The **JOURNALMAXBUFFER** extended parameter is used for debugging purposes or in special applications only.

Caution: Do not change the value of this parameter unless advised to do so by NetPerformer Technical Support.

Values: DISABLE, ENABLE

Default: DISABLE

3.1.40 KEEPDSPLOCALCALL

Keep DSP on local call

NOTE: This parameter is not available on a NetPerformer unit operating in SIP VoIP voice transport mode (global parameter *Voice transport method* set to **SIP VoIP**).

The **KEEPDSPLOCALCALL** extended parameter is used for debugging purposes or in special applications only.

Caution: Do not change the value of this parameter unless advised to do so by NetPerformer Technical Support.

Values: NO, YES

Default: NO

3.1.41 KEEPPROFILEONSERESET

Keep profile on SE reset

This parameter is used to prevent some parameter profiles from being reset with the **SE XXX RESET** or **EP XXX RESET** command.

Caution: This extended parameter is for the use of Memotec Inc. qualified personnel only. **Do not change its value unless you are specifically advised to do so by NetPerformer Technical Support.**

Values: From 0 to 32 characters: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, , (comma)

Default: undefined

3.1.42 LINKUPDATECOUNTER

Link update counter

Determines the maximum number of PVC connections the NetPerformer will check in one link update cycle to ensure that their destinations are still accessible. For example, if 130 PVCs are configured on the unit, you could set the **LINKUPDATECOUNTER** to **75** to check only the first 75 PVCs. This reduces the amount of time required to execute the link update cycle.

NOTE: The remaining PVCs are checked in the next link update cycle, which is scheduled with the **LINKUPDATETIMER**, described below.

Use this parameter in conjunction with the **LINKUPDATETIMER** global extended parameter and the **MULTIHOMEDDELAY** IP extended parameter to avoid choppy voice transmission when many PVCs are configured. Fine tuning of these three parameters will allow the NetPerformer processor to perform more tasks in a given time period.

Values: 1 - 100

Default: 10

3.1.43 LINKUPDATETIMER

Link update timer

When a subset of PVC connections is checked during the first link update cycle, this parameter determines the delay, in milliseconds, before the next link update cycle will be executed. The remaining PVC connections are checked during this second cycle.

Use this parameter in conjunction with the **LINKUPDATECOUNTER** global extended parameter and the **MULTIHOMEDDELAY** IP extended parameter to avoid choppy voice transmission when many PVCs are configured.

Values: 1 - 100

Default: 10

3.1.44 LOCALISDNSTATUS

Local ISDN STATUS msgs management

Determines how **STATUS** messages received on an ISDN link are managed.

- **DISABLE:** When **STATUS** messages are received on the ISDN link, they are passed to the remote side and then retransmitted.
- **ENABLE: STATUS** messages received on the ISDN link are managed locally.

Values: DISABLE, ENABLE

Default: DISABLE

3.1.45 LOCALTIMER

Voice calls local timer

Defines the local timer used at the originating side of the connection, which starts when the NetPerformer places a call over the WAN to the destination unit. The local timer stops when a reply is received from the destination unit. This timer is necessary in case the connection request is lost as it is transmitted over the WAN.

In order to deal with WAN link delays, the **LOCALTIMER** should be greater than the **ACCEPTTIMER** (see page 3) to favor connection management at the destination unit.

NOTE: These timers are used in digital signaling environments, including ISDN, QSIG, CAS, RBS, R2, etc. They do not affect the Transparent Signaling mode of operation, where the NetPerformer's logical connections are established once at the beginning of the session and kept up forever.

Values: 10 - 55

Default: 20

3.1.46 LOGALARMNODSP

Log alarm on NO DSP error

Controls whether SNMP and local console alarms will be logged when a voice port in PowerCell mode with **ON LINE** status has **NO DSP** displayed as the *Rate* using the Display Channel States (**DCS**) command. The NetPerformer unit periodically scans all voice ports to detect this abnormal situation.

- Set **LOGALARMNODSP** to **YES** to have the following alarms logged when this abnormal situation is detected:
  - **SNMP:** *noDspAlarm*, with value **NULL** and the *ifvceIndex* variable bound to the trap
  - **Local console: NO DSP ON PORT XXX (M=YYY ERR=Z)**, where **XXX** is the voice port number, and **M=YYY ERR=Z** provide further information for NetPerformer Technical Support.
- Leave **LOGALARMNODSP** at its default value, **NO**, if you do not want these alarms to be logged.

NOTE: Calls that are successfully completed in this abnormal situation are likely to consume a lot of bandwidth on the WAN links, and both IP communications and Frame Relay switching over the NetPerformer units can be negatively affected or even stopped. **Voice port reset can be programmed to automatically correct this situation should it occur.** Refer to "RESETPORT-

NODSP" on page 3-28.

Values: NO, YES

Default: NO

3.1.47 LOGVERSION

Call log version

Specifies the format of the log file display for the Display Log (**DL**) command, and for sending the log file via FTP.

- Log version **0** is an older version that does not include extended digits. In addition, the order in which the call data is presented is different than that in later versions.
- Log version **1** includes the extended digits that were used to place the call; maximum 16 extended digits
- Log version **2** is the most recent format, with a maximum of 30 extended digits supported

If you are using an application that requires an old format of the log file, set the **LOGVERSION** parameter to **0** or **1**. For a display of extended digits, you must set this parameter to **1** or **2**. The default value, **2**, is the most flexible format.

Values: 0, 1, 2

Default: 2

3.1.48 MAXCHPERDSP

Max channel per DSP for reload

Determines the number of voice channels that will be loaded on a DSP for a specific voice algorithm.

Values: 0 - 5

Default: 0

3.1.49 OSCILLATORSOURCE

Oscillator source selector

Selects the clock oscillator source for E1/T1 digital interfaces on units installed with the TCXO digital clock hardware module. **By default, the standard clock is activated on all units. You must change the oscillator source to activate an enhanced clock.**

NOTE: When the *Digital port clock source* is **INTERNAL**, the list of choices for the

oscillator source corresponds to the clock module(s) that are installed on the unit. Therefore, not all of the value choices shown below will be available on any one particular unit.

- **TCXO:** Activates the TCXO clock
- **STRATUM-3**: Activates the Stratum 3 clock
- **GPSTCXO**: Activates the GPS clocking module with TCXO clock

  For this application you must also activate the GPS port.
- **STD_OSC:** Selects the standard clock (the default value).

Values: TCXO, STRATUM-3, GPSTCXO, STD_OSC

Default: STD_OSC

3.1.50 PROXYARP

Proxy ARP

Enables a transparent subnet gateway application. The value may be:

- **DISABLE** (default): The NetPerformer does not use Proxy ARP, and does not act as a transparent subnet gateway or ARP subnet gateway. The router will not process an ARP request from one host to another host that is not on the same subnet.
- **RFC1027**: The NetPerformer respects RFC 1027 when using Proxy ARP. This technique permits processing ARP requests sent from one host to another when the two hosts are not on the same subnet. All ARP subnet handling is done in the ARP subnet gateways, and no changes to the ARP protocol or routing technique are required on the source or target hosts. From the point of view of the host there are no subnets and the physical network behaves like one large IP network. **If the host communication software supports subnetting, you must disable it. Set the network mask to cover the IP network number only, excluding the subnet bits.**
- **NONRESTRICTIVE**: The NetPerformer always uses Proxy ARP, and always acts as a transparent subnet gateway for ARP requests. Hosts on all connected subnets can communicate without being aware of the existence of these subnets.

Values: DISABLE, RFC1027, NONRESTRICTIVE

Default: DISABLE

3.1.51 PVCRDELAYINTERVAL

PVCR delay interval

Determines the interval, in seconds, at which the local unit sends a packet to the remote unit to determine the transmission delay on a PVCR link. The remote unit sends a reply to

each packet and, once received at the local unit, the total round-trip time is calculated and divided by two to determine the current transmission delay over the link.

NOTE: The transmission delay is displayed under the **STATE & DELAY (ms)** column in the Display PVC States (**DPVC**) and Display Port States (**DPORT**) commands.

The default value of **PVCRDELAYINTERVAL** is the maximum value, **30** seconds. Reduce this value if you would like a more precise examination of the transmission delay, with more frequent updates of the **DELAY (ms)** value on the **DPVC** and **DPORT** screens.

Values: 2 - 30

Default: 30

3.1.52 RESETPORTNODSP

Reset port on NO DSP error

Determines whether a voice port in PowerCell mode will be automatically reset if it is in **ON LINE** status and has **NO DSP** displayed as the *Rate* using the Display Channel States (**DCS**) command. The NetPerformer unit periodically scans all voice ports to detect this abnormal situation. A voice port reset, where the *Protocol* parameter is switched to **OFF** and then back to its original value, clears the problem.

Calls that are successfully completed when this situation occurs are likely to consume a lot of bandwidth on the WAN links, and both IP communications and Frame Relay switching over the NetPerformer units can be negatively affected or even stopped. Set **RESETPORTNODSP** to **YES** to prevent this from happening.

NOTE: You can also request that SNMP and local console alarms be logged when this abnormal situation occurs. Refer to “LOGALARMNODSP” on page 3-25.

Values: NO, YES

Default: NO

3.1.53 RIPBCXV2ACKTIMER

Ripbcx V2 ack timer

Sets the delay, in seconds, before a RIPBCX V2 connection with an acknowledged protocol will time out and resend the frames over the network. By default, this occurs after **2** seconds.

In a satellite network the **RIPBCXV2ACKTIMER** should be raised to handle the increased

network delay that can result during a traffic storm. When there is not enough satellite bandwidth to carry all the traffic, the problem can be compounded if the **RIPBCXV2ACKTIMER** expires too early, as even more traffic will be added to the network.

Values: 1 - 255

Default: 2

3.1.54 SEBLASTFILTERLOW

Set SE in Blast mode with filter low

The **SEBLASTFILTERLOW** extended parameter is used for debugging purposes or in special applications only.

Caution: Do not change the value of this parameter unless advised to do so by NetPerformer Technical Support.

Values: NO, YES

Default: NO

3.1.55 SEEVENTLOGENABLE

Enable/Disable event log in the SE

The **SEEVENTLOGENABLE** extended parameter is used for debugging purposes or in special applications only.

Caution: Do not change the value of this parameter unless advised to do so by NetPerformer Technical Support.

Values: NO, YES

Default: NO

3.1.56 SEIFSAVEFULLMSGPOOL

SEIF saves the MSG pool and restart

Determines whether the message pool will be saved and the unit automatically reset when an alarm of type **M=109 A=65 D=XXXXXXXX** occurs, indicating that the unit is running out of messages in its Signaling Engine interface module (**SEIF**), and having difficulties transmitting packets for voice signaling.

- **NO:** The message pool is *not* saved, and the unit is *not* reset when this alarm occurs. This is the default situation.
- **YES:** The message pool is saved in the file system as **MSGPOOL.DAT**. **This is a compressed file that must be sent to NetPerformer Technical Support for analysis.**

NOTE: **This extended parameter is intended for troubleshooting purposes by NetPerformer Technical Support only, and should *not* be changed from its default value.**

Values: NO, YES

Default: NO

3.1.57 SENDRENAMEFILE

Rename file when retrieving

Determines whether the configuration file, **cfg.txt**, will saved as **cfg_*UnitID*.txt** (where ***UnitID*** is the current value of the global *Unit ID* parameter) when the file is retrieved from this unit using zmodem or FTP.

For example, if the **cfg.txt** file on unit **A1** is retrieved using the FTP *get* command, the file is first saved as **cfg_a1.txt** and then downloaded.

Values: NO, YES

Default: NO

3.1.58 SORTERTIMEOUTOVERIP

FR over IP sorter timer

For FRoIP connections, including PVCR PVCs, and TRANSPARENT over IP applications, some frames can arrive out of sequence if load balancing is used over the IP network. A sorter reorders the received packets into their original sequence.

SORTERTIMEOUTOVERIP determines the sorter timeout, in milliseconds, used when receiving traffic over an FRoIP connection. If packets are lost the sorter will wait for this timeout. If the missing packets do not arrive during this period, they will be skipped.

NOTE: You can see how often this has occurred by examining the *Number of sorter timeouts* error counter, available with the PVC option of the Display Errors command (**DE/PVC**).

Values: 0 - 2000

Default: Base unit: 250

Abis/Ater: 0

3.1.59 STANDBYMODE

Standby mode

Activates *Standby Mode* on the unit. If Standby Mode is active, the unit monitors one modem signal per WAN port. This signal is:

- **DTR** if the port is DCE RS-232 or V.35
- **DCD** if the port is DTE RS-232 or V35
- **C** if the port is DCE X.21
- **I** if the port is DTE X.21

If the monitored modem signal is active on at least one WAN port, the unit uses its normal *Unit name*, specified with the **SETUP/GLOBAL** menu.

If the monitored modem signal is not active on any WAN port, the unit specified by the Standby Name (see next parameter) takes over. This feature, when combined with an external matrix switch, can be used to provide a hot backup function. The NetPerformer returns to its normal name when there are signals on one or more WAN ports.

Values: NO, YES

Default: NO

3.1.60 STANDBYNAME

Standby unit name

The name of the standby unit that will take over all transmissions if the present unit fails when *Standby Mode* is active (see previous parameter).

NOTE: When the **STANDBYMODE** parameter is set to **NO** the **STANDBYNAME** is not used, and can be left at its default value (not defined).

Values: Maximum 32-character alphanumeric string

Default: (not defined)

3.1.61 TAPCOUNT

Tap count

NOTE: One of two extended parameters for fine tuning the echo canceller to control double talk clipping (see also "HANGOVERTIME" on page 3-21).

The **TAPCOUNT** parameter determines how many taps are used by the adaptive filter of

the echo canceller. This is related to the echo tail delay time. To calculate the tail delay time *Td* in milliseconds, use the equation:

$$Td = \frac{(TAPCOUNT + 2)}{8}$$

For example, if the **TAPCOUNT** is set to **126**, the tail delay time will be **16** milliseconds, which is the maximum setting.

The filter should be long enough that it covers the echo delay time on the local side, but not the entire delay after going across the network.

- In most applications the local delay is less than 1 millisecond, and is equivalent to the delay from the time DSP sends the voice signal out to a locally attached phone and back.
- The local delay may be longer for an FXO application, where the loop typically goes out to the CO and then to a remote phone.

Caution: The value of this parameter can affect other Signaling Engine functions, and **should not be changed without the assistance of NetPerformer Technical Support.**

Values: 3 - 126

Default: 126

3.1.62 TELNETECHO

Display telnet echo

Authorizes echo mode if the console is connected via Telnet. Select **ECHOON** to turn echo on, or **ECHOOFF** to turn echo off.

Values: ECHOON, ECHOOFF

Default: ECHOON

3.1.63 TEMPTHRESHOLD

Temperature threshold (C)

Defines the temperature, in degrees Centigrade, at which the NetPerformer unit will log an alarm if this temperature is reached or exceeded. The alarm is displayed as:

```
Alarm>    -------------------------------   THU   2007/10/04
14:17:22
Alarm>    An error has occurred
Alarm>    (0x00030000 0x00000000), please
Alarm>    call the technical support.
```

Values: 0 - 150

Default: 65

3.1.64 VTRLOOP

Enable looping with VTR

> **NOTE:** This parameter is not available on a NetPerformer unit operating in SIP VoIP voice transport mode (global parameter *Voice transport method* set to **SIP VoIP**).

Allows repeating the call sequence in a loop if the call was not established after trying all MAP entries. The loop continues until the call is established or a call timer has expired (approximately 11 seconds).

Values: NO, YES

Default: NO

3.1.65 WATCHDSP

Watch DSP behavior

This parameter is for the use of NetPerformer Technical Support in troubleshooting cases where the DSP responds in an unusual way.

Caution: Do not change **WATCHDSP** from its default setting, **DISABLE**, as this may negatively affect DSP behavior on your unit.

Values: DISABLE, ENABLE

Default: DISABLE

3.1.66 RIPBCXLOSSSENDDELAY

SDM-92X0 Unit Name Table Updates

This extended parameter allows the configuration of the delay before the unit routing (RIPBCX) sends a destination unit route update.

Console	Text-based Config
EP GLOBAL RIPBCXLOSSSENDDELAY value	[npsys] RipbcxLossSendDelay=value

Range of values: 0 to 10, where value is the time in seconds

Default value: 10

3.1.67 PREVENTCLKSRCALARMS

Clock Source Change Alarms

This extended parameter prevents the display of clock source change alarms: “CLK SRC SWITCHED TO…”

Console	Text-based Config
EP GLOBAL PREVENTCLKSRCALARMS value	[npsys] PreventClkSrcAlarms=value

Value choices: NO, YES

Default value: NO

3.1.68 DECOMMISSIONDSP

SDM-92X0 LDCD Active Channel Limitation

Three global extended parameters allowing the decommissioning of the DSP resources of the on-board analog interfaces (FXS, FXO & E&M).

Console	Text-based Config
EP GLOBAL DECOMMISSIONDSPIF1 value	[npsys] DecommissionDspIf1 = value

Description: Decommission DSP on the interface in slot 1

Choice of values: NO and YES

Default value: NO

Console	Text-based Config
EP GLOBAL DECOMMISSIONDSPIF2 value	[npsys] DecommissionDspIf1 = value

Description: Decommission DSP on the interface in slot 2

Choice of values: NO and YES

Default value: NO

Console	Text-based Config
EP GLOBAL DECOMMISSIONDSPIF3 value	[npsys] DecommissionDspIf1 = value

Description: Decommission DSP on the interface in slot 3

Choice of values: NO and YES

Default value: NO

When the on-board interface DSP is decommissioned, the unit prevents the loading of the Codec on that DSP.

Note that by default, the NetPerformer also limits the maximum number of LDCD (G.728) channels per DSP to 3 when the DSP frequency is between 100 to 130 MHz and to 4 when the DSP frequency is 160 MHz.

GPS Extended Parameters

4.1 About the GPS Extended Parameter Subtype

The **GPS** extended parameter subtype is available only on a NetPerformer unit installed with the G.823 PDH-compliant GPS clocking module.

To adjust the value of a GPS extended parameter, enter:

EP GPS *parameter_name parameter_value*

If you do not know the extended parameter name:

1. Enter **EP ?**
2. At the *Item* prompt, enter **GPS**. The list of all GPS extended parameters is displayed
3. Enter the specific parameter name at the command line prompt
4. Enter a question mark (**?**) to view all valid values for this parameter
5. Enter the new value.

EP ?/GPS example

```
SDM-9210-GSM>EP ?
EXTENDED PARAMETERS
Item (BRG/GLOBAL/GPS/GSM/IP/IPX/LAN/NAT/PORT/PVC/VPORT,def:BRG) ?
GPS
CHOICE: PLLENABLE    STATUSSOURCE

Item (Current value:PLLENABLE) ? STATUSSOURCE
GPS> (STATUSSOURCE) Status Source (def:GPIO2_3) ? ?
CHOICE: GPIO2   GPIO2_3

GPS> (STATUSSOURCE) Status Source
        (Default value:GPIO2_3, Current value:GPIO2_3) ? GPIO2
```

The GPS extended parameter subtype includes the following:

4.1.1 PLLENABLE

Enable PLL

Controls the PLL function associated with the GPS clocking module. Also determines whether Phase Locked Loop (PLL) status information will be recorded and displayed with the Display GPS Status (**DGPS**) command. .

When **PLLENABLE** is set to **YES**, the PLL function is active. When set to **NO**, PLL is inactive.

Values: NO, YES

Default: YES

4.1.2 STATUSSOURCE

Status Source

Determines the source of Phase Locked Loop (PLL) status information. The default value, **GPIO2_3**, permits more rapid transition to holdover state.

Values: GPIO2, GPIO2_3

Default: GPIO2_3

IP Extended Parameters

5.1 About the IP Extended Parameter Subtype

The **IP** extended parameter subtype is available on all NetPerformer products.

To adjust the value of an IP extended parameter, enter:

EP IP *parameter_name parameter_value*

If you do not know the extended parameter name:

1. Enter **EP ?**
2. At the *Item* prompt, enter **IP**. The list of all IP extended parameters is displayed
3. Enter the specific parameter name at the command line prompt
4. Enter a question mark (**?**) to view all valid values for this parameter
5. Enter the new value.

EP ?/IP example

```
SDM-9230>EP ?
EXTENDED PARAMETERS
Item (BRG/GLOBAL/IP/IPX/LAN/NAT/PORT/PVC/VPORT,def:BRG) ? IP
CHOICE: ARPCACHESIZE    ARPCACHETTL     ICMPREDIRECT
LOSTROUTEALARM
        MULTIHOMEDDELAY MULTIHOMEDTYPE  RIPSENDHOSTADDR
RIPSIMPLESPLIT

Item (Current value:ARPCACHESIZE) ? MULTIHOMEDTYPE
IP> (MULTIHOMEDTYPE) Multihomed type (def:STANDARD) ? ?
CHOICE: STANDARD  DISABLED  IGNORENET

IP> (MULTIHOMEDTYPE) Multihomed type
        (Default value:STANDARD, Current value:STANDARD) ? DISABLED
```

The IP extended parameter subtype includes the following:

5.1.1 ARPCACHESIZE

ARP cache size

Determines the maximum number of ARP (Address Resolution Protocol) entries that the ARP cache table can contain at one time.

> **NOTE:** **If you change the value of ARPCACHESIZE, you must restart the unit with the Restart Unit (RU) command for the new value to take effect.**

Values: 1 - 1000

Default: 300

5.1.2 ARPCACHETTL

ARP cache TTL

Determines the Time To Live (TTL), in seconds, for an ARP entry in the ARP cache table.

> **NOTE:** If you change the value of **ARPCACHETTL**, **you must reset the unit** with the Reset Unit (**RU**) command for the new TTL to be applied to current ARP entries in the ARP cache table.

Values: 1 - 65534

Default: 240

5.1.3 ICMPREDIRECT

ICMP redirect

In applications where the NetPerformer is used as an IP router, it can reroute an IP frame automatically if the next hop is included in the routing table (i.e. for the IP interface on which the IP frame was received). The **ICMPREDIRECT** parameter determines whether the sender will be notified that rerouting has occurred.

- In the default situation (**ICMPREDIRECT** set to **ENABLE**), the NetPerformer sends an **ICMP REDIRECT** message to advise the sender of the IP frame that rerouting has occurred.
- If you want to deactivate this service, set **ICMPREDIRECT** to **DISABLE**. In this case, no **ICMP REDIRECT** messages will be sent when rerouting occurs.

Values: DISABLE, ENABLE

Default: ENABLE

5.1.4 LOSTROUTEALARM

Lost route alarm

Determines whether an alarm will be raised when a route is lost from the IP RIP routing table. When this parameter is disabled and an entry on the IP RIP routing table becomes invalid, no alarm is recorded. This is the default setting.

When this parameter is enabled and a routing table entry becomes invalid or disappears from the table, an alarm is recorded. This option can facilitate the analysis of IP network problems. The following alarms can occur:

- **RIP RTE TIMEOUT (XXX.XXX.XXX.XXX):** the specified routing table entry has become invalid
- **RIP RTE GONE (XXX.XXX.XXX.XXX):** the specified routing table entry has disappeared from the routing table.

Values: DISABLE, ENABLE

Default: DISABLE

5.1.5 MULTIHOMEDDELAY

Multihomed Delay

Defines the length of the delay, in milliseconds, before the NetPerformer will transmit IP Multihomed routing tables to another remote node.

This determines the delay between processing of ports. For example, if the MULTIHOMEDDELAY is set to **30**, the NetPerformer will process Port 1, wait 30 milliseconds, then process Port 2, wait 30 milliseconds, and so on.

A delay may be required if the NetPerformer is configured with many PVCs to several different nodes.

Use this parameter in conjunction with the LINKUPDATECOUNTER and LINKUPDATETIMER global extended parameters to avoid choppy voice transmission when many PVCs are configured. Fine tuning of these three parameters will allow the NetPerformer processor to perform more tasks within a given time period.

Values: 0 - 200

Default: 0

5.1.6 MULTIHOMEDTYPE

Multihomed type

Determines whether to permit or block the transmission and reception of multihomed IP routing table updates. In some cases, multihomed IP addressing can interfere with RIP routing.

For example, RIP cannot work in this application, where two NetPerformer units on the same LAN are also connected via a WAN link:

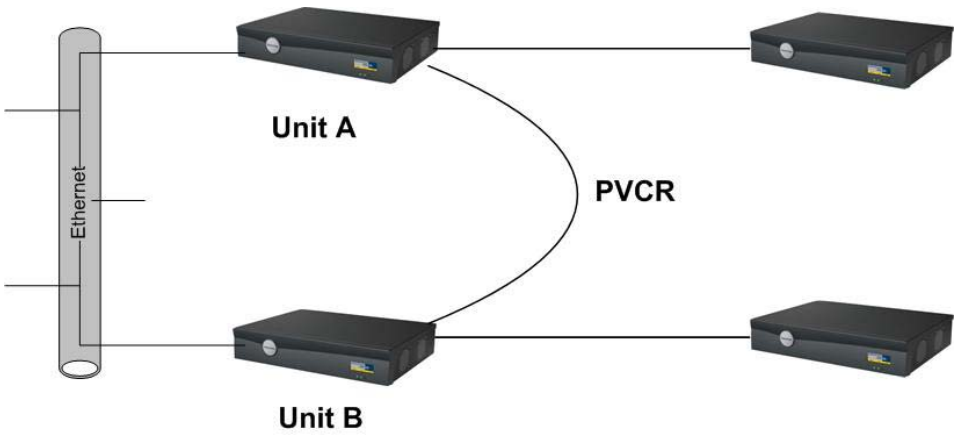


Figure 5-1: Multihomed type layout

Here there are two NetPerformer units, **A** and **B**, on the LAN which are also connected via a WAN (PVCR) link. If these units have multihomed addressing, RIP cannot work.

- The solution is to disable multihomed addressing on either **Unit A** or **Unit B**, by setting the **MULTIHOMEDTYPE** extended parameter to **DISABLED** on that unit. This will permit RIP routing without having to remove any cable connections.

NOTE: Multihomed addressing *must* be turned off in a PowerCell over IP application, to prevent the FRoIP PVCs from going up and down.

- If on the other hand you do ***not*** need RIP routing in an application such as this, leave **MULTIHOMEDTYPE** at its default value, **STANDARD**.

  Caution: If you disable multihomed addressing, the IP multihomed routing table will display local addresses only.

  •The **IGNORENET** value allows multihomed addressing on a NetPerformer that is not connected on the LAN. This NetPerformer will receive all multihomed IP routing table updates. The **IGNORENET** setting is also required if you are using RIP Version 2 and different subnet masks have different lengths, e.g. when routing an IP frame with a destination address that uses a subnet with more bits than the local IP address mask.

Values: STANDARD, DISABLED, IGNORENET

Default: STANDARD

5.1.7 RIPSENDHOSTADDR

RIP send host address

Controls whether IP host addresses will be sent during periodic updates to the IP RIP routing table. This parameter should be set to **ENABLE** (the default setting) to have the host addresses sent. When RIPSENDHOSTADDR is enabled, IP network addresses will be updated periodically.

Values: DISABLE, ENABLE

Default: ENABLE

5.1.8 RIPSIMPLESPLIT

RIP simple split enable

Determines whether an IP RIP table update will include the status of IP networks that are already known to the destination router. The Simple Split scheme, sometimes referred to as Simple Split Horizon, omits routes that have been secured from one neighbor in updates that are sent to that neighbor.

When this parameter is disabled (the default value), IP RIP operates according to the normal RIP protocol specification. That is, when an IP RIP table update is transmitted to another router, the status of IP networks already known to the other router are transmitted with a metric equal to infinity (the highest value in the metric range).

When this parameter is enabled and the NetPerformer sends an IP RIP table update to another router, the status of IP networks already known to the other router are not transmitted. This significantly reduces the size of the IP RIP update.

NOTE: In some circumstances, a transitional case may occur where router RT1 must transmit to RT2 in order to reach RT3, and at the same time router RT2 must transmit to RT1 in order to reach RT3. Without Simple Split the routing table updates would disappear right away, due to a process called reverse poisoning. With Simple Split, however, these updates will disappear only when a timeout is reached. Although a disadvantage of Simple Split, the need for reverse poisoning is very rare, and is far outweighed by the advantages that Simple Split provides.

Values: DISABLE, ENABLE

Default: DISABLE

IPX Extended Parameters

6.1 About the IPX Extended Parameter Subtype

The **IPX** extended parameter subtype is available on all NetPerformer products.

To adjust the value of an IPX extended parameter, enter:
EP IPX *parameter_name parameter_value*

If you do not know the extended parameter name:

1. Enter **EP ?**
2. At the *Item* prompt, enter **IPX**. The list of all IPX extended parameters is displayed
3. Enter the specific parameter name at the command line prompt
4. Enter a question mark (**?**) to view all valid values for this parameter
5. Enter the new value.

EP ?/IPX example

```
SDM-9230>EP ?
EXTENDED PARAMETERS
Item (BRG/GLOBAL/IP/IPX/LAN/NAT/PORT/PVC/VPORT,def:BRG) ? IPX
CHOICE: ADDPACING   RIPMAXROUTE SAPMAXROUTE

Item (Current value:ADDPACING) ? RIPMAXROUTE
IPX> (RIPMAXROUTE) RIP max route (1-2048,def:128) ? ?
IPX> (RIPMAXROUTE) RIP max route (Default value:128, Current
value:128) ? 64
```

The IPX extended parameter subtype includes the following:

6.1.1 ADDPACING

Add pacing enable

Specifies whether a delay is added between IPX frames (either RIP or SAP). If set to YES, a minimum delay of 55 milliseconds is added. If set to NO, no delay is added between frames.

Values: NO, YES

Default: NO

6.1.2 RIPMAXROUTE

RIP max route

Determines the maximum number of RIP entries that can appear in the IPX routing table. Setting this parameter to a large value will decrease the amount of memory available for other applications.

NOTE: For this parameter to take effect you must restart the unit. Enter **RU** at the console command line.

Values: 1 - 2048

Default: 128

6.1.3 SAPMAXROUTE

SAP max route

Determines the maximum number of SAP entries that can appear in the IPX routing table. Setting this parameter to a large value will decrease the amount of memory available for other applications.

NOTE: For this parameter to take effect you must restart the unit. Enter **RU** at the console command line.

Values: 1 - 2048

Default: 128

LAN Extended Parameters

7.1 About the LAN Extended Parameter Subtype

The **LAN** extended parameter subtype is available on NetPerformer products operating in PowerCell mode (the global parameter *Voice transport method* set to **PowerCell**), including units installed with the Abis/Ater licensed software option.

To adjust the value of a LAN extended parameter, enter:

EP LAN *lan_number parameter_name parameter_value*

If you do not know the extended parameter name:

1. Enter **EP ?**
2. At the *Item* prompt, enter **LAN**
3. At the second *Item* prompt, identify the number of the LAN you wish to fine tune. For example, enter **1** for LAN port **ETH1**.

   The list of all LAN extended parameters is displayed (only one parameter for this subtype)
4. Enter a carriage return to select the current parameter choice
5. Enter a question mark (**?**) to view all valid values for this parameter
6. Enter the new value.

EP ?/LAN example

```
SDM-9230>EP ?
EXTENDED PARAMETERS
Item (BRG/GLOBAL/IP/IPX/LAN/NAT/PORT/PU/PVC/VPORT,def:BRG) ? LAN
Item (1-2,def:1) ? 1
CHOICE: GSMRXTIMER

Item (Current value:GSMRXTIMER) ? GSMRXTIMER
LAN 1> (GSMRXTIMER) GSM traffic RX processing timer (1-15,def:10) ?
?
LAN 1> (GSMRXTIMER) GSM traffic RX processing timer (Default
value:10,
Current value:10) ? 15
```

The LAN extended parameter subtype includes the following:

7.1.1 ACCESSCONCENTRATOR

PPPoE PADI Broadcasts

This LAN extended parameter is used to determine if NetPerformer needs to act as an Access Concentrator and respond to PADI packets by PADO or not.

Console	Text-based Config
EP LAN port ACCESSCONCENTRATOR value	[[iflan x] AccessConcentrator=value

Values: Port value for the LAN field is 1 or 2 and the parameter value is NO or YES.

Default value: NO

NAT Extended Parameters

8.1 About the NAT Extended Parameter Subtype

The **NAT** extended parameter subtype is available on all NetPerformer products.

To adjust the value of a NAT extended parameter, enter:

EP NAT *parameter_name parameter_value*

If you do not know the extended parameter name:

1. Enter **EP ?**
2. At the *Item* prompt, enter **NAT**. The list of all NAT extended parameters is displayed
3. Enter the specific parameter name at the command line prompt
4. Enter a question mark (**?**) to view all valid values for this parameter
5. Enter the new value.

EP ?/NAT example

```
SDM-9230>EP ?
EXTENDED PARAMETERS
Item (BRG/GLOBAL/IP/IPX/LAN/NAT/PORT/PVC/VPORT,def:BRG) ? NAT
CHOICE: DNS      FRAGMENT SEQUENCE

Item (Current value:DNS) ? FRAGMENT
NAT> (FRAGMENT) Fragment entry timeout (1-10000,def:4) ? ?
NAT> (FRAGMENT) Fragment entry timeout (Default value:4, Current
value:4) ? 100
```

The NAT extended parameter subtype includes the following:

8.1.1 DNS

DNS binding entry timeout

Specifies the timeout, in minutes, of a special DNS entry used for temporary binding.

Values: 1 - 10000

Default: 1

8.1.2 FRAGMENT

Fragment entry timeout

Specifies the timeout, in minutes, of a special translation table entry that is created for fragmented packets.

NOTE: These special entries are not displayed with the Display NAT Table Information (**DN**) command. They are intended for NetPerformer technical personnel only, for specialized troubleshooting procedures.

Values: 1 - 10000

Default: 4

8.1.3 SEQUENCE

Sequence entry timeout

Specifies the timeout, in minutes, of a special translation table entry that is created during translation of an FTP PORT command packet.

NOTE: These special entries are not displayed with the Display NAT Table Information (**DN**) command. They are intended for NetPerformer technical personnel only, for specialized troubleshooting procedures.

Values: 1 - 10000

Default: 1440

PORT Extended Parameters

9.1 About the PORT Extended Parameter

The **PORT** extended parameter subtype is available on all NetPerformer products. It is used to fine-tune data ports and channels, that is, ports and channels that carry traffic other than voice traffic.

To adjust the value of a PORT extended parameter, enter:

EP PORT *port_number parameter_name parameter_value*

If you do not know the extended parameter name:

1. Enter **EP ?**
2. At the *Item* prompt, enter **PORT**

   The list of currently configured ports and channels is displayed.
3. At the second *Item* prompt, identify the number of the port or channel you wish to fine tune. For example:
   - Enter **1** for serial port 1
   - Enter **100** for the first digital LINK on the first span or interface card
   - Enter **101** for the first channel of that digital LINK
   - Enter **CSL** for the console port.

   The list of all PORT extended parameters is displayed.
4. Enter the specific parameter name at the command line prompt
5. Enter a question mark (**?**) to view all valid values for this parameter
6. Enter the new value.

EP ?/PORT example

```
SDM-9230>EP ?
EXTENDED PARAMETERS
Item (BRG/GLOBAL/IP/IPX/LAN/NAT/PORT/PU/PVC/VPORT,def:BRG) ? PORT
Item (CSL/1/100/101/150/151/200/250/251/253/254/255/256/
259,def:CSL) ? 1
CHOICE: BLOCSIZE          CLOCKDELTA        CLOCKRECOVERY
        COPMODE           COST              DATAJITTERBUFFER
        DLESYN            FASTTIMEOUT       FLAGSHARING
        HDLCMODE          IGNOREMODEMSIGNAL MARKDELAY
        MAXCOST           MODEMCALLCLEAR    PACKDELAY
        TOD               TXMAXDELAY        TXMAXFRAMESIZE

Item (Current value:BLOCSIZE) ? HDLCMODE
PORT 1> (HDLCMODE) HDLC mode (def:NORMAL) ? ?
CHOICE: NORMAL MAXFRM

PORT 1> (HDLCMODE) HDLC mode
        (Default value:NORMAL, Current value:NORMAL) ? MAXFRM
```

The PORT extended parameter subtype includes the following:

9.1.1 BLOCSIZE

Block size defines the maximum size, in bytes, of data blocks to be sent over an HDLC, Async, or COP port. Reducing the block size can improve response time for networks with low-speed transmission of small blocks.

If you change the value of BLOCSIZE, you must reset the port using the Reset Port (RP) command for the change to take effect.

NOTE: The default value, **0**, is interpreted by the NetPerformer as 48 bytes for a COP or Async port, and 96 bytes for an HDLC port.

Caution: Under most circumstances, the default value provides the best block size. Do not change the value of this parameter unless advised to do so by NetPerformer Technical Support personnel.

Values: 0, 8, 16, 24, 32, 40, 48, 96

Default: 0

9.1.2 CLOCKDELTA

PASSTHRU tuning delta

Adjusts the magnitude of the clock frequency variation on a data port set to the **PASSTHRU** protocol. Fine-tuning the magnitude of clock frequency variations can allow the NetPerformer to support communications with a broader range of equipment:

- Equipment that is extremely sensitive to variations in clock frequency
- Equipment that requires a specific clock frequency range
- Videoconferencing applications.

Set CLOCKDELTA to **0** to disable clock tuning.

NOTE: If you set CLOCKDELTA to a high value, underruns or overruns may occur on the PASSTHRU port. After adjusting the value, test the results with the Display Errors (**DE**) command.

Values: 0 - 127

Default: 2

9.1.3 CLOCKRECOVERY

Clock Recovery

Provides a *Clock Recovery* mechanism for a FR-NET port operating at speeds lower than 2049 Kbps. Enabling Clock Recovery can prevent the accumulation of delays when in DCE internal clocking mode, and ensure that LMI will come up when connecting the NetPerformer to other vendor equipment. To enable this mechanism, set **CLOCKRECOVERY** to **ENABLE**.

NOTE: On the SDM-9220 or SDM-9230, only port **1** can be selected.

Values: DISABLE, ENABLE

Default: DISABLE

9.1.4 COPMODE

COP mode

For COP ports only. Determines how idle characters in a COP data string are interpreted and transmitted over the link. Idle characters appear in a COP data string when no data frame is being transmitted. The defined idle character may be MARK (**FF**) or SPACE (**00**).

The COPMODE parameter can be set to:

- **NORMAL**: No idle characters are transmitted to the remote site, whether they be **FF** or **00**.
  - The local unit sends all blocks starting from the synchronization characters to the desynchronization characters
  - The transmitter is in BISYNC in this mode
  - WAN serial connection controller (68360) configuration:

RX: Passthrough

TX: Bisync

NOTE: This configuration is more efficient than setting both the RX and TX to Passthrough mode (the **TRANSPARENT** setting).

- **TRANSPARENT**: All characters that differ from the defined idle character are transmitted to the remote site.
  - For example, if the idle character is configured as FF, all 00 characters will be sent to the remote site in addition to the actual COP data
  - This mode is useful if SPACE must be detected by the remote unit
  - The transmitter is in BISYNC in this mode. This is useful when the idle characters change during the connection, as for X.21 dialing

- WAN serial connection controller (68360) configuration:

RX: Passthrough

TX: Passthrough

- **COPTRSP**: No idle characters are transmitted to the remote site.
  - The transmitter is in Passthrough in this mode. This mode is similar to the **PASSTHRU** port protocol, in that the entire data stream is sent regardless of its content
  - This value may be required for certain slower networks.
  - WAN serial connection controller (68360) configuration:

RX: Passthrough

TX: Passthrough

If you change the value of COPMODE, you must reset the port using the Reset Port (RP) command for the change to take effect.

Caution: The default value of this parameter is recommended for most transmissions involving COP data. Do not change the value of the COPMODE parameter unless advised to do so by NetPerformer Technical Support personnel.

Values: NORMAL, TRANSPARENT, COPTRSP

Default: NORMAL

9.1.5 COST

PVCR cost

Defines the cost of this PowerCell link in the network. The COST parameter is used only when the port is configured with the **PVCR** protocol.

Values: 1 - 65534

Default: 1

9.1.6 DATAJITTERBUFFER

Constant delay

This parameter is used to transmit data packets to the remote end in the same way they were received at the local end. This may be required when the attached equipment is delay-sensitive.

- When the remote NetPerformer receives a frame, it transmits it to the attached equipment with the same interframe delay that was used on reception, with the addition of a constant offset, in milliseconds, specified by the **DATAJITTERBUFFER** parameter.
- If the **DATAJITTERBUFFER** value is larger than the real delay on the WAN link, it also reduces the effect of delay variation on the WAN.

The data jitter buffer is inactive when set to **0** (the default value). To activate the process, **DATAJITTERBUFFER must have a non-zero value on both sides of the connection, since it is applied locally at each end.**

Values: 0 - 1000

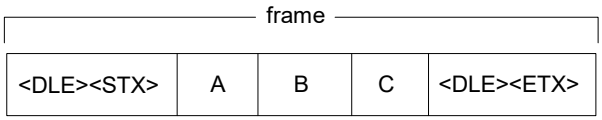
Default: 0

9.1.7 DLESYN

DLESYN Enable

For BSC and COP ports only. Determines how a BSC or COP port handles the transmission of control characters. Two methods are available:

- **Normal**: Control characters are sent with no extra characters. This is the usual mode. If an underrun occurs and characters are missed, synchronization characters are sent as a sequence of **<SYN><SYN>**.
- **Transparent**: All control characters are preceded by **<DLE>** within the frame, which are removed on reception of the frame. For example:



In some circumstances the presence of many **<DLE>** characters in the data stream can cause a throughput problem. If an underrun occurs a sequence of **<DLE><SYN>** characters must be sent.

The **DLESYN** parameter provides a solution to the throughput problem. It can be set to:

- **YES:** The NetPerformer sends frames in normal mode (without **<DLE>**), which reduces the volume of the data stream. If an underrun should occur, the NetPerformer sends the **<DLE><SYN>** sequence which is appropriate to transparent transmissions. **DLESYN *must* be set to YES if underruns are expected on BSC/COP data that is sent in transparent mode**.

  Caution: **Do not set DLESYN to YES if the data stream is sent in Normal Mode (as described above).** This setting is appropriate to Transparent Mode only. Make sure you are dealing with Transparent Mode by checking for **<DLE>** characters. Take a data capture, if required, to ascertain the data type. **If in doubt, contact NetPerformer Technical Support before changing the value of this parameter.**

- **NO:** The frame contents are not altered in any way. That is, in Transparent Mode all control characters are sent with **<DLE>**, and in Normal Mode they are sent without **<DLE>**. **This is the default value.**

NOTE: For this parameter to take effect on a COP port, you must turn the port off and then on again. To do this, set the *Protocol* parameter in the **SETUP/PORT**

menu to **OFF** and then to **COP**.

Values: NO, YES

Default: NO

9.1.8 FASTTIMEOUT

Fast NULL DATA enable

Determines whether a more rapid timeout counter will be used on a data connection:

- **YES:** Activates the fast timeout. When the NetPerformer is used as a gateway to an SDM-FP, **FASTIMEOUT** must be activated on all data connections between the NetPerformer and the SDM-FP.
- **NO:** The regular timeout counter is used. Leave **FASTTIMEOUT** at this value when FP mode is not used.

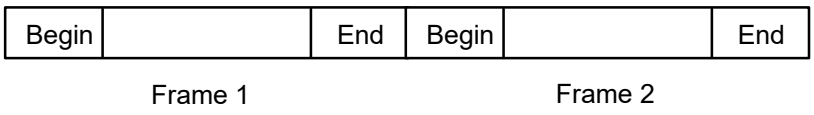
Values: NO, YES

Default: NO

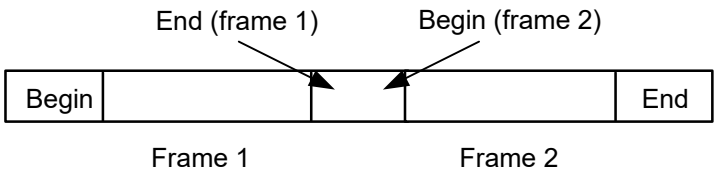
9.1.9 FLAGSHARING

Flag sharing

Permits two HDLC frames that are transmitted back-to-back to share the same flag. Usually each frame transmitted has a Begin Flag and an End Flag:



When **FLAGSHARING** is set to **YES**, two contiguous HDLC frames will share the middle flag:



Flag sharing is required to avoid transmission overrun problems when the *IDLE pattern* of an HDLC channel is **FLAG**. It is also useful for some videoconferencing applications that require as much bandwidth as possible.

NOTE: The **FLAGSHARING** parameter is not available for a port on the Dual Serial interface card. **Also, its value is ignored if the port is set to the SS7 or SS7MTP2 protocol, where flag sharing is always enabled by default.**

Values: NO, YES

Default: NO

9.1.10 FORWARDSPEED

Forward speed

The *Forward Speed* mechanism allows a PASSTHRU port to send the exact speed to the remote side for clocking purposes. In the NetPerformer implementation, the detected speed from the DTE PASSTHRU port of the local unit is passed to the remote unit, which uses this speed value to clock its DCE PASSTHRU port.

- **YES:** Activates the Forward Speed mechanism. The detected speed is read every 5 seconds and is sent to the remote side every 30 seconds or when a change in speed is detected.

  FORWARDSPEED needs to be activated on the DTE unit only, on a port or channel configured with the PASSTHRU protocol.

- **NO:** Deactivates the Forward Speed mechanism. The DTE unit sends a speed of 0, indicating to the remote DCE unit that it should use its own configured *Port speed* value.

Values: NO, YES

Default: NO

9.1.11 HDLCMODE

HDLC mode

For an HDLC port only. Determines whether the HDLC driver on this port will permit an increased number of frames in the reception queue. Set to **MAXFRM** for the maximum number of frames. This may be required when the application does not permit fallback for HDLC transmissions. Set to **NORMAL** for normal transmission of HDLC data.

Caution: **An improper HDLCMODE setting can seriously affect data transmission.** Do not change the value of this parameter unless advised to do so by NetPerformer Technical Support.

NOTE: For **HDLCMODE** to take effect the port must be turned off and then back on. To do this, set the *Protocol* parameter in the **SETUP/PORT** menu to **OFF** and

then to **HDLC**.

Values: NORMAL, MAXFRM

Default: NORMAL

9.1.12 IGNOREMODEMSIGNAL

Ignore FR modem signal

Determines whether the modem signals on a Frame Relay port or channel will be ignored. Set **IGNOREMODEMSIGNAL** to **YES** to ignore modem signals on the port/channel. By default, modem signals are detected (the **NO** setting).

This functionality can be useful for a SkyPerformer application, to prevent an RFC1490 PVC from dropping on the **MODULATOR** port if the **DEMODULATOR** port at the remote side drops. In this application, if a site stops transmitting to a **DEMODULATOR** port, all RFC1490 PVCs pointing to the **MODULATOR** port will go down unless the DCD signal on the **MODULATOR** port is in a fixed state, including PVCs receiving satellite traffic from other sites that are up.

The **YES** setting of the **IGNOREMODEMSIGNAL** parameter makes it possible to set the DCD signal on the **MODULATOR** port to a fixed state.

Values: NO, YES

Default: NO

9.1.13 ISDNRESTART

Initialize/Restart B-channels

For digital interfaces with ISDN signaling only. Reinitializes ISDN-BRI B-channels and prevents ISDN **RESTART** messages from being sent over the D-channel for all channels configured on the interface.

In general, when the D-channel goes up, a **RESTART** message is sent for each of the channels it supports. The PBX will ultimately reply with an **ACK** for each message sent.

However, some PBX equipment cannot receive more than one **RESTART** message at a time, and have difficulty handling several **RESTART** messages simultaneously. For this type of PBX, the solution is to disable the messages by setting **ISDNRESTART** to **YES** (the default value).

NOTE: **This parameter appears for a digital LINK port only.** The LINK must be enabled for it to appear at the NetPerformer console. It is not available on a NetPerformer unit operating in SIP VoIP voice transport mode (global parameter *Voice transport method* set to **SIP VoIP**).

Values: NO, YES

Default: YES

9.1.14 MARKDELAY

MARK delay

Determines the amount of time, in milliseconds, that the line will continue to send **FLAG** after transmitting a frame (during idle mode) and before changing to **MARK**. A longer delay may be required when connecting to an AS-400. The extra time in the **FLAG** state allows time to receive the next frame before going to **MARK**, thereby avoiding retransmissions.

Values: 1 - 255

Default: 20

9.1.15 MAXCOST

Maximum cost

Controls the establishment of a virtual connection through the network. The unit monitors the cost of the best route available. If this cost is higher than the value of the **MAXCOST** parameter, the virtual connection will not be opened.

NOTE: The **MAXCOST** value is employed on a port configured for transparent operation (HDLC, T-ASYNC, R-ASYNC, BSC, COP, PASSTHRU), PVCs in MULTIPLEX mode, and SDLC PUs. Changing the **MAXCOST** value on other ports, PVCs or PUs will have no effect.

Values: 0 - 65534

Default: 65534

9.1.16 MINIMUMFIFO

Set the tx/rx fifo to its minimal value

When activated (set to **YES**), this parameter minimizes the depth of the TX and RX queues for the **PASSTHRU**, **PASSTHRUOFR**, **COP** and **BISYNC** protocols. This may be required to reduce the transport delay for these protocols. By default this feature is inactive (**MINIMUMFIFO** set to **NO**).

Values: NO, YES

Default: NO

9.1.17 MODEMCALLCLEAR

Modem call clear

For a PASSTHRU or PASSTHRUOFR port only. Clears all currently connected voice calls when high-priority data is transmitted across a transparent data port (**HDLC, DDCMP, T- ASYNC, R-ASYNC, BSC, COP, PASSTHRU**). This is useful, for example, when setting up a videoconferencing application.

- Enable Modem Call Clear by setting the **MODEMCALLCLEAR** parameter to **YES**. Modem Call Clear will clear all voice calls only if all of the modem signals are up on the HIGH priority data port. These signals include DSR, DCD, DTR and RTS (RI and RL in X.21).
- Disable Modem Call Clear by setting the **MODEMCALLCLEAR** parameter to **NO** or **OFF**. When Modem Call Clear is disabled, currently active voice calls are not affected when high priority data is transmitted. This is the default setting.

Tip: To ensure that high-priority traffic is transmitted to the remote site, set the port *Modem control signal* parameter on the port to **STATPASS** or **DYNAPASS**. These settings will pass the current status of the remote port modem signals onto the local modem signals.

NOTE: When a voice call is disconnected as a result of Modem Call Clear, the voice channel will remain in *Link Down Busy* mode for about 5 seconds. After the user hangs up, another voice call may be attempted. A new connection can be made if voice calls are no longer blocked, depending on the *Max voice channels if high priority data* parameter.

Values: NO, YES

Default: NO

9.1.18 PACKDELAY

PACK delay

Determines the delay, in milliseconds, before transmitting a frame that contains several PVCR cells. This parameter is activated when the port is configured with the **PVCR** protocol, with the *Cell Packetization* parameter set to **YES**.

When *Cell Packetization* is used, several PVCR cells are packed one after the other to create a larger frame. The **PACKDELAY** timer starts when the first cell is packed in the frame. If no other cell is received within the specified delay, the frame is transmitted. If another cell is received within the specified delay, it is added to the frame and the **PACKDELAY** timer is restarted.

Values: 1 - 30

Default: 10

9.1.19 PRESENTATION

ISDN ANI Presentation bit

In an ISDN application, this parameter controls the setting of the **Presentation** bit in the **Calling Party Number** information element of an outgoing **SETUP** message. The Presentation bit indicates whether the caller's phone number should be displayed. **If the Presentation bit is recognized by the ISDN telephone or user equipment,** the **PRESENTATION** parameter value will be interpreted as follows:

- **NOT FORCED:** The display of the Calling Party Number depends on the value of the Presentation bit received or configured on the remote (incoming) side
- **ALWAYS ALLOWED:** The Calling Party Number is always displayed, i.e. the Presentation bit is forced to **ALLOWED** for all outgoing calls over this port
- **ALWAYS RESTRICTED:** The Calling Party Number is never displayed, i.e. the Presentation bit is forced to **RESTRICTED** for all outgoing calls over this port.

NOTE: **This parameter appears for a digital LINK port in PowerCell mode only.** The **LINK** must be enabled for it to appear at the NetPerformer console. **PRESENTATION** is not available on a NetPerformer unit operating in SIP VoIP voice transport mode (global parameter *Voice transport method* set to **SIP VoIP**).

Values: NOT FORCED, ALWAYS ALLOWED, ALWAYS RESTRICTED

Default: NOT FORCED

9.1.20 R2I15TIMERDELAY

R2 I15 timer delay (ms)

In an R2 application, this parameter determines the amount of time, in milliseconds, that the NetPerformer will wait for the **I-15** tone, which is the **End-of-Digits** indication.

Most end-user devices are able to transmit the **I-15** tone immediately when an additional digit is requested (with tone **A-1**), but no more digits are available. However, some devices do not send the **I-15** tone under these circumstances. In this case, the NetPerformer waits for the duration of the **R2I15TIMERDELAY**. When this timer expires, the NetPerformer restarts the R2 tone exchange normally.

NOTE: **This parameter appears for a digital LINK port in PowerCell mode only.** The **LINK** must be enabled for it to appear at the NetPerformer console. **R2I15TIMERDELAY** is not available on a NetPerformer unit operating in SIP VoIP voice transport mode (global parameter *Voice transport method* set to

SIP VoIP).

Values: 0 - 10000

Default: 800

9.1.21 REVERSEDATA

Reverse Data for digital channel

Permits the reversal of data transmission from LSB to MSB order on digital data channels. Data reversal can be configured on a per channel basis for PASSTHRU and HDLC channels, and in some cases may be required for PASSTHRU. To activate it, set **REVERSEDATA** to **YES**.

NOTE: This parameter is available for a digital channel only, *not* a serial port.

Values: NO, YES

Default: NO

9.1.22 TOD

Transmit on demand enable

Controls whether the NetPerformer will transmit data from this port immediately, without having to wait for the next poll of the port.

NOTE: This parameter should be used only when a data jitter buffer has been defined for the port, using the **DATAJITTERBUFFER** extended parameter (see "DATAJITTERBUFFER" on page 9-5).

- **YES:** Data traffic is prioritized on the port, using the precise delay defined by the **DATAJITTERBUFFER** parameter.
- **NO:** Transmit On Demand is inactive.

Values: NO, YES

Default: NO

9.1.23 TXMAXDELAY

TX Max delay

Determines the maximum number of bytes that the HDLC (PVCR) driver will store in the transmission queue before sending the data. A lower value improves the QoS, since fewer delays are introduced, and should be used for high priority data, low speed traffic (e.g. ASYNC), and traffic that is sensitive to delays.

Values: 0 - 255

Default: 0

9.1.24 TXMAXFRAMESIZE

TX Max frame size

Determines the maximum size of PVCR frames on the HDLC driver for legacy NetPerformer products (the SDM-9360, SDM-9380 and SDM-9585).

Values: 1 - 1000

Default: 200

9.1.25 TXQDATALEVEL

Tx queue level for discarding data

> **NOTE:** This parameter is available only on NetPerformer units installed with the GSM A-bis/ter licensed software option.

In a GSM application, **TXQDATALEVEL** defines the number of packets that must be buffered on this port before the DSP will start the flow control process. The maximum value is the current value of the extended GSM parameter **FLOWCTLACCUMULATION** (see "FLOWCTLACCUMULATION" on page 5-3).

- The lower the value of this parameter, the more rapidly data packets will be discarded. As a result, discards can be avoided during temporary bursts in the amount of bandwidth required.
- A higher value can prevent unwanted discards, but will increase the amount of jitter that occurs, since each packet represents 4 ms of additional jitter.

Raise the value of **TXQDATALEVEL** if congestion is occurring on load-balanced links. This reduces the amount of frame fragmentation required when a large number of GSM spans are directed to only one destination, and allows the GSM flow control mechanism to operate effectively in congestion situations using the number of packets queued.

Values: 0 - value of **FLOWCTLACCUMULATION**

Default: 1

9.1.26 TXQLOWLEVEL

Tx queue low level threshold

> **NOTE:** This parameter is available only on NetPerformer units installed with the GSM A-bis/ter licensed software option.

In a GSM application, **TXQLOWLEVEL** determines the threshold for stopping the flow control process on this port. The value of this parameter represents the number of packets buffered at this level. The maximum value is the current value of the extended GSM parameter **FLOWCTLACCUMULATION** (see "FLOWCTLACCUMULATION" on page 5-3).

Raise the value of **TXQLOWLEVEL** if congestion is occurring on load-balanced links. This reduces the amount of frame fragmentation required when a large number of GSM spans are directed to only one destination, and allows the GSM flow control mechanism to operate effectively in congestion situations using the number of packets queued.

Values: 0 - value of **FLOWCTLACCUMULATION**

Default: 0

9.1.27 TXQVOICELEVEL

Tx queue level for discarding voice

> **NOTE:** This parameter is available only on NetPerformer units installed with the GSM A-bis/ter licensed software option.

In a GSM application, **TXQVOICELEVEL** defines the number of packets that must be buffered on this port before the DSP will apply the flow control process to voice. The maximum value is the current value of the extended GSM parameter **FLOWCTLACCUMULATION** (see "FLOWCTLACCUMULATION" on page 5-3).

> **NOTE:** Since voice is prioritized, data packets are discarded first. If more bandwidth is still required, voice packets will be discarded.

- The lower the value of this parameter, the more rapidly voice packets will be discarded. As a result, discards can be avoided during temporary bursts in the amount of bandwidth required.
- A higher value can prevent unwanted discards, but will increase the amount of jitter that occurs, since each packet represents 4 ms of additional jitter.

Raise the value of **TXQVOICELEVEL** if congestion is occurring on load-balanced links. This reduces the amount of frame fragmentation required when a large number of GSM spans are directed to only one destination, and allows the GSM flow control mechanism to operate effectively in congestion situations using the number of packets queued.

Values: 0 - value of **FLOWCTLACCUMULATION**

Default: 3

9.1.28 RESTRICTSTATUSALARM & RESTRICTSTATUSDELAY

Prevent filling up the Alarm log

These two extended parameters prevent filling up the alarm log with "LINK x IN SYNC" and "LINK x OUT OF SYNC" alarms.

When the restriction of logging those alarms is activated, the port will wait a validation delay before logging an "IN SYNC" alarm. If the port becomes "OUT OF SYNC" before the expiration of the timer, neither the "IN SYNC" nor the "OUT OF SYNC" alarms will be logged. If the port did not become "OUT OF SYNC" before the expiration of the timer, the "IN SYNC" alarm will be logged as usual.

• Description: Setting this parameter at YES will restrict the number of "LINK x IN SYNC" and "LINK x OUT OF SYNC" alarms in the alarm log.

- Console: EP PORT p RESTRICTSTATUSALARM v, where p is the port number (100, 150, 200 …) and v is the value
- Choice of values: NO and YES
- Default value: NO
- Configuration file: [ifwan p] RestrictStatusAlarm=v

CLI example:

```
NP>EP PORT 300 RESTRICTSTATUSALARM YES
EXTENDED PARAMETERS
PORT 300> (RESTRICTSTATUSALARM) Restrict status alarm YES
NP>
```

- Description: Changing this value will affect the delay of the alarm restrictions
- Console: EP PORT p RESTRICTSTATUSDELAY v, where p is the port number (100, 150, 200 …) and v is the value in second
- Value range: 0 to 120
- Default value: 30
- Configuration file: [ifwan p] RestrictStatusDelay=v

CLI example:

```
NP>EP PORT 300 RESTRICTSTATUSDELAY 45
EXTENDED PARAMETERS
PORT 300> (RESTRICTSTATUSDELAY) Restrict status delay (s) 45
NP>
```

9.1.29 SEQVALIDATION

Sequence Validation

This new parameter has been added to the ports and PVC for the PVCR protocol. It is the SEQVALIDATION extended parameter, which can be set to YES or NO values. The default value is YES.

9.1.30 SECONDARYREMOTEUNIT & SECONDARYREMOTEPORT

Primary and secondary "remote" unit name and port

These extended parameters are used to re-establish a serial user port point-to-point connection to a different unit (secondary location) in case of main link failure to the primary unit/location. These new parameters apply to the following user serial port protocols:

- HDLC
- T-ASYNC
- R-ASYNC
- BSC
- COP
- PASSTHRU.

Before the implementation of these new parameters, NetPerformer could only establish or re-establish a serial port user connection to a unique unit (primary location). In case of main link failure, NetPerformer would only try to re-establish the connection to that unit when reachable either through backup link or using connection re-routing through alternative routes.

Now, in case of main link failure, the serial user port connection can be re-established to a different unit instead (i.e: secondary location). The secondary unit must have a serial port available to receive that connection when needed, as illustrated in Figure 9-1.

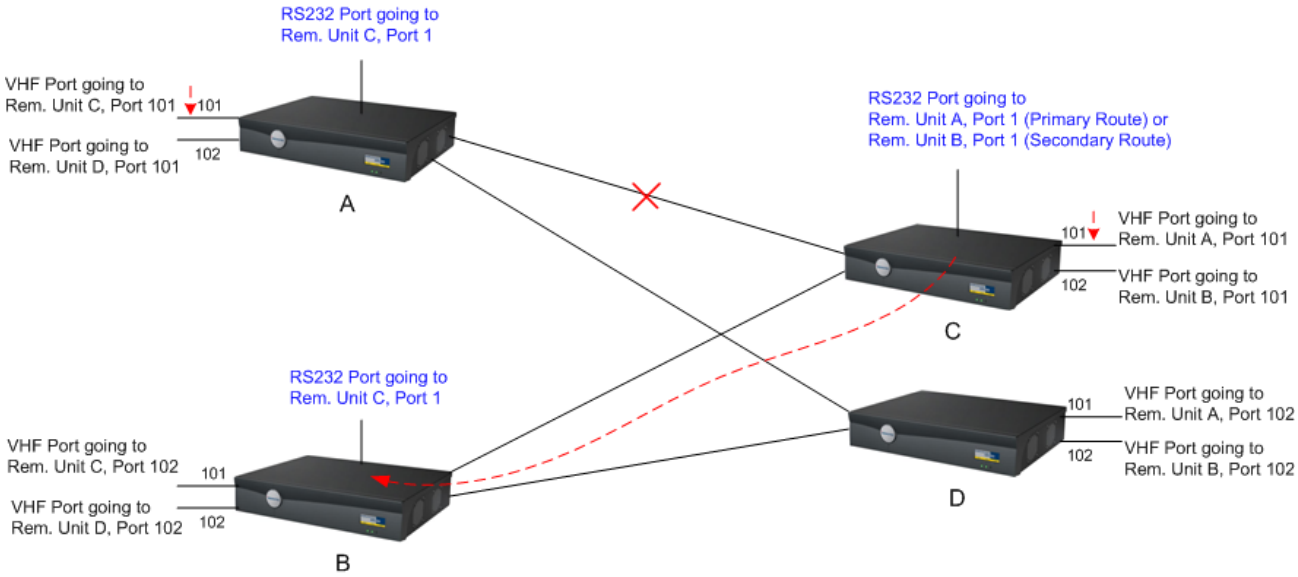


Figure 9-1: Primary and Secondary Remote Unit and Port example

This functionality is achieved through the following new extended parameters:

```
EP PORT x SECONDARYREMOTEUNIT yyyy (x = port number and yyyy = remote unit
name)
EP PORT x SECONDARYREMOTEPORT y (x = port number and y = remote port
number)
```

NOTE: The Remote Unit and Remote Port, available through the standard user port configuration, are used as the primary destination unit and destination port.

Serial User Port connection behavior

1. If the primary destination unit is **up** and the secondary destination unit is **down**, then the user port connection is initiated to the primary destination unit.
2. If the primary destination unit is **down** and the secondary destination unit is **up**, then the user port connection is initiated to the secondary destination unit.
3. If both destination units are up, then the user port connection is initiated to the destination unit that is reachable at the least cost (i.e: number of hops). If the cost to the primary destination is the same as the cost to the secondary destination, then the primary destination has precedence.

PU Extended Parameters

10.1 About the PU Extended Parameter

The **PU** extended parameter subtype is available on all NetPerformer products. It is used to fine-tune PUs for special applications of the NetPerformer feature set.

> **NOTE:** **The PU extended parameter subtype appears as an EP command *Item* only if at least one PU has been configured using the SETUP/PU command.**

To adjust the value of a PU extended parameter, enter:

EP PU *pu_number parameter_name parameter_value*

If you do not know the extended parameter name:

1. Enter **EP ?**
2. At the *Item* prompt, enter **PU**

   The list of currently configured PUs is displayed.
3. At the second *Item* prompt, identify the number of the PU you wish to fine tune.

   The list of all **PU** extended parameters is displayed.
4. Enter the specific parameter name at the command line prompt
5. Enter a question mark (**?**) to view all valid values for this parameter
6. Enter the new value.

EP ?/PU example

```
SDM-9230>EP ?
EXTENDED PARAMETERS
Item (BRG/GLOBAL/IP/IPX/LAN/NAT/PORT/PU/PVC/VPORT,def:BRG) ? PU
Item (1/2/3/4/5/10/20/30/36,def:1) ? 1
Item (OWNCOMPDICT/MAXCOST,def:OWNCOMPDICT) ? MAXCOST
PU 1> (MAXCOST) Maximum cost (0-65534,def:65534) ? ?
PU 1> (MAXCOST) Maximum cost (Default value:65534, Current
value:65534) ? 48000
```

The **PU** extended parameter subtype includes the following:

10.1.1 MAXCOST

Maximum cost

Controls the establishment of a virtual connection through the network The unit monitors the cost of the best route available. If this cost is higher than the value of the **MAXCOST** parameter, the virtual connection will not be opened.

NOTE: This function is employed only when the PU has been configured with a **LINKS** operating mode.

Values: 0 - 65534

Default: 65534

10.1.2 OWNCOMPDICT

Own compression dictionary

When activated (set to **YES**), the **OWNCOMPDICT** parameter allows for one compression dictionary per PU. This can be useful when there are many possible routes to a remote unit.

Values: NO, YES

Default: NO

PVC Extended Parameters

11.1 About the PVC Extended Parameter Subtype

The **PVC** extended parameter subtype is available on all NetPerformer products. It is used to fine-tune PVCs for special applications of the NetPerformer feature set.

To adjust the value of a PVC extended parameter, enter:

EP PVC *pvc_number parameter_name parameter_value*

If you do not know the extended parameter name:

1. Enter **EP ?**
2. At the *Item* prompt, enter **PVC**
3. At the second *Item* prompt, identify the number of the PVC you wish to fine tune.

   The list of all PVC extended parameters is displayed.
4. Enter the specific parameter name at the command line prompt
5. Enter a question mark (**?**) to view all valid values for this parameter
6. Enter the new value.

EP ?/PVC example

```
SDM-9230>EP ?
EXTENDED PARAMETERS
Item (BRG/GLOBAL/IP/IPX/LAN/NAT/PORT/PU/PVC/VPORT,def:BRG) ? PVC
Item (1-600,def:100) ? 120
CHOICE: COST             FRAGMENT         IRFACTOR         MAXCOST
        PACKDELAY        PRIORITY         PVCRFS
TXONFRCHECKTIMER
        TXQDATALEVEL     TXQLOWLEVEL      TXQVOICELEVEL
UDPCHECKSUM

Item (Current value:COST) ? FRAGMENT
PVC 120> (FRAGMENT) Fragmentation mode (def:NONE) ? ?
CHOICE: NONE         RFC1490      RFC1490-NET  FP-NET       RFC1490-
USER
        FP-USER      8192

PVC 120> (FRAGMENT) Fragmentation mode
        (Default value:NONE, Current value:NONE) ? RFC1490
```

The PVC subtype of extended parameters includes the following:

11.1.1 COST

PVCR cost

Defines the cost of this PowerCell link in the network. The **COST** parameter is used only when the PVC is configured in **PVCR** mode.

Values: 1 - 65534

Default: 1

11.1.2 FRAGMENT

Fragmentation mode

For a PVC in RFC1490 or TRANSP mode only. Determines the type of fragmentation to be applied to large frames.

> **NOTE:** The maximum number of bytes per frame is determined from the **PVCRFS** (PVCR Frame Size) extended PVC parameter, described on "PVCRFS" on page 11-5.

- **RFC1490:** Fragmentation using the RFC1490 standard. This setting is valid only for PVCs in **RFC1490** mode
- **RFC1490-USER:** Fragmentation used the RFC1490 standard on the user side of a PVC in **TRANSP** mode
- **RFC1490-NET:** Fragmentation using the RFC1490 standard on the network side of a PVC in **TRANSP** mode
- **FP-USER:** Fragmentation using Memotec's proprietary SDM-FP method on the user side of a PVC in **TRANSP** mode
- **FP-NET:** Fragmentation using Memotec's proprietary SDM-FP method on the network side of a PVC in **TRANSP** mode
- **NONE**: The frames are not fragmented. This is the default value.

Values: NONE, RFC1490, RFC1490-NET, FP-NET, RFC1490-USER, FP-USER

Default: NONE

11.1.3 IRFACTOR

Information rate factor

> **NOTE:** The PVC must be activated for this parameter to be displayed.

Determines the number of bits that will be accumulated by the NetPerformer during bursts of high-speed traffic.

- The higher the **IRFACTOR**, the lower the number of bits accumulated.

  For example, if the Information Rate (IR) is 64 Kbps and the IRFACTOR (F) is 1, traffic can burst up to a maximum of 64,000 bits. If the IRFACTOR is raised to 2, traffic can burst up to 32,000 bits only. Thus the maximum number of bits transmitted = IR / F.

- In addition, the higher the **IRFACTOR**, the longer the burst will last. The duration of the burst = IR * F.

Values: 1 - 250

Default: 50

11.1.4 MAXCOST

MULTIPLEX Maximum cost

Controls the establishment of a virtual connection through the network The unit monitors the cost of the best route available. If this cost is higher than the value of the **MAXCOST** parameter, the virtual connection will not be opened.

NOTE: This function is employed only when the PVC has been configured in **MULTIPLEX** mode.

Values: 0 - 65534

Default: 65534

11.1.5 PRIORITY

Priority

Determines how traffic over a particular PVC will be prioritized with respect to traffic from other PVCs. Use **PRIORITY** to ensure that data critical applications get as much bandwidth as possible on Frame Relay circuits. By default, the value of **PRIORITY** is **LOW**, which means that .

- **LOW:** The PVC is not given preferential treatment. Its transmit queue is always emptied last. **This is the default value.**
- **MEDIUM:** The transmit queue of the PVC is always emptied before **LOW** priority PVCs, but after **HIGH** priority PVCs.
- **HIGH:** The transmit queue of the PVC is always emptied before **MEDIUM** or **LOW** priority PVCs.

NOTE: If more than one PVC uses a specific port, the NetPerformer will always empty the transmit queue of the **HIGH** priority PVC first, then go to the **MEDIUM** priority PVC and finally the **LOW** priority PVC.

Values: LOW, MEDIUM, HIGH

Default: LOW

11.1.6 PACKDELAY

PACK delay

Determines the delay, in milliseconds, before transmitting a frame that contains several PVCR cells. This parameter is activated when the PVC is configured in **PVCR** mode, with the *Cell Packetization* parameter set to **YES**.

When *Cell Packetization* is used, several PVCR cells are packed one after the other to create a larger frame. The **PACKDELAY** timer starts when the first cell is packed in the frame. If no other cell is received within the specified delay, the frame is transmitted. If another cell is received within the specified delay, it is added to the frame and the **PACKDELAY** timer is restarted.

Values: 1 - 255

Default: 5

11.1.7 PVCRFS

PVCR Frame Size

Determines the maximum frame size, in bytes, for the *Fragmentation* and *Cell Packetization* functions before transmission over the WAN. The PVCR frame size can be set separately for each PVC.

- Fragmentation is discussed on page 3 under the **FRAGMENT** parameter.
- Cell Packetization permits combining cells before transmission. This accommodates some public Frame Relay networks that do not support a rapid sequence of several small frames. It is enabled on the port when the *Cell packetization* parameter is set to **YES**. The **PVCRFS** extended parameter limits how many bytes can be combined in this way.

A frame is transmitted either when the maximum frame size is reached (determined by **PVCRFS**) or when the *Frame Check Timer* (**FRCHECKTIMER** global extended parameter) has expired. The **FRCHECKTIMER** is described on "FRCHECKTIMER" on page 3-17.

Values: 1 - 2000

Default: 200

11.1.8 SHAREDICT

Share dictionary

> **NOTE:** This parameter is listed only when the SkyPerformer licensed software option is installed on the NetPerformer unit.

SP-MULTIPLEX PVCs use independent compression dictionaries, and if many PVCs are configured, the number of dictionaries required can become cumbersome to the system. **SHAREDICT** allows PVCs that are going to the same destination to use the same dictionary. This is the default situation. Set **SHAREDICT** to **NO** if you would like the SP-MULTIPLEX PVCs to use independent compression dictionaries, regardless of their destination.

Values: NO, YES

Default: YES

11.1.9 TXONFRCHECKTIMER

Frame transmitted on frchecktimer

NOTE: This parameter is available only on NetPerformer units installed with the Abis/Ater licensed software option.

Caution: This parameter is intended for the use of NetPerformer Technical Support personnel only. It should not be changed from its default value.

Values: NO, YES

Default: YES

11.1.10 TXQDATALEVEL

Tx queue level for discarding data

NOTE: This parameter is available only on NetPerformer units installed with the Abis/Ater licensed software option.

11.1.11 TXQVOICELEVEL

Tx queue level for discarding voice

NOTE: This parameter is available only on NetPerformer units installed with the Abis/Ater licensed software option.

NOTE: Since voice is prioritized, data packets are discarded first. If more bandwidth

is still required, voice packets will be discarded.

- The lower the value of this parameter, the more rapidly voice packets will be discarded. As a result, discards can be avoided during temporary bursts in the amount of bandwidth required.
- A higher value can prevent unwanted discards, but will increase the amount of jitter that occurs, since each packet represents 4 ms of additional jitter.

Raise the value of **TXQVOICELEVEL** if congestion is occurring on load-balanced links. This reduces the amount of frame fragmentation required when a large number of spans are directed to only one destination, and allows the flow control mechanism to operate effectively in congestion situations using the number of packets queued.

Values: 0 - value of **FLOWCTLACCUMULATION**

Default: 3

11.1.12 UDPCHECKSUM

Enable UDP checksum

NOTE: This parameter is not available on a NetPerformer unit operating in SIP VoIP voice transport mode (global parameter *Voice transport method* set to **SIP VoIP**).

Permits calculation of the UDP checksum on the PVC, which avoids sending a bad frame to the DSP, thereby preventing a DSP crash. This is the default setting (**YES**). To disable **UDPCHECKSUM**, set it to **NO**.

Values: NO, YES

Default: YES

11.1.13 SEQVALIDATION

Sequence Validation

This parameter is applied to the ports and PVC for the PVCR protocol. It is the SEQVALIDATION extended parameter, which can be set to YES or NO values. The default value is YES.

SIP Extended Parameters

12.1 About the SIP Extended Parameter Subtype

The **SIP** extended parameter subtype is available only when the SIP VoIP licensed software option is installed on the NetPerformer unit.

To adjust the value of a SIP extended parameter, enter:

EP SIP *parameter_name parameter_value*

If you do not know the extended parameter name:

1. Enter **EP ?**
2. At the *Item* prompt, enter **SIP**. The list of all SIP extended parameters is displayed
3. Enter the specific parameter name at the command line prompt
4. Enter a question mark (**?**) to view all valid values for this parameter
5. Enter the new value.

EP ?/SIP example

```
SDM-9230>EP ?
EXTENDED PARAMETERS
Item (BRG/GLOBAL/IP/IPX/LAN/NAT/PORT/PVC/SIP/VPORT,def:BRG) ? SIP
CHOICE: ALARMS        HEAPSIZE      RTPUDP        SIPTIMEOUT
SUPPSERV
        USERAGENTTYPE

Item (Current value:ALARMS) ? HEAPSIZE
SIP> (HEAPSIZE) Heap Size in Kilo Bytes (512-8192,def:2048) ? ?
SIP> (HEAPSIZE) Heap Size in Kilo Bytes (Default value:2048,
Current value:2048) ? 512
```

The SIP extended parameter subtype includes the following:

12.1.1 ALARMS

Log Sip Alarms

> **NOTE:** This parameter is supported in NetPerformer V10.2.X only.

Determines whether alarms pertaining to the SIP VoIP functionality are logged in the NetPerformer alarm file, and displayed with the Display Alarms (**DA**) command. By default, SIP alarms are not included with the system alarms (**DISABLE** value). To include them, set **ALARMS** to **ENABLE**.

Values: DISABLE, ENABLE

Default: DISABLE

12.1.2 HEAPSIZE

Heap Size in Kilobytes

Permits changing the SIP heap size from a default of 2 MB to as high as 8 MB. Enter the value required for your application, **in kilobytes**.

Values: 512 - 8192

Default: 2048

12.1.3 RTPUDP

Base for RTP UDP Port

Permits adjusting the base value of an RTP UDP port. Enter the new value to change the current setting.

> **NOTE:** **You must restart the unit (RU command) once this parameter has been configured for the change to take effect.**

Values: 1000 - 48000

Default: 40000

12.1.4 SIPTIMEOUT

SIP Connection Timeout

Defines the SIP connection timeout, which is applied to the called unit in a SIP VoIP application. It determines the maximum duration of time, in seconds, that the host will wait for a voice channel to go **OFF HOOK** before disconnecting the call.

For example, Unit A calls Unit B, which rings a telephone at the Unit B site. If no one answers the phone within the time period defined by **SIPTIMEOUT**, the called unit disconnects the calling side and the phone stops ringing.

Values: 30 - 255

Default: 120

12.1.5 SUPPSERV

Transfer supplementary services

Determines whether ISDN/QSIG supplementary services will be transported using SIP VoIP, by encapsulating them in SIP methods such as **INVITE**, **INFO**, **183** and **200**. By default, ISDN/QSIG supplementary services are supported in SIP (**ENABLE** value). To exclude them, set **SUPPSERV** to **DISABLE**.

Values: DISABLE, ENABLE

Default: ENABLE

12.1.6 USERAGENTTYPE

Sip user agent type

Defines the function of the User Agent (UA):

- **ENDPOINT:** (default) If the UA receives an **INVITE** and there is no channel available to connect another call, the UA sends a **486 Busy** message. In this case, the proxy server will not attempt the place the call elsewhere.
- **GATEWAY:** If the UA receives an **INVITE** and there is no channel available to connect another call, the UA sends a **503 Service Unavailable** message. In this case, the proxy server will attempt to place the call via another route, if there is one available.

Values: ENDPOINT, GATEWAY

Default: ENDPOINT

VPORT Extended Parameters

13.1 About the VPORT Extended Parameter

The **VPORT** extended parameter subtype is available on all NetPerformer products. It is used to fine-tune voice channels for special applications of the NetPerformer feature set.

> **NOTE:** **The VPORT extended parameter subtype appears as an EP command *Item* only if at least one voice channel has been configured with a voice protocol using the *Protocol* parameter of the SETUP/SLOT/CHANNEL** or **SETUP/SPAN/CHANNEL** command.

To adjust the value of a VPORT extended parameter, enter:

EP VPORT *channel_number parameter_name parameter_value*

If you do not know the extended parameter name:

1. Enter **EP ?**
2. At the *Item* prompt, enter **VPORT**

   The list of currently configured voice channels is displayed.
3. At the second *Item* prompt, identify the number of the voice channel you wish to fine tune. For example, enter **101** for the first channel of the digital LINK in slot/span 1.

   The list of all **VPORT** extended parameters is displayed.
4. Enter the specific parameter name at the command line prompt
5. Enter a question mark (**?**) to view all valid values for this parameter
6. Enter the new value.

EP ?/VPORT example

```
SDM-9230>EP ?
EXTENDED PARAMETERS
Item (BRG/GLOBAL/IP/IPX/LAN/NAT/PORT/PU/PVC/VPORT,def:BRG) ? VPORT
Item (101/102/103/104,def:101) ?
CHOICE: ANSWERDELAY         ANSWERMODE          FAXONLY
        FORCEDFALLBACK      POUNDSIGNPASS       STUENCRYPTION
        T30TRANSPARENTNSF   V32RATESIGNALCODING

Item (Current value:ANSWERDELAY) ? POUNDSIGNPASS
VPORT 102> (POUNDSIGNPASS) Send pound sign to remote (def:NO) ? ?
CHOICE: NO  YES END

VPORT 102> (POUNDSIGNPASS) Send pound sign to remote
        (Default value:NO, Current value:NO) ? END
```

The **VPORT** extended parameter subtype includes the following:

13.1.1 ANSWERDELAY

Answer delay (ms)

Sets the supervision delay timer, in milliseconds, for the *ANSWERMODE* extended parameter (described below) and for digital FXO channels. Its value is used only when the **ANSWERMODE** is set to **ANSWER** or **CLEAR**.

Values: 100 - 10000, in increments of 10 ms

Default: 2000

13.1.2 ANSWERMODE

Answer mode

Permits adjustment of the way in which the Signaling Engine handles voice call Connect Requests forwarded from the WAN to a T1/E1 connection. In particular, this parameter sets the answer supervision mode of the associated digital channel.

This may be needed to support older digital equipment that use a signaling protocol requiring the Signaling Engine to be actively involved whenever a Connect Request is received from the WAN.

- **NORMAL:** Signaling on the associated timeslot is used to acknowledge the Connect Request being forwarded to the digital interface. This is the method most commonly used by digital equipment to manage voice connections, and is the default **ANSWERMODE** value.
- **ANSWER:** Provides a way of answering calls independently of the signaling on the associated timeslot. If the supervision delay timer expires (see **ANSWERDELAY** extended parameter, above), the Signaling Engine assumes that the call has been answered, and acknowledges the connection on behalf of the connected equipment.
- **CLEAR:** The Signaling Engine rejects the call when the supervision delay timer expires.

NOTE: **The ANSWERMODE extended parameter has no effect on T1/E1 channels configured for FXO signaling** (with the *Signaling type* parameter). **ANSWERMODE** is forced to **ANSWER** on digital FXO channels, using the supervision delay timer specified with the **ANSWERDELAY** extended parameter.

Values: NORMAL, ANSWER, CLEAR

Default: NORMAL

13.1.3 FAXONLY

FAX ONLY enable

When this parameter is activated, only fax messages will be processed on the channel, and voice compression is disabled. To activate **FAXONLY**, set it to **YES**. By default this parameter is set to **NO**, which allows the port to process both voice and fax.

Values: NO, YES

Default: NO

13.1.4 FORCEDFALLBACK

Rate fallback

When this parameter is activated (set to **YES**), the channel is forced into voice rate fallback, regardless of the status of the BECN bits. This usually implies a reduced rate and double buffering. For example, an 8 Kbps rate with single buffering will be replaced with a 5.8 Kbps rate with double buffering. A rate of 4.8 Kbps with single buffering is replaced with 4.8 Kbps with double buffering in fallback mode.

By default **FORCEDFALLBACK** is deactivated (set to **NO**).

For further information on the fallback rate and buffering schemes available for the various voice protocols refer to the description of the *DSP packets per frame* parameters, in the appendix *SE/SLOT/#/CHANNEL Configuration Parameters* of the *Analog Voice* module of this document series.

Values: NO, YES

Default: NO

13.1.5 ISDNASCIICALLINGNB

Ascii characters in Calling Nb IE

Controls whether a Calling Party Number information element (IE) with non-digit content, i.e, ASCII characters other than **0** to **9**, will be accepted and retransmitted to the outgoing (egress) side. Set **ISDNASCIICALLINGNB** to **ENABLE** to allow these ASCII characters.

Values: DISABLE, ENABLE

Default: DISABLE

13.1.6 ISDNOVERLAPSENDING

ISDN Overlap Sending

Controls the support of overlap sending in ISDN:

- **DISABLE:** When the NetPerformer places a call in ISDN, it sends the dial digits in en-bloc mode, even if the incoming digits are in overlap mode.
- **ENABLE:** The NetPerformer dials in overlap mode if the incoming dial digits are received in overlap mode. Otherwise, it dials in en-bloc mode.

NOTE: **To support overlap mode, *all* ISDN channels involved (both sides) must have ISDNOVERLAPSENDING set to ENABLE. In addition, both ends must be configured to the same ISDN type (including QSIG) since the supplementary digits are transmitted in the same way as supplementary services.**

Values: DISABLE, ENABLE

Default: DISABLE

13.1.7 MFSENDWINKONST23P

MF Send wink on ST2P/ST3P reception

In an MF (R1) dialing scenario, this parameter determines whether signaling winks will be sent after ST2P or ST3P tones have been received. Set **MFSENDWINKONST23P** to **YES** to allow the sending of signaling winks.

Values: NO, YES

Default: NO

13.1.8 POUNDSIGNPASS

Send pound sign to remote

Determines how the pound sign (**#**) signal will be passed to the remote unit:

- **NO:** The pound sign (**#**) indicates the end of the user-dialed digits string. When the NetPerformer receives a **#**, it immediately brings up the call. **The # is not forwarded to the remote unit.** This is the default value.
- **END:** The **#** indicates the end of the user-dialed digits string. When the NetPerformer receives a **#**, it immediately brings up the call and **forwards the # to the remote unit.**
- **YES:** The **#** does not indicate the end of a user-dialed digits string. Instead, the **#** is processed like any other telephone key signal, and is passed transparently to the remote side.

NOTE: When the **YES** value is selected, the *Dial timer* parameter determines the end of the user-dialed digits string. This can add a slight delay to the call setup procedure. You must avoid this delay in an application that requires forwarding of the **#** to the remote side, change the value of the **POUNDSIGNPASS** extended parameter from **YES** to **END**.

Values: NO, YES

Default: NO

13.1.9 R2ACCEPTI11TOI14

R2 Accept I11 to I14

In an R2 signaling application, controls whether incoming tones I-11 to I-14 will be interpreted as normal digits, e.g. ***** and **#**, rather than being ignored. When **R2ACCEPTI11TOI14** is enabled, a call requiring these digits can be properly completed.

NOTE: You must also set the **POUNDSIGNPASS** extended voice parameter to **YES** for the unit to be able to forward tones I-11 to I-14 as normal digits. Refer to "POUNDSIGNPASS" on page 13-5.

By default **R2ACCEPTI11TOI14** is set to **DISABLE**, and tones I-11 to I-14 are ignored.

Values: DISABLE, ENABLE

Default: DISABLE

13.1.10 R2EARLYANI

R2 Early Ani Request

On a connection that uses R2 signaling with R2 tones, **R2EARLYANI** determines when the NetPerformer will request the ANI after called party digits are received:

- **AFTER 1 DIGIT:** The NetPerformer will request the ANI after 1 called party digit is received
- **AFTER 2 DIGITS:** After 2 called party digits are received
- **AFTER 3 DIGITS:** After 3 called party digits are received
- **DISABLE:** The NetPerformer will request the ANI after the end of the digits received from the called party. Thus ANI transmission immediately follows the transmission of the called number. This is the default value.

NOTE: When **R2EARLYANI** is disabled, the NetPerformer may not be compatible with standard R2-China PSTN switches.

Values: **AFTER 1 DIGIT, AFTER 2 DIGITS, AFTER 3 DIGITS,** DISABLE

Default: DISABLE

13.1.11 R2FORCEDDISC

Support R2 forced disconnect

In an R2 signaling application, determines whether a **Forced Disconnect** will be supported. On a **Forced Disconnect**, signaling bits **0001** are received while the call is up.

Values: NO, YES

Default: NO

13.1.12 R2GRPBSWTOGRPIA

R2 Group B Switch to Group I/A

Defines the R2 signaling **Group B** digit that will flag a switch to R2 signaling **Group A**. Enter the digit that will be used. A zero value, **0**, deactivates this feature. This is the default setting.

Values: 0 - 15

Default: 0

13.1.13 R2GRPCSWTOGRPIA

R2 Group C Switch to Group I/A

Defines the R2 signaling **Group C** digit that will flag a switch to R2 signaling **Group A**. Enter the digit that will be used. A zero value, **0**, indicates that the NetPerformer will send the default value for the digit that defines a switch from **Group C** to **Group A**.

Values: 0 - 15

Default: 0

13.1.14 R2NEXTANIDIGIT

R2 Next ANI Digit

When R2 tones are used, a sequence of forward and backward tones is exchanged between the two sides of the connection. **R2NEXTANIDIGIT** defines the tone that will be

transmitted after each ANI digit is received, to signal a request for the next ANI digit. Enter the digit that will be used.

If ANI is required between two R2 channels that use R2 digits (*Tone type* set to **R2**), you must set the **R2NEXTANIDIGIT** extended parameter to **1**. This is the default value.

Values: 1 - 15

Default: 1

13.1.15 R2REMOTEANICATEGORY

R2 Remote ANI Category

In an R2 signaling application, it is now possible to support end-to-end transport of the ANI category. This is accomplished through a new extended voice parameter, **R2REMOTEANICATEGORY**.

When **R2REMOTEANICATEGORY** is set to **DISABLE** (the default value) the ANI category transmitted is determined locally from the current value of the *R2 Group 3 ANI category digit* parameter. To retransmit on the remote side the ANI category that was received on the incoming side, change the value of **R2REMOTEANICATEGORY** to **ENABLE**.

Values: DISABLE, ENABLE

Default: DISABLE

13.1.16 R2REMOTEGRPB

R2 Enable Remote Group B

In an R2 signaling application, determines whether a Group B tone that is received will be retransmitted to the incoming (ingress) side:

- **DISABLE** (the default value): The Group B tone is generated locally according to the following rules:
  - **If the destination is available:** The Group B tone takes the value of the *R2 Group 2 digit* voice channel parameter
  - **If the destination is busy:** The Group B tone takes the value of the *R2 Busy digit* voice channel parameter.
- **ENABLE:** The Group B tone is retransmitted to the incoming side without change.

Values: DISABLE, ENABLE

Default: DISABLE

13.1.17 R2RESTARTANI

R2 Restart ANI Sequence On Reentry to ANI

In an R2 signaling application, determines whether the ANI digits should be restarted when passing from **Group 3** to another group, and then back to **Group 3**. The **Group 3** ANI digits indicate the calling number, and **Group 1** ANI digits indicate the called number.

R2RESTARTANI is useful for handling switches that require a change from one group to another in the middle of a calling sequence. In some cases when returning to **Group 3** from **Group 1**, the switch may expect that the ANI digits be restarted from the beginning.

Values: NO, YES

Default: NO

13.1.18 R2SENDI15

R2 Send I-15

In an R2 signaling application, determines whether the I-15 tone must be sent after all the digits have been sent **if an additional digit is requested** (with tone A-1). The I-15 tone is the end-of-digits indication.

Values: NO, YES

Default: YES

13.1.19 STUENCRYPTION

STU encryption support

Permits the support of encrypted modem connections and encrypted STU telephone connections. When **STUENCRYPTION** is set to **ENABLE**, the NetPerformer is able to correctly interpret the tones for modems which use tones similar to those used by encrypted STU telephones.

NOTE: On the NetPerformer base unit, the default value is **ENABLE**. On a unit with SIP, the default value is **DISABLE**. **Normally this parameter should be left at its default value.**

Values: DISABLE, ENABLE

Default: Base unit: ENABLE
SIP VoIP unit: DISABLE

13.1.20 T30TRANSPARENTNSF

T30 transparent fax NSF packet

Determines whether T30 NSF fax messages will be sent transparently, that is, without any changes or compression. This can be useful for T30 fax machines that use encryption, or that provide specific information about the equipment in the body of an NSF message. If this is the case for your fax machine, set **T30TRANSPARENTNSF** to **ENABLE** to ensure proper communication.

Values: DISABLE, ENABLE

Default: DISABLE

13.1.21 V32RATESIGNALCODING

V.32 rate signal coding

Controls whether the trellis bits will be removed from V.32 bis *Modem Relay over Packet* traffic in order to force V.32 rate signal coding. When **V32RATESIGNALCODING** is set to **ENABLE**, the port is able to transport V.32 bis at 4800 bps, and support Modem Relay at that speed. To leave the trellis bits from V.32 traffic intact (and deactivate V.32 rate signal coding), set **V32RATESIGNALCODING** to **DISABLE**. This is the default setting.

Values: DISABLE, ENABLE

Default: DISABLE

13.1.22 FXSSEIZUREDETECTTIME

FXS seizure detect time configuration

This extended parameter allows the change of the FXS seizure detect time. An application like autodial could need a change of this parameter.

Console: EP VPORT p FXSSEIZUREDETECTTIME v, where p is the port number and v is the value in ms

Range of value: 20 to 600

Default value: 50

Configuration file: [ifvce p] FxsSeizureDetectTime=v

CLI example:

```
 NP>EP VPORT 201 FXSSEIZUREDETECTTIME 50
EXTENDED PARAMETERS
VPORT 201> (FXSSEIZUREDETECTTIME) FXS seizure detect time (ms) 50
NP>
```

13.1.23 EMSEIZUREDETECTTIME

E&M seizure detect time configuration

This extended parameter allows the change of the E&M seizure detect time configuration.

An application like redial could need a change of this parameter.

Console: EP VPORT p EMSEIZUREDETECTTIME v, where p is the port number and v is the value in ms

Range of value: 20 to 800

Default value: 50

Configuration file: [ifvce p] EMSeizureDetectTime=v

CLI example:

```
NP>EP VPORT 201 EMSEIZUREDETECTTIME 50
EXTENDED PARAMETERS
VPORT 201> (EMSEIZUREDETECTTIME) E&M seizure detect time (ms) 50
NP>
```

13.1.24 EMPTTONHOOKDETECTTIME

Hook detect time configuration for E&M Push-To-Talk

This extended parameter allows the change of the E&M Push-To-Talk on hook detect time. A PTT application generating a small pulse on the M-Lead could need a modification of this parameter.

Console: EP VPORT p EMPTTONHOOKDETECTTIME v, where p is the port number and v is the value in ms

Range of value: 50 to 2000

Default value: 10

Configuration file: [ifvce p] EMPttOnHookDetectTime=v

CLI example:

```
NP>EP VPORT 201 EMPTTONHOOKDETECTTIME 10
EXTENDED PARAMETERS
VPORT 201> (EMPTTONHOOKDETECTTIME) E&M ptt on hook detect time
(ms) 10
NP>
```

13.1.25 EMIDLEDETECTTIME

Delay Too Long Releasing E Lead

This extended parameter sets the duration for the validation/detection of an on-hook on a voice port.

Console	Text-based Config
EP VPORT x EMIDLEDETECTTIME value	[ifvce #] EMIdleDetectTime =value

Range of values: 20 to 800, where value is the time in milliseconds.

- **Default value**: 50

13.1.26 EMPULSEEVENTRELAY

Custom signaling for E&M application

Custom signaling extended parameter for E&M application

Console	Text-based Config
EP VPORT x EMPULSEEVENTRELAY value	[ifvce x] EMPulseEventRelay = value

Values:

- DISABLED: Default value
- DIGIT: Regenerate pulse transition at the remote end when the voice port is at the CALL UP state.
- PULSE: For a mixture of tones and break pulses (40 ms duration), regenerate pulses of 40 ms at the remote end

13.1.27 PTTCONTROLAUTOCONNECT

Auto-establish PTT-controlc onnections without waiting for PTT signal

Before v10.5.0, if PTT-control is configured on both sides, the “permanent” connection is established the first time a PTT signal is detected (button is pressed on one side). As this may not be acceptable for a customer running a push-to-talk application on SIP, and as per the Eurocae WG-67 / ED-137 specification, the following extended parameter has been added for this auto-establish to be set:

EP VPORT xxx PTTCONTROLAUTOCONNECT ENABLE where xxx is the voice channel number. In this mode, a not-established PTT-Control connection will be “re-launched” approximately each 30 seconds.

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