CHAPTER 1

Super User Commands

Introduction

This chapter contains detailed descriptions of the **IPX/IGX/BPX Software Release 8.2** super user commands. The IPX/IGX/BPX super user command descriptions are presented in alphabetical order. Access to these commands requires privilege level zero (0).

Caution Use of these commands should be restricted to StrataCom personnel and other qualified users, such as System Administrators. Do not distribute this information to casual users because improper use of some of these commands may lead to system malfunction or complete failure.

General Information

Note Access to the super user commands (privilege level 0) requires a different login and password than access to commands with privilege levels 1 through 6.

Because the privilege level for all super user commands is 0, the privilege level does not appear in the command definition.

Table 1-1 lists all the IPX/IGX/BPX level 0 (super user) commands in alphabetical order. The table also lists whether the command can be used on IPX node, on a BPX node, and with a job. To access these commands, type in **SuperUser** at the login prompt. Then type in the super user password. To exit a command and return to the "next command" prompt, press the **delete** key.

The screens and examples used in this chapter are based on a network equipped with both IPX and BPX nodes. The nodes are all running a preliminary version of Release 8.2 system software. This command list reflects all commands available for this release of software. Refer to the *Command Reference* for information on how to enter commands and for detailed descriptions of privilege level 1 through 6 commands.

Table 1-1 Super User Command List

Command	Description	Job?	IPX	IGX	BPX
burnfwrev	Burn Firmware Revision	Yes	X	X	X
clrcderrs	Clear Detailed Card Errors Log	Yes	X	X	X
clrcnf	Clear Configuration Memory	No	X	X	X
clrfpevt	Clear FastPAD Event Reporting	No	X	X	
cnfbmpparm	Configure Priority Bumping Parameter	Yes	X	X	X
cnfcdpparm	Configure CDP Card Parameters	No	X	X	
cnfcftst	Configure Communications Fail Test Pattern	No	X	X	X
cnfchstats	Configure Channel Statistics Collection	Yes	X	X	X
cnfchts	Configure Channel Timestamp	Yes	X	X	X
cnfclnparm	Configure Circuit Line Parameters	No	X	X	
cnfclnsigparm	Configure Circuit Line Signalling Parameters	No	X	X	
cnfclnstats	Configure Circuit Line Statistics Collection	Yes	X	X	
cnfcmparm	Configure Connection Management Parameters	Yes	X	X	X
cnfdiagparm	Configure Diagnostic Test Parameters	No	X	X	X
cnfdlparm	Configure Download Parameters	No	X	X	X
cnfecparm	Configure Echo Canceller Parameters	Yes	X	X	
cnffpcom	Configure FastPAD Communication Parameter	Yes	X	X	
cnffpcon	Configure FastPAD Connection Parameters	Yes	X	X	
cnffpddelay	Configure FastPad Sc/Mc Parameters	No	X	X	
cnffpdpvc	Configure FastPad bc/bc pvc Parameters	No	X	X	
cnffpmap	Configure FastPAD Map Table	Yes	X	X	

Command	Description	Job?	IPX	IGX	BPX
cnffpport	Configure FastPAD Port Parameters	No	X	X	
cnffpsys	Configure FastPAD System Parameters	No	X	X	
cnffstparm	Configure Frame Relay ForeSight Node Parameters	No	X	X	X
cnflnparm	Configure ATM Line Parameters	No			X
cnflnsigparm	Configure Line Signalling Parameters	No	X	X	
cnflnstats	Configure Line Statistics Collection	Yes	X	X	X
cnfmxbutil	Configure MUXBUS Utilization	No	X	X	
cnfnodeparm	Configure Node Parameters	No	X	X	X
cnfnwip	Configure Network IP Address	No	X	X	X
cnfportstats	Configure FR Port Statistics Collection	Yes	X	X	
cnfrobparm	Configure Robust Alarms Parameters	No	X	X	X
cnfslotstats	Configure Slot Statistics Collection	Yes			X
cnftcpparm	Configure TCP Parameters	Yes	X	X	X
cnftrkparm	Configure Trunk Parameters	No	X	X	X
cnftrkstats	Configure Trunk Statistics Collection	Yes	X	X	X
cnftstparm	Configure Card Self Test Parameters	Yes	X	X	X
cnfuiparm	Configure User Interface Parameters	No	X	X	X
cnfvchparm	Configure Voice Channel Parameters	Yes	X	X	
cpyfpmap	Copy FastPAD Map Table	Yes	X	X	
dchst	Display CDP Channel Status	No	X	X	
diagbus	Diagnose Failed Bus	No	X	X	
drtop	Display Route Op Table	No	X	X	X
dspasich	Display ASI Channel Routing Entry	No			X
dspbmpst	Display Priority Bumping Statistics	No	X	X	
dspbuses	Display Bus Status	No	X	X	X
dspcderrs	Display Card Errors	No	X	X	X
dspcftst	Display Communications Fail Test Pattern	No	X	X	X
dspchan	Display Channel Configuration	No	X	X	
dspchstatcnf	Display Statistics Enabled for a Channel	No	X	X	
dspchstathist	Display Statistics Data for a Channel	No	X	X	
dspclnstatcnf	Display Statistics Enabled for a Circuit Line	No	X	X	
dspclnstathist	Display Statistics History for a Circuit Line	No	X	X	X
dspcnf	Display Config. Save/Restore Status	No	X	X	X
dspdnld	Display Download	No	X	X	X
dspdutl	Display Data Channel Utilization	No	X	X	
dspecparm	Display Echo Canceller Parameters	No	X	X	
dspfpdsc	Display FastPAD Card Descriptor Parameters	No	X	X	
dspfwrev	Display Firmware Revision	No	X	X	X
dsplnstatcnf	Display Statistics Enabled for a Line	No	X	X	X

Command	Description	Job?	IPX	IGX	BPX
dsplnstathist	Display Statistics Data for a Line	No	X	X	X
dspplnmcons	Display Packet Line Connection Counts	No	X	X	
dspportstatcnf	Display Statistics Enabled for a FR Port	No	X	X	
dspportstathist	Display Statistics Hist for a FR Port	No	X	X	
dsprevs	Display Revisions	No	X	X	X
dsprobst	Display Robust Statistics	No	X	X	X
dsprrst	Display Reroute Statistics	No	X	X	X
dspsig	Display Signalling	No	X	X	
dspslot	Display Slot	No	X	X	X
dspstatmem	Display Statistics Memory Use	No	X	X	X
dsptcpparm	Display TCP Parameters	No	X	X	X
dsptrkcons	Display Trunk Connection Counts	No	X	X	X
dsptrkmcons	Display Trunk Connection Counts by MAster Node	No	X	X	X
dsptrkstatcnf	Display Statistics Enabled for a Trunk	No	X	X	X
dsptrkstathist	Display Statistics History for a Trunk	No	X	X	X
dsputl	Display Voice Connection Utilization	No	X	X	
forcerev	Force Revision	No	X	X	X
getfwrev	Get Firmware Revision	Yes	X	X	X
loadcnf	Load Configuration	Yes	X	X	X
loadrev	Load Revision	No	X	X	X
prtcderrs	Print Card Errors	Yes	X	X	X
rrtcon	Reroute Connection	Yes	X	X	X
rststats	Reset Statistics Collection TIme	Yes	X	X	X
runcnf	Run Configuration	No	X	X	X
runrev	Run Revision	No	X	X	X
savecnf	Save Configuration	Yes	X	X	
setfpevt	Set FastPAD Events	No	X	X	
tststats	Test Statistics	No	X	X	X

Command Help

The StrataView Plus (SV+) workstation provides on-line help for all IPX/IGX/BPX commands. On-line help can be accessed through the SV+ FrameViewer icon. On-line help provides an abbreviated version of the information in this document, including the command function, syntax, and attributes. Hypertext links allow you to navigate through the various commands.

Commands

The following pages list the various super user commands available for Release 8.2. Commands are listed in alphabetical order, and most include a table describing the applicable system parameters and a typical screen display.

Note The commands in this manual refer only to cards used to equip Rel. 8.2 and later systems. Cards used with earlier releases that have been replaced by newer units (e.g. DTI group, CIP, MT3, etc.) are not included here. Refer to the *Rel. 6.2 IPX SuperUser Commands User Guide* for these cards.

Beginning with Rel. 7.0, all command references to packet line (pln) may also be addressed by trunk (trk). For example the Display Packet Line Connection Count command (**dspplncon**) may also be reached by entering Display Trunk Connection Count (**dsptrkcon**).

All commands that work on an IPX also work on an IGX.

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burnfwrev (Burn Firmware Image into Card(s)

The **burnfwrev** command burns a new firmware image into a specific card.

Attributes

Jobs: Yes Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

dspfwrev, getfwrev

Syntax

burnfwrev <image name> <slot number>

<image name>	specifies the name of the firmware image to burn. Image names are generally in all capital letters and are case-sensitive when being entered.
<slot number>	specifies the shelf slot where the card to burn is located. Specifying slot 0 will burn all cards of the appropriate type at the local node.

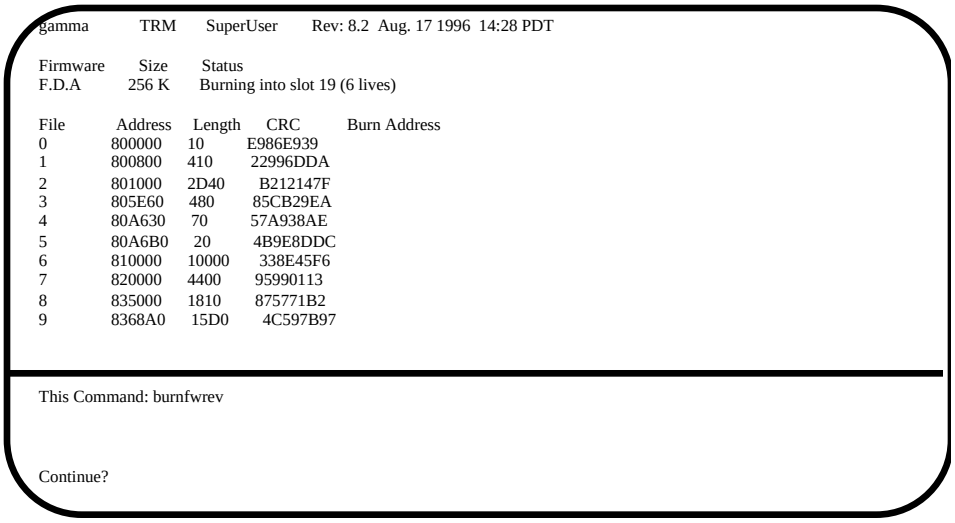
Function

This command is used to burn (load) a firmware image into the memory of a specific IPX/IGX/BPX card. Before using this command, the firmware image must have already been loaded into controller card's memory by the **getfwrev** command. A few seconds after issuing this command, the system displays a screen similar to Figure 1-1. A few moments later, the burn address column will start to indicate the addresses that are being "burned". When finished, the status will change to "Complete".

After all cards at a node have been updated with this command, issue a **getfwrev 0.0** node name command. This command will clear the firmware image from the controller card's buffer area, allowing the buffer to be used for other purposes. Use the **dspfwrev** command to display the firmware image status on the controller card at any other time after the burn has been completed.

At the super user level (0), this command can only be used to change the revision level of a card's firmware. If the firmware revision results in a new model number for the card, only a user with the StrataCom privilege level will be able to burn the firmware image.

Figure 1-1 burnfwrev—Burn Firmware Revision into Card



clrcderrs (Clear Detailed Card Errors)

The **clrcderrs** command clears the history of card failures (errors) associated with the specified slot.

Attributes

Jobs: Yes Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

dspcderrs, prtcderrs

Syntax

clrcderrs <slot number | *>

<slot number | *> specifies the slot number to clear. A "*" can be entered to clear all cards.

Function

This command clears the history of card failures associated with the specified slot. When you enter this command system responds with Slot Number or *. After you enter the command, the system asks you to confirm that it is OK to clear this data.

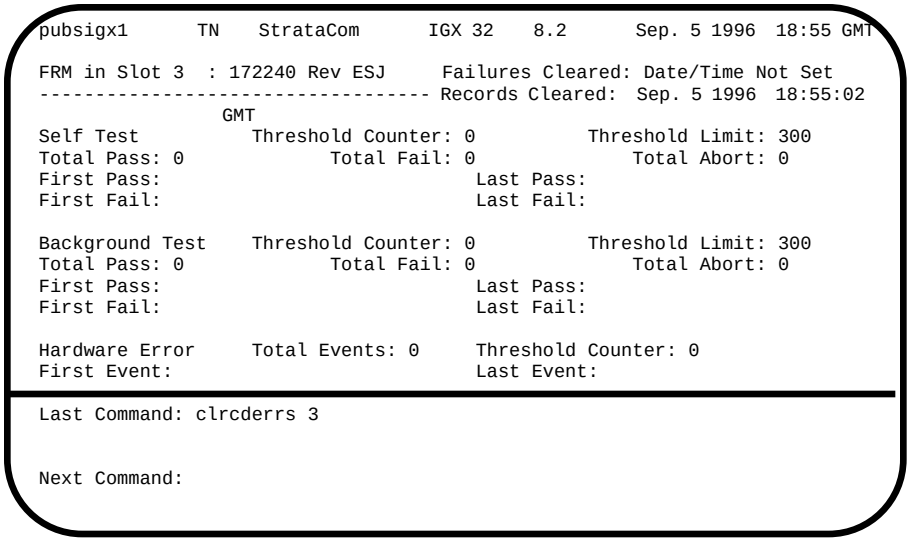
For example, to clear the data from the FRM card in slot 3, enter the command illustrated in Figure 1-2. This screen also illustrates the card's stored data.

Figure 1-2 Figure 2. clrcderrs—Clear Card Errors (before confirmation)

```
pubsigx1       TN    StrataCom       IGX 32    8.2       Sep. 5 1996  18:48 GMT

FRM in Slot 3  : 172240 Rev ESJ     Failures Cleared: Date/Time Not Set
---------------------------------- Records Cleared:  Date/Time Not Set
Self Test          Threshold Counter: 0          Threshold Limit: 300
Total Pass: 495           Total Fail: 0             Total Abort: 2
First Pass: Date/Time Not Set          Last Pass: May  29 1996 19:36:48 GMT
First Fail:                            Last Fail:

Background Test    Threshold Counter: 0          Threshold Limit: 300
Total Pass: 29849         Total Fail: 0             Total Abort: 0
First Pass: Date/Time Not Set          Last Pass: Sep. 5 1996  18:46:34 GMT
First Fail:                            Last Fail:

Hardware Error     Total Events: 0     Threshold Counter: 0
First Event:                           Last Event:

This Command: clrcderrs 3


OK to clear (y/n)?
```

After replying 'y' (yes) to the confirmation prompt, the screen appears as in Figure 1-3.

Figure 1-3 clrcderrs—Clear Card Errors (after confirmation)



clrcnf (Clear Configuration Memory)

The **clrcnf** command clears the configuration memory at the current node and resets the node.

Attributes

Jobs: No Log: No Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

loadcnf, runcnf, savecnf

Syntax

clrcnf

Function

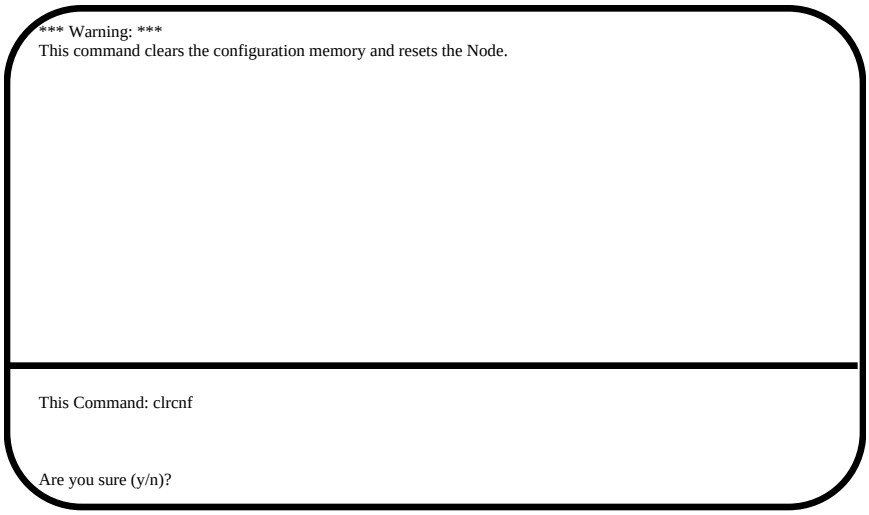
This command erases most network configuration data, including connections, trunks, circuit lines, etc. for the local node. It may be required when updating a software release or when a node is physically moved to a different location and needs to be reconfigured. Before the command is performed, a warning is displayed and a confirmation is required. Figure 1-4 illustrates a typical screen.

This command should be used only on a node that has not yet been placed in service or when the network configuration has been previously saved so it can be quickly reloaded. The configuration can be saved in one of several ways:

- On a StrataView Plus terminal using the **savecnf** command. The node is then reloaded using the **loadcnf** command.
- On a standby controller card. Before entering the **clrcnf** command, remove the standby controller from its slot. The configuration data will be maintained in BRAM even though the power has been removed from the card.

Caution Use the **clrcnf** command with great care. It is best not to use it unless specifically instructed to do so by StrataCom ISC as it can make the node unreachable to the network.

Figure 1-4 Clrcnf—Clear Node Configuration



clrfpevt (Clear FastPAD Event Reporting)

The **clrfpevt** command disables the reporting of FastPAD events.

Attributes

Jobs: No Log: Lock: Node Type: IPX, IGX

Associated Commands

setfpevt

Syntax

clrfpevt <FastPAD name> | <slot.port>

Function

Figure 1-5 Clrfpevt—Clear FastPAD Event Reporting

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cnfbmpparm (Configure Priority Bumping Parameter Values)

The **cnfbmparm** command configures the parameters for the optional priority bumping feature.

AttributesSyntax

Jobs: Yes Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

dspbmpst

Syntax

cnfbmpparm <index> <value>

<index> specifies the index number of the parameter to change. Priority bumping parameters are listed in Table 1-2.

<value> specifies the value for the parameter.

Function

This command enables the optional priority bumping feature and sets its various parameters. Network-wide values should only be changed when all nodes are reachable. This command should be used carefully as the resolution of conflicting values when networks are joined can cause difficulties. Table 1-2 lists the various parameters of the priority bumping feature. Figure 1-6 illustrates a typical screen.

Figure 1-6 cnfbmpparm—Configure Priority Bumping Parameter Values

```
sw83     TN    StrataCom     IPX 16    8.2  June 1 1996  15:15 PST

                    System-Wide Priority Bumping Parameters

 1  Enable Priority Bumping ..................................    No
 2  Enable bumping to preferred routes .......................    No
 3  Bump the lowest COS conns first ..........................   Yes
 4  Lowest COS that may bump other connections ...............    15
 5  Highest COS that may be bumped by other connections .......     0
 6  Maximum number of candidates per pass ....................    10
 7  Number of connections processed before pausing ...........  2000
 8  Time between idle processing (sec) .......................    60
 9  Time to next COS processing (sec) ........................    45
10  Time to lock routing COS (sec) ...........................    20
11  Time to kickoff routing (sec) ............................    15
12  Time between failed candidate retries (min) ..............    10

Last Command: cnfbmpparm

Priority Bumping control is not available
Next Command:
```

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Table 1-2 Priority Bumping Parameters

Index	Parameter	Value	Description
1	Enable Priority Bumping	Y|N	Enable bumping of lower COS connections on a network-wide basis.
2	Enable bumping to preferred routes	Y|N	Enable bumping to move routed connections to their preferred routes by bumping lower COS connections.
3	Bump lowest COS connections	Y|N	The lowest COS connections will be bumped to fit the candidate. No = find the shortest path or preferred route.
4	Lowest COS that may bump	COS	The lowest COS of connections that are allowed to bump other connections. (The highest COS is 0.)
5	Highest COS that may be bumped	COS	The highest COS of connections that may be bumped by higher COS connections.
6	Maximum number of candidates	number	The maximum number of connections that may be evaluated at once to bump lower COS connections. This configures the CPU impact of bumping.
7	Number of connections before pausing	number	The number of connections processed by bumping before allowing lower priority processing. This configures the CPU impact of bumping.
8	Time between idle processing	sec	If there are no candidates for priority bumping, how often to "wake up" this routine to see if it can reroute a connection to its preferred route.
9	Time to next COS processing	sec	Amount of time to wait until the next COS is processed.
10	Time to lock routing COS	sec	Amount of time bumping locks the routing for a particular COS.
11	Time to kickoff routing	sec	Amount of time before routing kicks itself off to route the candidates after locking the COS.
12	Time between failed candidates	min	Amount of time before bumping will retry a candidate that failed to find a route via bumping.

cnfcdpparm (Configure CDP Card Parameters)

The **cnfcdpparm** command configures the CDP card parameters.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX

Associated Commands

cnfchts, dchst, cnfecparm

Syntax

cnfcdpparm <parameter number> <new value>

<parameter number> specifies the number of the CDP parameter to change. (See Table 1-3).

<new value> specifies the new value for the parameter.

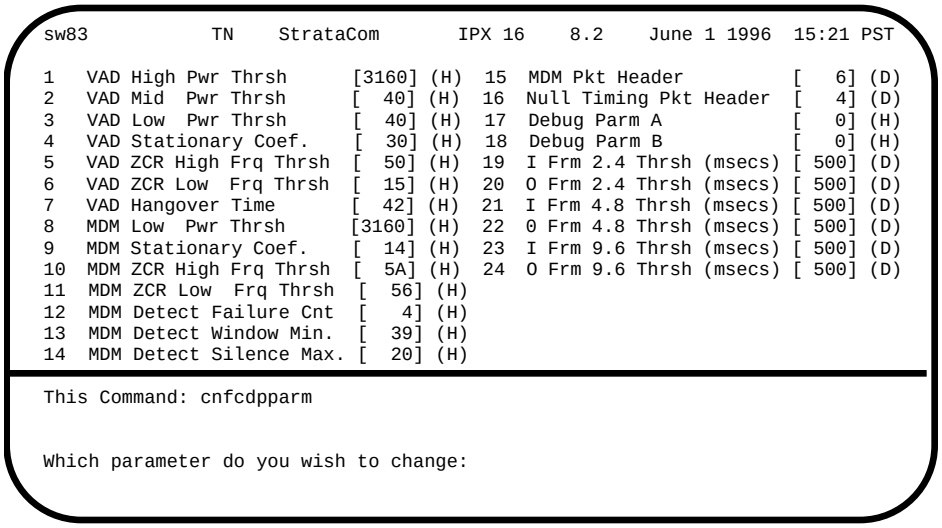
Function

This command configures CDP card parameters associated with Voice Activity Detection (VAD), Modem Detection (MDM), debug parameters, and In/Out of Frame (I Frm and O Frm) Thresholds for DS0A type T1 applications. See the **cnfcln** command for information on signing % Fast Modem on a per-channel basis. Table 1-3 lists the various CDP parameters. Figure 1-7 illustrates a typical screen.

When you enter the command, the system prompts for a parameter number to change. All CDP cards in the node are dynamically reconfigured based on the new parameter value. Debug Parameters do not get sent to the CDP cards.

Caution You should consult StrataCom ISC before changing any of these parameters.

Figure 1-7 cnfcdpparm—Configure CDP Card Parameters



IPX SU/0008_

Table 1-3 CDP Card Parameters

No.	Parameter	Description	Default *
1	VAD High Power Threshold	Power level for Voice Activity Detect high-range threshold.	3160 (H)
2	VAD Mid Power Threshold	Power level for Voice Activity Detect mid-range threshold.	40 (H)
3	VAD Low Power Threshold	Power level for Voice Activity Detect low-range threshold.	40 (H)
4	VAD Stationary Coefficient	Indicates how rapidly the power level is changing to not be detected as voice.	30 (H)
5	VAD ZCR (zero crossing) High Freq Threshold	High frequency zero-crossing threshold for Voice Activity Detect.	50 (H)
6	VAD ZCR (zero crossing) Low Freq Threshold	Low frequency zero-crossing threshold for Voice Activity Detect.	15 (H)
7	VAD Hangover Time	Silent interval after speech during which cells/packets are still sent.	42 (H)
8	MDM Low Power Threshold	Power level for Modem Detect high-range threshold.	3160 (H)
9	MDM Stationary Coefficient	Indicates how rapidly the power level is changing to not be detected as modem.	14 (H)
10	MDM ZCR High Freq Threshold	Defines upper frequency value for 2100 Hz. tone used in V.25 modem detection.	5A (H)
11	MDM ZCR Low Freq Threshold	Defines lower frequency value for 2100 Hz. tone used in V.25 modem detection.	56 (H)
12	MDM Detect Failure Count	Defines no. of failures above which fast modem is not declared.	4 (H))
13	MDM Detect Window Min.	No. of 5.25 ms. windows used in the modem tests.	39 (H)

* Enter value in either decimal (D) or hexidecimal (H).

No.	Parameter	Description	Default *
14	MDM Detect Silence Max.	Amount of time a channel stays in a modem detected state. Value X 84 ms. Default = 1008 ms.	C (H)
15	MDM Pkt Header	Changes packet type from voice to non-timestamped for modems.	6 (D)
16	Null Timing Pkt Header	Gives first few voice packets higher priority to decrease delay for talk spurts.	4 (D)
17	Debug Parameter A	Engineering debug tools.	0 (H)
18	Debug Parameter B	Engineering debug tools.	0 (H)
19	I Frm 2.4 Threshold(msecs)	Determines threshold for inframe for DS0 2.4 Kbps overhead data channel.	500 (D)
20	O Frm 2.4 Threshold (msecs)	Determines threshold for out of frame for DS0 2.4 Kbps overhead data channel.	500 (D)
21	I Frm 4.8 Threshold (msecs)	Same as 19 for DS0 4.8 Kbps channel.	500 (D)
22	0 Frm 4.8 Threshold(msecs)	Same as 20 for DS0 4.8 Kbps channel.	500 (D)
23	I Frm 9.6 Threshold(msecs)	Same as 19 for DS0 9.6 Kbps channel.	500 (D)
24	O Frm 9.6 Threshold (msecs)	Same as 20 for DS0 9.6 Kbps channel.	500 (D)

* Enter value in either decimal (D) or hexidecimal (H).

cnfcftst (Configure Communication Fail Test Pattern)

The **cnfcftst** command changes the configuration of the test pattern used for communication failure testing.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

dspcftst

Syntax

cnfcftst

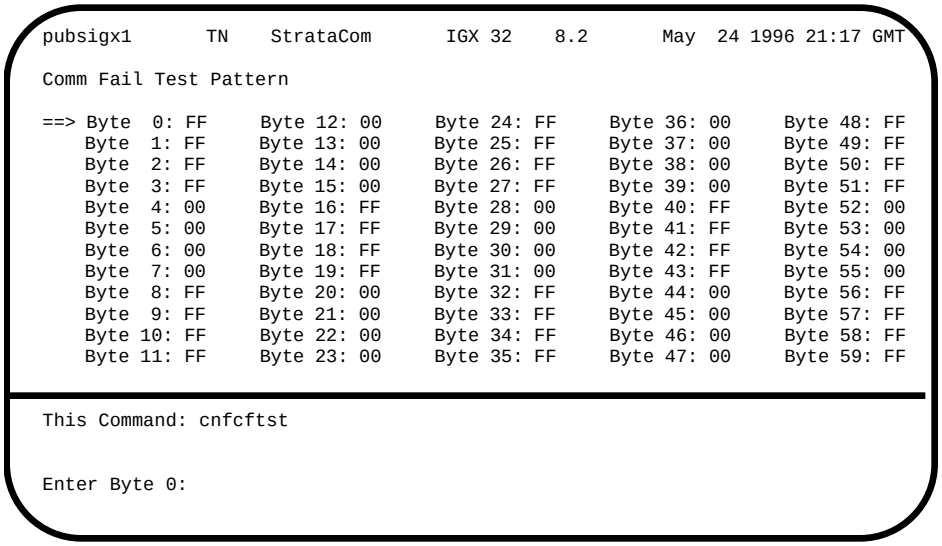
Function

The communication fail test pattern is used to periodically test for failure of nodes to communicate with each other. This test pattern is also used to recover from communication fail conditions. A communication fail is defined as a loss of controller communication over one or more trunks to a particular node. A communication fail differs from a communication break condition in that the node may be reachable over other paths. The communication fail test is used to test the failed trunk for proper controller traffic.

This command allows the user to configure the communication fail test pattern byte by byte. It defaults to a pattern of four bytes of ones followed by four bytes of zeros. Varying the length of the test pattern makes the communications test more or less rigorous. Changing the characters determines the pattern sensitivity for strings of less than 14 bytes.

The **dspcftst** command displays the current communication test pattern. The parameters used for declaring and clearing communication fails are set by the **cnfnodeparm** command. Figure 1-8 illustrates a typical screen.

Figure 1-8 cnfcftst—Configure Communication Fail Test Pattern



cnfchstats (Configure Channel Statistics Collection)

The **cnfchstats** command enables statistics collection for various channel parameters.

Attributes

Jobs: Yes Log: Yes Lock: Yes Node Type: BPX, IGX, IPX

Associated Commands

dspchstatcnf

Syntax

nfchstats <channel> <stat> <interval> <e | d> [<samples> <size> <peaks>] [nodename]

<channel>	specifies the channel (connection) to configure.
<stat>	specifies the type of statistic to enable/disable. (See Table 1-4).
<interval>	specifies the time interval of each sample (1–255 minutes).
<e|d>	enables/disables a statistic. 'E' to enable; 'D' to disable a statistic.
[samples]	specifies the number of sample to collect (1–255).
[size]	specifies the number of bytes per data sample (1, 2 or 4).
[peaks]	enables/disables the collection of one minute peaks. 'Y' to enable: 'N' to disable.
[nodename]	specifies the name of the node to which the StrataView terminal is connected.

Function

This command enables statistics collecting for channel parameters. It is a debug tool and not necessary for everyday use.

Table 1-4 lists the statistics by type. Not all statistic types are available for all connections. Only valid statistics are displayed for the user to select from; the others appear in gray. If you are unsure of the size parameter to specify, select four bytes per sample.

The **dspchstatcnf** command displays the channel statistics configuration. Statistics are collected by and displayed on the StrataView Plus workstation. StrataView Plus allows statistics collection to be customized. A StrataView Plus-enabled channel statistic may be disabled by specifying the optional node name of the workstation as the last parameter on the command line.

Table 1-4 Channel Statistic Types

Statistic Type	Statistic
1	Frames Received
2	Receive Frames Discarded
3	Frames Transmitted
4	Transmit Frames Discarded
5	Packets Received
6	Receive Packets Discarded
7	Packets Transmitted
8	Projected Packets Transmitted
9	Supervisory Packets Transmitted
10	Bytes Received
11	Receive Bytes Discarded
12	Bytes Transmitted
13	Transmit Bytes Discarded
14	Seconds V.25 Modem On
15	Seconds DSI Enabled
16	Seconds Off-Hook
17	Seconds In Service
18	Frames Transmitted with FECN
19	Frames Transmitted with BECN
20	Supervisory Packets Received
21	Minutes Congested
22	DE Frames Received
23	DE Frames Transmitted
24	DE Frames Dropped
25	DE Bytes Received
26	Frames Received in Excess of CIR
27	Bytes Received in Excess of CIR
28	Frames Transmitted in Excess of CIR
29	Bytes Transmitted in Excess of CIR
32	Rx Frames Discarded—Deroute/Down
33	Rx Bytes Discarded—Deroute/Down
34	Rx Frames Discarded—VC Queue Overflow
35	Rx Bytes Discarded—VC Queue Overflow
36	Tx Frames Discarded—Queue Overflow
37	Tx Bytes Discarded—Queue Overflow
38	Tx Frames Discarded—Ingress CRC
39	Tx Bytes Discarded—Ingress CRC

Statistic Type	Statistic
40	Tx Frames Discarded—Trunk Discard
41	Tx Bytes Discarded—Trunk Discard
42	TX Frames During Ingress LMI Fail
43	TX Bytes During Ingress LMI Fail

cnfchts (Configure Channel Timestamp)

The **cnfchts** command configures the preage parameter for CDP or SDP data channels.

Attributes

Jobs: Yes Log: Yes Lock: Yes Node Type: IPX, IGX

Associated Commands

cnfcdpparm

Syntax

cnfchts <channel(s)> <preage>

<channel(s)> specifies the data channel to configure.

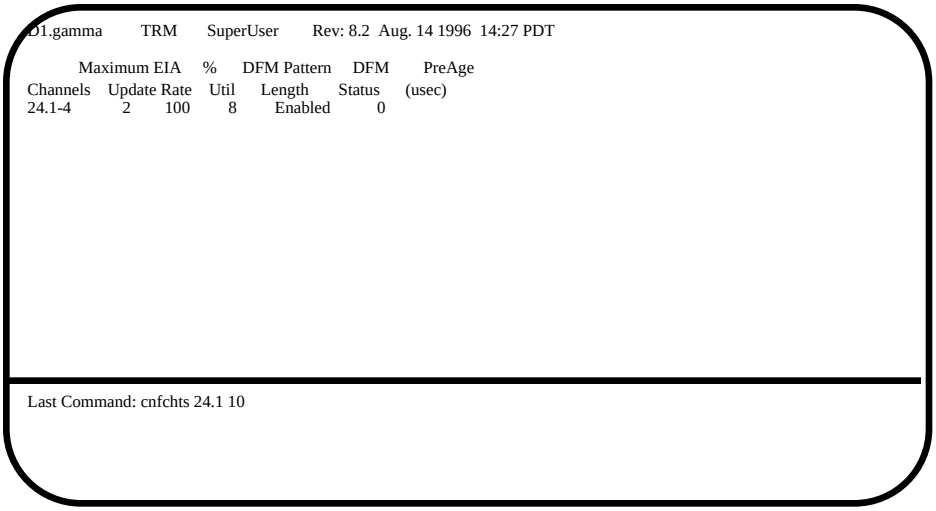
<preage> specifies a time stamp in microseconds to be entered for preage.

Function

This command configures the preage parameter for data channels. The preage parameter is used to reduce the delay or improve throughput on a data connection. The preage parameter specifies the initial age to be timestamped on a packet used in a timestamped data connection. The timestamp in the data packet is used to prioritize packets and to determine when a packet is too old and should be discarded from the transmitting NTC queue. Data channels with the greater preage value will be transmitted sooner but the chance that they will be aged and discarded in an overloaded network is greater.

All values entered are rounded down to the nearest multiple of 250 microseconds. The default value is 0. Acceptable values are in the range 0 to the Max Time Stamped Packet Age' (set by the **cnfsysparm** command). When you enter this command, the system responds with the screen illustrated in Figure 1-9. The connection should be rerouted or restarted for the new value to take effect.

Figure 1-9 cnfchts—Configure SDP/CDP Channel Timestamp



IPX SU/0009_

cnfclnparm (Configure Circuit Line Parameter)

The **cnfclnparm** command configures the alarm integration time for circuit lines originating on CDP and for T1/E1 frame relay circuits originating on an FRP.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX

Associated Commands

cnfclnsigparm, dchst

Syntax

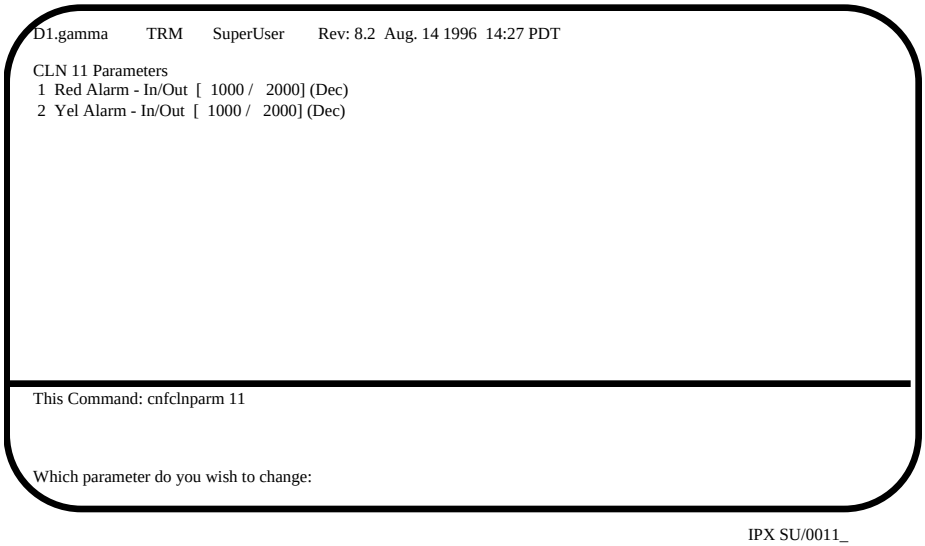
cnfclnparm <line>

<line> specifies the circuit line to configure.

Function

This command configures the circuit line alarm integration times for RED and YELLOW circuit line alarms. These integration times are specified in milliseconds and should be set to correspond to the local carrier's alarm integration times. Carrier integration times are typically 800 to 1500 ms. for RED Alarm and 1500 to 3000 ms. for YELLOW Alarm. The allowable range for these parameters are 60 to 3932100 ms. When you enter this command system responds with the screen in Figure 1-10.

Figure 1-10 cnfcln—Configure Circuit Line Alarm Integration Times



cnfclnsigparm (Configure Circuit Line Signaling Parameters)

The **cnfclnsigparm** command configures various signalling parameters for a CDP circuit line.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX

Associated Commands

cnfclnparm, dspsig

Syntax

cnfclnsigparm <parameter number> <parameter value>

<parameter number> specifies the parameter number of the signalling parameter to change. (See Table 1-5).

<parameter value> specifies the new value to enter.

Function

This command configures any of the CDP circuit line signalling parameters associated with the IPX node. Configurable parameters and their range of values are indicated in Table 1-5.

When you enter this command system as follows, the system responds with the display as shown in Figure 1-11.

Figure 1-11 cnfclnsigparm—Configure Circuit Line Signalling Parameters

```
sw83          TN    StrataCom       IPX 16    8.2.   June 1 1996  15:26 PST

1  CDP & CIP Heartbeat                    [   2] (sec)
2  CDP & CIP Sig. Polling Rate            [  10] (sec)
3  CDP & CIP Default Inband Sig Delay     [  96] (msec)
4  CDP & CIP Default Inband Playout Delay [ 200] (msec)
5  CDP & CIP Default Pulse Sig Delay      [  96] (msec)
6  CDP & CIP Default Pulse Playout Delay  [ 200] (msec)
7  CIP Number of Packet Slices            [   1]
8  CDP & CIP Packet Rate                  [ 200] (pkt/sec)
9  CDP & CIP Condition CCS Lines?         [  NO]
10 CIP Default Inband Min. Wink           [ 140] (msec)
11 CIP Default Pulse Min. Wink            [ 140] (msec)




This Command: cnfclnsigparm


Which parameter do you wish to change:
```

IPX SU/0010_

Table 1-5 Circuit Line Signalling Parameters

No.	Parameter	Description	Range
1	Heartbeat	The current state of the signalling is periodically transmitted to the far end even if no signalling transitions are detected. This interval is determined by the value of heartbeat.	2–30 sec.
2	Signal Polling Rate	How often the NPC polls the CDP for the status of the channel signalling. Used to update displays and statistics.	2–60 sec.
3	Default Inband Signal Delay	Transmit buffer timer value set after receiving a valid signalling transition for inband signalling. When timer expires, a packet with signalling is sent.	30–96 msec.
4	Default Inband Playout Delay	Rcv. buffer timer that "ages" a time-stamped packet from a far end CDP until the packets timestamp reaches this value. Then it is output to the user. Used to even out the delay between signalling packets and voice packets.	0–200 msec.
5	Default Pulse Signal Delay	Same as 3. for pulse signalling.	30–96 msec.
6	Default Pulse Playout Delay	Same as 4. for pulse signalling.	100–200 msec.
8	Packet Rate	Sets the trunk bandwidth reserved for carrying CIP/CDP signalling data.	0–1000 pkts/sec.
9	Condition CCS Lines	If yes, applies signalling conditioning during alarm to all channels on E1 circuit lines marked for Common Channel Signalling to notify PBX of line failure.	YES or NO
10	Inband Min. Wink	Same as 6. for inband signalling.	120–300 msec.
11	Pulse Min. Wink	For CDP connections only. Controls both wink and interdigit interval for signalling arriving over the NPC signaling channel from a far end CDP.	120–300 msec.

cnfclnstats (Configure Circuit Line Statistics Collection)

The **cnfclnstats** command configures parameters for circuit line statistics collection.

Attributes

Jobs: Yes Log: Yes Lock: Yes Node Type: IPX, IGX

Associated Commands

dspchstats

Syntax

cnfclnstats <line> <stat> <interval> <e|d> [<samples> <size> <peaks>] [nodename]

<line>	specifies the circuit line to configure.
<stat>	specifies the type of statistic to enable/disable.
<interval>	specifies the time interval of each sample (1 - 255 minutes).
<e|d>	enables/disables a statistic. 'E' to enable; 'D' to disable.
[samples]	specifies the number of samples to collect (1 - 255).
[size]	specifies the number of bytes per data sample (1, 2 or 4).
[peaks]	enables/disables the collection of ten second peaks. 'Y' to enable; 'N' disable.

Function

This command configures parameter for circuit line statistic collection. It is basically a debug tool and should not be required for everyday use. It permits customizing statistics collected on each circuit line. Table 1-6 lists the statistics by type. Figure 1-12 illustrates the display.

Not all statistic types are available for all lines. Only valid statistics are displayed for the user to select from, the others appear in gray.

Table 1-6 Circuit Line Statistic Types

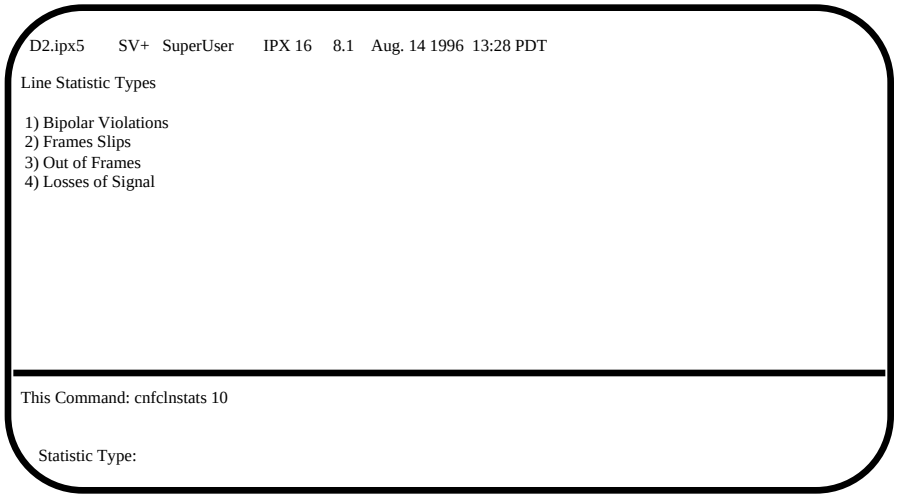
Statistic Type	Statistic	Line Type
1	Bipolar Violations	E1 and T1
2	Frame Slips	E1 and T1
3	Out of Frames	E1 and T1
4	Loss of Signal	E1 and T1
5	Frame Bit Errors	E1 only
6	CRC Errors	E1 only
7	Out of Multi-Frames	E1 only

Statistic Type	Statistic	Line Type
8	All Ones in Timeslot 16	E1 only

Note Bipolar violations are not generally accumulated on E1 trunk and circuit lines. They are accumulated only on E1 lines connected to E1 frame relay ports.

Figure 1-12 illustrates the screens displayed after entering **cnfcmparm.**

Figure 1-12 cnfclnstats—Configure Circuit Line Statistics (T1 Line)



cnfcmparm (Configure Connection Management Parameters)

The **cnfcmparm** command configures various connection management parameters for IPX network connections.

Attributes

Jobs: Yes Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

dsprrst

Syntax

cnfcmparm <parameter number> <value>

<parameter number> specifies the number of the parameter to change. (See Table 1-7).

<value> specifies the new parameter value to enter.

Function

This command configures parameters that affect Adaptive Voice, Rerouting, and Courtesy Up/Down. These parameters are used only at the local node. Table 1-7 lists the parameters, their descriptions, and their default values.

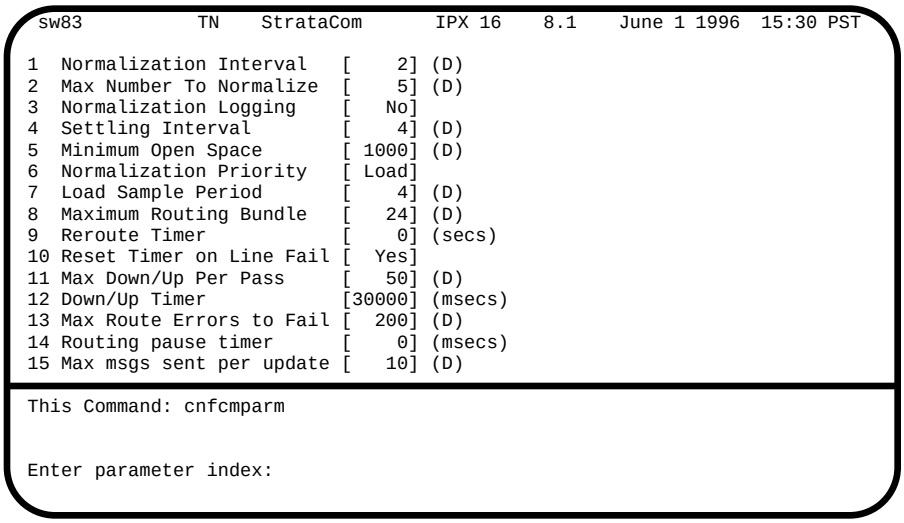
Table 1-7 Circuit Line Connection Management Parameters

No.	Parameter	Description	Default
1	Normalization Interval	The number of minutes between attempts to disable VAD on groups of voice connections.	2
2	Max Number To Normalize	The maximum number of connections per group discussed above.	5
3	Normalization Logging	Enables or disables the logging of changes of a connection's normalization status.	No
4	Settling Interval	The number of minutes after a trunk failure during which no normalization attempts are made.	4
5	Minimum Open Space	The minimum number of packets per second of open space required to consider a trunk capable of supporting a normalized connection. Increasing this parameter causes all connections to enter the protect mode.	1000
6	Normalization Priority	Determines whether the system uses a connection's Class Of Service or its projected load to determine normalization priority. Changing this parameter causes all connections to enter the protect mode.	Load
7	Load Sample Period	The number of minutes of projected load used to determine normalization priority if the normalization priority is set to 'load'.	4
8	Maximum Routing Bundle	The maximum number of connections that can be routed as a bundle. Larger values give faster rerouting. Smaller values give better load balancing.	24

No.	Parameter	Description	Default
9	Reroute Timer	The number of seconds since the last reroute to wait before attempting another reroute of the same connection.	300
10	Timer Reset on Line Fail	Indicates if the reroute timer should be reset on reroutes where the new route develops a line failure.	Yes
11	Max Down/Up Per Pass	Number of connections downed/upped per pass.	50
12	Down/Up Timer	Number of msec to wait between down/up passes.	30000
13	Max Route Errors to Fail	Defines the number of errors counted for the circuit line before declaring failure.	10000

Figure 1-13 illustrates the screens displayed after entering **cnfcmparm.**

Figure 1-13 cnfcmparm—Configure Connection Management Parameters



cnfdiagparm (Configure Diagnostic Test Parameter)

The **cnfdiagparm** command sets various diagnostic test parameters for BPX and IPX nodes.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

cnftstparm

Syntax

cnfdiagparm

Function

This command sets several parameters that affect the three IPX/IGX/BPX automatic diagnostic tests. Use this command to set test parameters on the internal system clock. Table 1-8 lists the parameters, their descriptions, and their default values.

Table 1-8 Diagnostic Parameters

No.	Parameter *	Description	Default *
1	VDP Test Frequency	Interval between VDP background tests (in seconds).	50
2	LDP tstport delay	Seconds delayed before test data is sent.	10
3	System clock drift (8.192 Mhz)	Range of allowable drift of system clock.	±480
4	UEC-B's PLL railing (8.192 Mhz)	Range of UEC-B's phase lock loop rail.	± 2720
5	NPC's PLL Min. (8.192 Mhz)	Lower limit of NPC's PLL.	- 92000
6	NPC's PLL Max. (8.192 Mhz)	Upper limit of NPC's PLL.	+ 50800
7	Clock Test Window	Number of samples that make up a window.	10
8	Clock Test Max Error in Window	Errors within window before fault isolation.	4
9	Clock Test Isolation Window	Window size during fault isolation.	10
10	Clock Fault Max. Error in Window	Errors allowed during fault isolation.	3
11	Clock Test Frequency	Interval between clock tests.	200 ms.
12	Clock Test Switch Delay	Delay clock testing after any clock transfers to allow settling.	3000 ms.
13	Card Reset Threshold		255
14	Card Reset Increment		0

* Clock Test parameters—Frequencies are in Hz, offset from 8.192 MHz

When you enter this command, the system responds with the screen illustrated in Figure 1-14.

Figure 1-14 cnfdiagparm—Configure Diagnostic Test Parameters

```
D2.att7     SV       SuperUser     IPX 16    8.1     Aug. 13 1996 00:21 GMT

1. Vdp Test Frequency (seconds)      [50]
2. LDP tstport delay                [10]
3. System clock drift (8.192 MHz)  +- [480]
4. UEC-B's PLL railing (8.192 MHz) +- [2720]
5. NPC's PLL minimum (8.192 MHz)    - [92000]
6. NPC's PLL maximum (8.192 Mhz)    + [508000]
7. Clock Test Window                [10]
8. Clock Test Max Error in Window    [4]
9. Clock Fault Isolation Window      [10]
10. Clock Fault Max Error in Window   [3]
11. Clock Test Frequency (msec)      [200]
12. Clock Test Switch Delay (msec)   [3000]
13. Card Reset Threshold             [255]
14. Card Reset Increment             [0]

This Command: cnfdiagparm


Enter index of value to be changed:
```

cnfdlparm (Configure Download Parameter)

The **cnfdlparm** command sets various software and firmware downloader parameters.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

dspdnld

Syntax

cnfdlparm

Function

This command sets parameters that affect the SW/FW download protocol. It is primarily a debug command. It is included only for the possibility that some future software or firmware revision may need to be adjusted for optimizing the downloading process. It is currently not being used.

Caution Downloader parameters should not be changed except under specific direction from StrataCom Engineering Dept.

When you enter this command system responds with the screen illustrated in Figure 1-15.

Figure 1-15 cnfdlparm—Configure Download Parameters

```
pubsbpx1      VT    StrataCom      BPX 15    8.1      May  24 1996 23:18 GMT

 1  Rmt Blk Freq (msec)     [    100]    16 FW Dnld Msgs/Block(dec) [      4]
 2  Rmt Blk Size (hex)      [    400]    17 Flash Write TO(msec)    [  16000]
 3  Lcl Blk Freq (msec)     [    100]    18 Flash Erase TO(msec)    [    100]
 4  Lcl Blk Size (hex)      [    400]    19 Erase Verify TO(msec)   [  16000]
 5  Image Req Freq (msec)   [  10000]    20 Standby Flash TO(sec)   [    300]
 6  Dnld Req Freq (msec)    [  10000]    21 Lcl Flash Init TO(msec) [   1000]
 7  Session Timeout (msec)  [  30000]    22 Flsh Write Blk Sz (hex) [  10000]
 8  Request Hop Limit (dec) [     1]    23 Flsh Verfy Blk Sz (hex) [    400]
 9  Crc Throttle Freq (dec) [   5000]    24 Chips Per Write/Erase   [      1]
10 Crc Block Size (hex)    [    400]
11 Rev Change Wait(dec)    [      0]
12 CCs Switch Wait(dec)    [   1000]
13 Lcl Response TO(msec)   [   5000]
14 Rmt Response TO(msec)   [  20000]
15 FW Dnld Block TO(msec)  [     50]

This Command: cnfdlparm


Which parameter do you wish to change:
```

cnfecparm (Configure Echo Canceller Parameters)

The **cnfecparm** command configures the CDP or CVM integrated echo canceller (IEC) parameters for specified voice circuit line.

Attributes

Jobs: Yes Log: Yes Lock: Yes Node Type: IPX, IGX

Associated Commands

cnfchec, dspecparm

Syntax

cnfecparm <line> <parameter number> <parameter value>

<line> specifies the circuit line to configure.

<parameter number> specifies the number of the parameter to change. (See Table 1-9).

<parameter value> specifies the new value to enter for the parameter.

Function

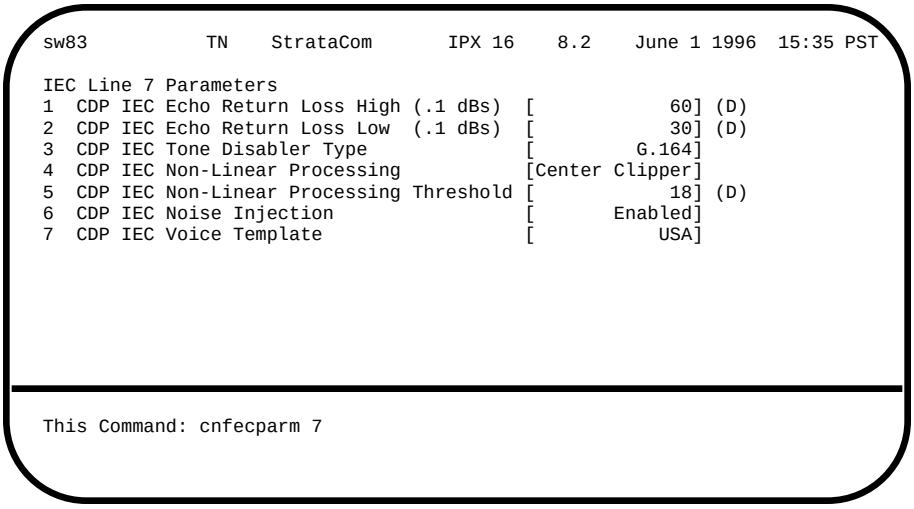
This command configures the CVM or CDP integrated echo canceller (IEC). It configures IEC parameters associated with all voice channels for the specified circuit line. Setting these parameters allows you to optimize the IEC performance. Table 1-9 lists the parameters that can be modified. The **dspecparm** command description lists the defaults and provides a sample display. Also, refer to the **cnfchec** command in the *Command Reference* for configuring per-channel parameters.

Table 1-9 Echo Canceller Parameters

Index	Parameter	Description	Options
1	Echo Return Loss High:	Maximum ERL required for echo canceller to converge on speech (value X 0.1 dB).	0–99 dB
2	Echo Return Loss Low:	Minimum ERL required for echo canceller to converge on speech (value X 0.1 dB).	0–99 dB
3	Tone Disabler Type	Selection of protocol to enable tone disabler.	G.164, G.165
4	Non-Linear Processing	Selects type of post-canceller signal.	Center Clipper, Multiplying
5	NLP Threshold	Threshold below which non-linear processing is enabled (value X 0.1 dB).	0–99 dB
6	Noise Injection	Determines if noise will be injected when NLP is active.	Enable, Disable
7	Voice Template	Selection of template to use; normal voice levels or high voice levels.	USA—normal UK—high-level

When you enter this command system responds with the screen illustrated in Figure 1-16.

Figure 1-16 cnfecparm—Configure Echo Canceller Parameters



cnffpcom (Configure FastPAD Communication Parameter)

The **cnffpcom** command configures the FastPAD communication parameters.

Attributes

Jobs: Yes Log: Yes Lock: Yes Node Type: IPX, IGX

Associated Commands

None

Syntax

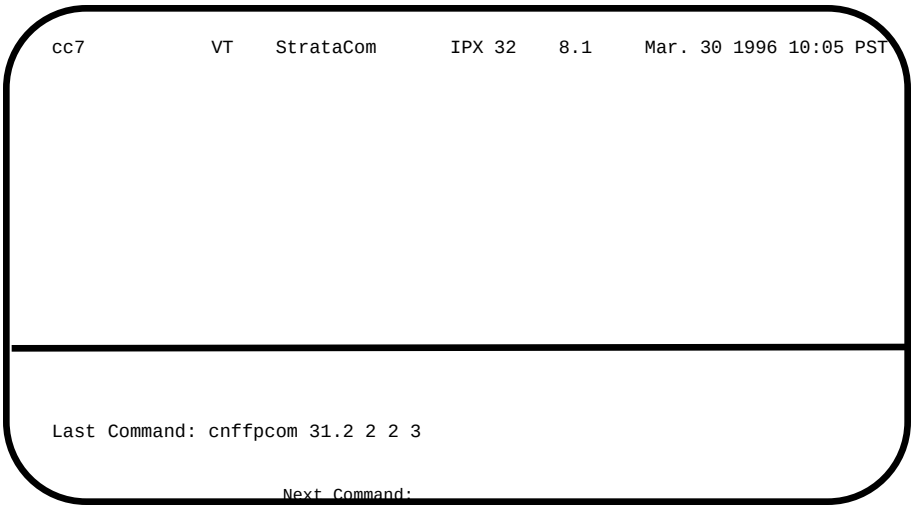
cnffpcom <slot.port> | <name> <trans timer> <alive timer> <retry count>

<slot.port>	specifies the FTC card slot.port to which the FastPAD is connected.
<name>	specifies the name of the FastPAD connected to the port.
<trans timer>	specifies the transmission timer.
<alive timer>	specifies the keep alive timer value.
<retry count>	specifies the retry count value.

Function

This command configures the FastPAD communication parameters. When you enter this command, the system responds with the following:

Figure 1-17 cnffpcom—Configure FastPAD Communication Parameters



cnffpcon (Configure FastPAD Connection Parameters)

The **cnffpcon** command configures the FastPAD connection parameters.

Attributes

Jobs: Yes Log: Yes Lock: Yes Node Type: IPX, IGX

Associated Commands

addcon, dspcon, dncon, upcon

Syntax

cnffpcon <connection> [fr_bw]

<connection> specifies the connection whose parameters to configure.

[fr_bw] specifies the frame relay bandwidth parameters for the connection.

Function

This command configures connection parameters. When you enter this command, the system responds with as in Figure 1-18.

Figure 1-18 cnffpcon—Configure FastPAD Connection Parameters

```
cc7           VT    StrataCom       IPX 32    8.1     Mar. 30 1996 10:10 PST

Conn:  31.2.B.1   ca12        9.1.B.1     9.6
   MIR       CIR    VC Q Depth      PIR      Cmax   ECN QThresh    QIR    FST
11.6/11.6 11.6/11.6  2048/2048   11.6/11.6   10/10   1024/1024  11.6/11.6  n
% Util: 100/100
Owner: LOCAL  Restriction: NONE  COS: 0                    Status: New Conn
Group: NONE  Priority: N/A  TestRTD: 0 msec

Path:   cc7       19-- 6.2cc1      6.3-- 2.2ca13     1.3--  13ca12
Pref:   Not Configured



cc7       FTC:   OK                    ca12      FTC:   OK
          FTI:   OK                              FTI:   OK
          FastPAD: OK                            FastPAD: OK

This Command: cnffpcon 31.2.B.1 ca12 9.1.B.1


Enter FRP parameters (mir/oe_mir * ...):
```

cnffpddelay (Configure FastPAD Delay)

The **cnffpddelay** command configures thresholds for severe congestion (Sc) and mild congestion (Mc) on the FastPAD.

Attributes

Jobs: No Log: Lock: Node Type: IPX, IGX

Associated Commands

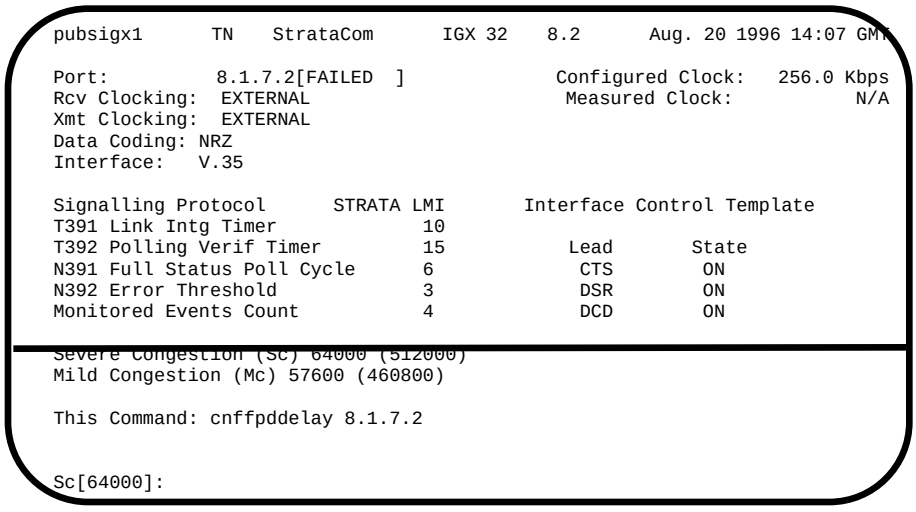
Syntax

cnffpddelay <slot.port.subslot.subport><Sc><Mc>

<slot.port.subslot.subport>	specifies the FTC port and subport connected to the FastPAD for configuring the Sc and Mc.
<Sc>	severe congestion
<Mc>	mild congestion

Function

Figure 1-19 cnffpddelay—Configure FastPAD Delay



cnffpdpvc (Configure FastPAD PVC)

The **cnffppvc** command configures the FastPAD bc/bc pvc parameters.

Attributes

Jobs: No Log: Lock: Node Type: IPX, IGX

Associated Commands

Syntax

cnffpdpvc <slot.port.subslot.subport.dlci><bc><bc>

<slot.port.subslot.subport.dlci> specifies the FTC port, subport, and dlci of the FastPAD for which bc/bc and pvc parameters are to be configured.

<bc>

<bc>

Function

Figure 1-20 cnffpdpvc—Configure FastPAD PVC

cnffpmap (Configure FastPAD Map Table)

The **cnffpmap** command configures the FastPAD map table.

Attributes

Jobs: Yes Log: Yes Lock: Yes Node Type: IPX, IGX

Associated Commands

cpyfpmap

Syntax

cnffpmap <slot.port>

<slot.port> specifies the FTC port connected to the FastPAD for which to configure the map table.

Function

This command configures FastPAD map table. The map table contains the dialing plan for the FastPAD. When you enter this command, the system responds with the following:

Figure 1-21 cnffpmap—Configure FastPAD Map Table

```
cc7           VT    StrataCom       IPX 32    8.1     Mar. 30 1996 10:14 PST

Index  #   DLCI Slot  Index  #   DLCI Slot  Index  #   DLCI Slot  Jump:
[000] 9915 0991  05   [014] FFFF 1023  15   [028] FFFF 1023  15
[001] 0182 0018  02   [015] FFFF 1023  15   [029] FFFF 1023  15
[002] 0528 0052  08   [016] FFFF 1023  15   [030] FFFF 1023  15
[003] 0186 0018  06   [017] FFFF 1023  15   [031] FFFF 1023  15
[004] 0188 0018  08   [018] FFFF 1023  15   [032] FFFF 1023  15
[005] 0524 0052  04   [019] FFFF 1023  15   [033] FFFF 1023  15
[006] 0526 0052  06   [020] FFFF 1023  15   [034] FFFF 1023  15
[007] 0528 0052  08   [021] FFFF 1023  15   [035] FFFF 1023  15
[008] 0528 1023  09   [022] FFFF 1023  15   [036] FFFF 1023  15
[009] FFFF 1023  15   [023] FFFF 1023  15   [037] FFFF 1023  15
[010] FFFF 1023  15   [024] FFFF 1023  15   [038] FFFF 1023  15
[011] FFFF 1023  15   [025] FFFF 1023  15   [039] FFFF 1023  15
[012] FFFF 1023  15   [026] FFFF 1023  15   [040] FFFF 1023  15
[013] FFFF 1023  15   [027] FFFF 1023  15   [041] FFFF 1023  15

This Command: cnffpmap 31.2


Next Command: cnffpmap 31.2
```

cnffpport (Configure FastPAD Port Parameters)

The **cnffpport** command configures the FastPAD port parameters.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX

Associated Commands

dspftcport, dnftcport, upftcport

Syntax

cnffpport <slot.port.subslot.subport> <parameter number> <parameter value>

<slot.port.subslot.subport>	specifies the port for which to configure the port parameters.
<parameter number>	specifies the number of the parameter to change.
<parameter value>	specifies the new value to enter.

Function

This command configures port parameters for the FastPAD port. When you enter this command, the system responds with the following:

Figure 1-22 cnffpport—Configure FastPAD Port Parameters

```
cc7           VT    StrataCom      IPX 32    8.1     Mar. 30 1996 10:16 PST

                        FastPad Port Configuration
                     Index: 0x0000 Location: 0x30E84C40
     Port in Use   : 01      Port Type     : 02      Conn Exist    : 01
     Phy Port Code : 00      Port Code     : 00      Abs Rate      : 07

                              Data Parameters
[01] Mode          : 00 [02] Baud Rate     : 06 [03] Underrun Fill : 7E
[04] Clock Stop FC : 00 [05] Transmit Clock: 00 [06] Local CTS     : 01
[07] Local CTS Dly : 00 [08] Local DSR     : 01 [09] Local DCD     : 01
[10] Hunt Group Mem: 01 [11] Dest Switch Nm: 01 [12] Dest Port Nm  : 03
[13] Dest Slot/Chnl: 00 [14] Call Timer    : 05 [15] Enable Channel: 01
[16] Initiate Calls: 01 [17] Allocate BW   : 00 [18] Intrframe Fill: 00
[19] DPLL Mode     : 00 [20] Set DE on Data: 00 [21] Async In Timer: 05
[22] Checksum      : 00 [23] Sync Pattern  : 0000


This Command: cnffpport 31.2.B.1


Enter parameter number to change (DEL to quit):
```

Enter the parameter number to make a change.

cnffpsys (Configure FastPAD System Parameters)

The **cnffpsys** command configures the FastPAD system parameters.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX

Associated Commands

dspftcport, dnftcport, upftcport

Syntax

cnffpport <slot.port> <parameter number> <parameter value>

<slot.port> specifies the port for which to configure the port parameters.

<parameter number> specifies the number of the parameter to change.

<parameter value> specifies the new value to enter.

Function

This command configures system parameters for the FastPAD port. When you enter this command, the system responds with the following:

Figure 1-23 cnffpsys—Configure System Parameters

```
cc7           VT    StrataCom       IPX 32    8.1     Mar. 30 1996 10:17 PST

                           FastPad Configuration
                      Index: 0x0000 Location: 0x30E9D0B2
     FPD in Use    : 01      Conn State    : 01      FPD Name      : cc7FP
     Alarm Status  : 00      Switched Conn : 01      FPD Index     : 05
     IPX Slot Nm   : 1F      FTC Port Nm   : 01      Link Int      : 01
     Link Rate     : 0C      Card Dsc Index: 00      Avail SwVoice : 00
     Sfail/Nack    : 00/00   TmOut/OutOfSeq: 00/00   Unknown/Q len : 00/00
                             System Parameters
[04] Ring Freq     : 00 [05] Spd Dial Digit: 04 [06] Country Code  : 0100
[07] Line Mgmt Ptcl: 02 [08] Local Swtch Nm: 0C [09] Local Port Nm : 51
[10] Inquire Poll  : 05 [11] Full Stat Poll: 05 [12] Min Frame Size: 22
[13] Max Frame Size: 43 [14] Jitter Buf Sz : 00 [15] User Lockout  : 01
                               Link Parameters
[16] Clock         : 00 [17] Rate          : 0C [18] Bandwidth     : 8000
[19] Data Card Slot: FF [20] Data Card Chnl: 00 [21] Bundled DLCI  : 1000

This Command: cnffpsys 31.2


Enter parameter number to change (DEL to quit)
```

Enter the parameter number to make a change.

cnffstparm (Configure ForeSight Node Parameter)

The **cnffstparm** command configures the ForeSight parameters for frame relay ports.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

cnffrcon

Syntax

cnffstparm

No line or port number need be entered.

Function

This command configures the ForeSight parameters for frame relay ports. This command only has an effect if the frame relay ForeSight option is enabled. The parameter values set by this command apply to all frame relay connections enabled with ForeSight. Therefore, these parameters must be configured on each node in the network that has ForeSight connections. Table 1-10 lists the parameters. The **cnffrcon** command enables ForeSight on a connection.

When you enter this command system responds with the screen illustrated in Figure 1-24.

Figure 1-24 cnffstparm—Configure ForeSight Parameters

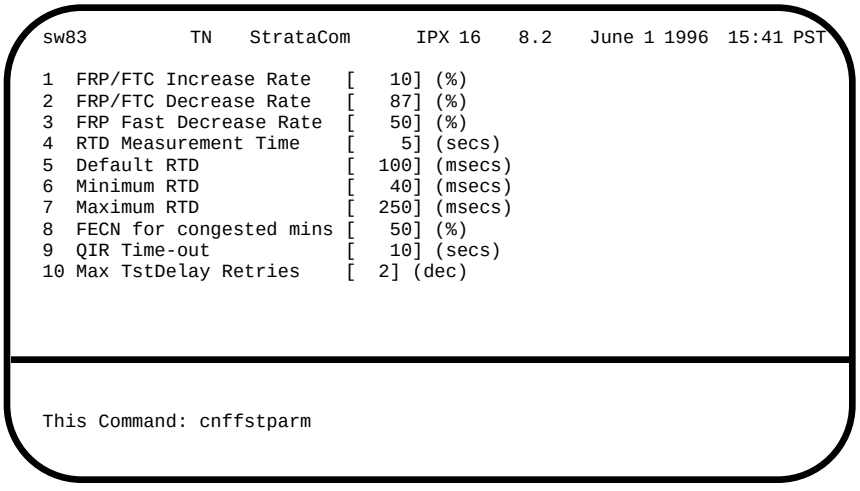


Table 1-10 ForeSight Node Parameters

No.	Parameter	Description	Default
1	FRP Increase Rate	If free bandwidth is available, the rate at which FRP increases transmission (as a percentage of MIR).	10%
2	FRP Decrease Rate	If free bandwidth becomes unavailable, the rate at which FRP decreases transmission (as a percentage of current rate).	87%
3	FRP Fast Decrease Rate	If a cell is dropped or the TxQ is full, the rate at which FRP decreases transmission (as a percentage of current rate).	50%
4	RTD Measurement Time	The polling interval for measuring round-trip delay on each frame relay PVC.	5 sec.
5	Default RTD	The default RTD the connection uses before RTD is measured.	100 ms.
6	Minimum RTD	Min. value used for RTD in FR calculation regardless of measured RTD.	40 ms.
7	Maximum RTD	Max. value used for RTD in FR calculation regardless of measured RTD.	250 ms.
8	FECN for congested mins	When this % of packets received have the EFCN bit set, a congested minutes field in the **dspfrport** command is indicated.	50%
9	QIR Time-out	Interval after which if PVC is idle, will reset the allowable transmit rate to QIR.	10 secs.

cnflan (Configure LAN)

The **cnflan** command configures node communication parameters.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

upln, dnln, cnfln

Syntax

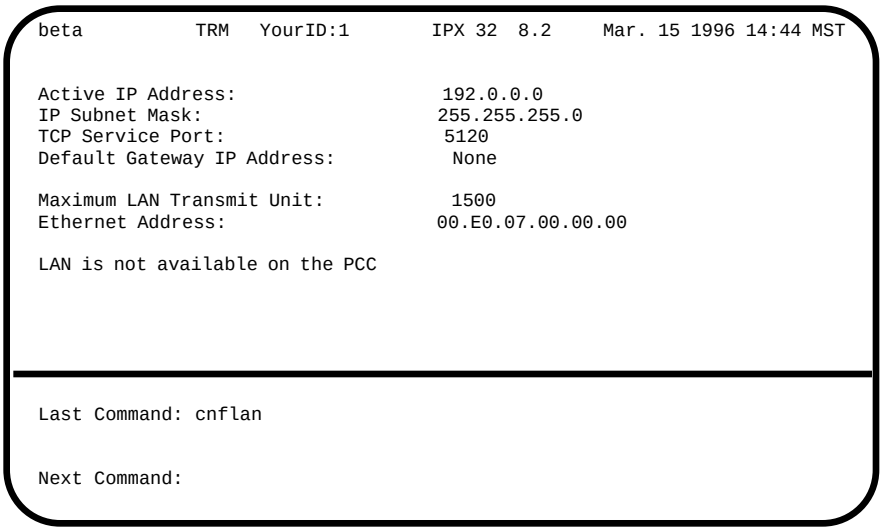
cnflan <IP_Address> <IP_Subnet_Mask> <Maximum LAN Transmit Unit> <TCP Service Port>

<IPAdd>	Specifies the Internet address of the node used in the TCP/IP protocol
<IP subnet mask>	Specifies a 32-bit mask that contains information about the bit lengths of the subnet ID and host ID address fields. The format of this field uses 1s for the subnet ID field and 0s for the host ID address field as defined in the TCP/IP protocol. The default value (in decimal notation) is 255 255 255.0. This mask denotes both subnet ID and host ID fields as 8-bit fields.
<Max. LAN Transmit Unit>	BPX only: typical amount is 1500 bytes.
<TCPServicePort>	Specifies the node's service point used by the transmission control protocol (TCP).
<GatewayIPAddr>	Specifies the Internet gateway address

Function

This command configures node communication parameters, so the node can communicate with a StrataView Plus terminal over an Ethernet LAN using TCP/IP protocol. The parameters all contain address information about the Ethernet TCP/IP network that connects the StrataView Plus station to an IPX, IGX, or BPX. The values must conform to those of the network. The network administrator can supply the parameters.

Figure 1-25 cnflan—Configure LAN Parameters



cnflnparm (Configure ATM Line Card Parameter)

The **cnflnparm** command configures several parameters for ATM lines originating on the BPX.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: BPX

Associated Commands

upln, dnln, cnfln

Syntax

cnflnparm <slot.port> <option 1 – 4>

<slot.port> specifies the line to configure in the format slot.port for the ASI-0 card.

<option 1 – 4> specifies the parameter to configure.

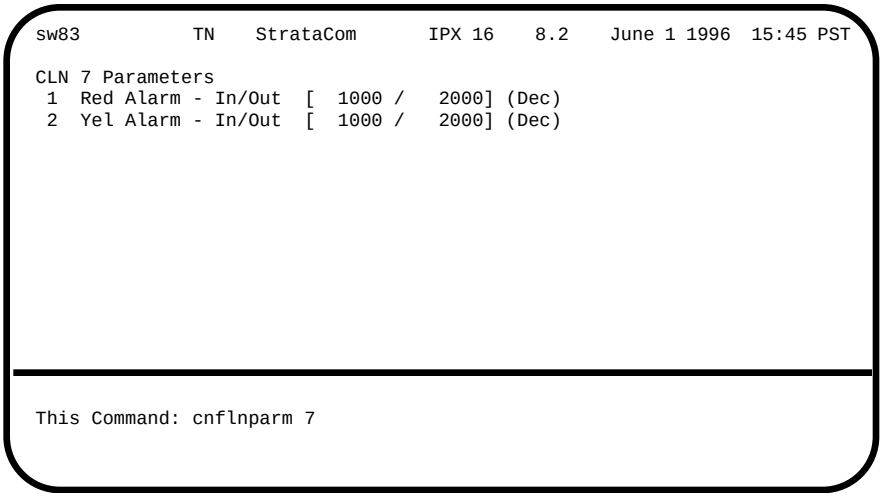
Function

This command configures the circuit line alarm integration times for RED and YELLOW circuit line alarms. These integration times are specified in milliseconds and should be set to correspond to the local carrier's alarm integration times. Carrier integration times are typically 800 ms. to 1500 ms for RED Alarm and 1500 to 3000 milliseconds for YELLOW Alarm. The allowable range for these parameters are 60 to 3932100 milliseconds.

You can also set the queue depth for the two queues associated with the ASI-0 card, the constant bit rate (CBR) queue and the Variable Bit Rate (VBR) queue. The queue depths may be increased to 16,000 bytes per queue.

When you enter this command system responds with the screen in Figure 1-26. This command is quite similar to the Configure Circuit Line command.

Figure 1-26 cnflnparm—Configure ATM Line Card Parameters



cnflnsigparm (Configure Line Signalling Parameters)

The **cnflnsigparm** command configures the line signalling parameters.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX

Associated Commands

cnflnparm, cnflnstats, dsplnstatcnf, dsplnstathist, upln, dnln, cnfln

Syntax

cnflnsigparm <parameter number> <parameter value>

<parameter number> specifies the number of the parameter to change.

<parameter value> specifies the new value to enter.

Function

This command configures the line signalling parameters associated with a line. When you enter this command, the screen responds with the following:

Figure 1-27 cnflnsigparm—Configure Line Signalling Parameters

```
cc2           LAN   StrataCom      IPX 32    8.2     Mar. 30 1996 11:16 PST

1  CDP & CIP Heartbeat                    [   2] (sec)
2  CDP & CIP Sig. Polling Rate            [  10] (sec)
3  CDP & CIP Default Inband Sig Delay     [  96] (msec)
4  CDP & CIP Default Inband Playout Delay [ 200] (msec)
5  CDP & CIP Default Pulse Sig Delay      [  96] (msec)
6  CDP & CIP Default Pulse Playout Delay  [ 200] (msec)
7  CIP Number of Packet Slices            [   1]
8  CDP & CIP Packet Rate                  [ 200] (pkt/sec)
9  CDP & CIP Condition CCS Lines?         [ YES]
10 CIP Default Inband Min. Wink           [ 140] (msec)
11 CIP Default Pulse Min. Wink            [ 140] (msec)


This Command: cnflnsigparm

                  Which parameter do you wish to change
```

cnflnstats (Configure Line Statistics Collection)

The **cnflnstats** command configures statistics collection for the specified line.

Attributes

Jobs: Yes Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

dsplnstatcnf, dsplnstathist

Syntax

cnflnstats <line> <stat> <interval> <e | d> [<samples> <size> <peaks>]

<line>	specifies the port to configure.
<stat>	specifies the type of statistic to enable/disable.
<interval>	specifies the time interval of each sample (1 - 255 minutes).
<e|d>	enables/disables a statistic. 'E' to enable; 'D' to disable.
[samples]	specifies the number of samples to collect (1 - 255).
[size]	specifies the number of bytes per data sample (1, 2 or 4).
[peaks]	enables the collection of one minute peaks. 'Y' to enable; 'N' to disable.

Function

This command configures parameters for line statistic collection. It is basically a debug tool and should not be required for everyday use. It permits customizing statistics collected on each line. The following table lists the statistics by type.

Not all statistic types are available for all lines. Only valid statistics are displayed for the user to select from, the others appear in gray.

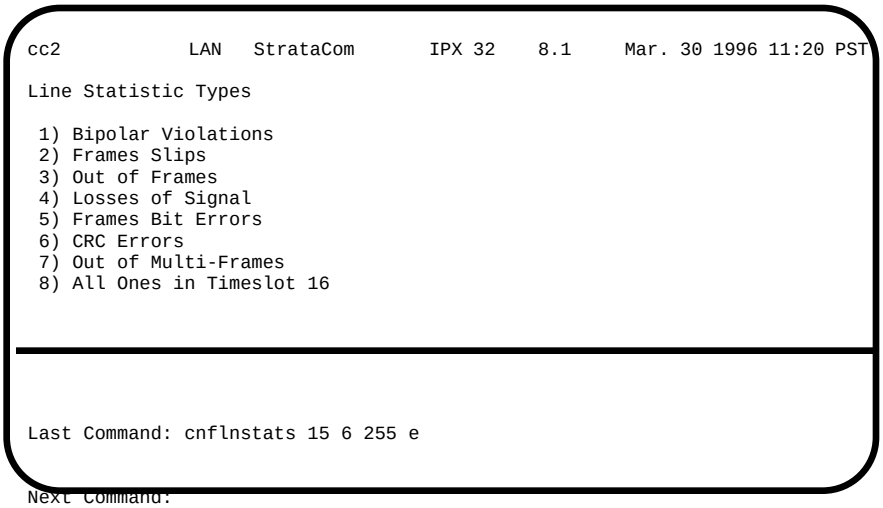
Table 1-11 Statistic Types

Statistic Type	Statistic	Line Type
1	Bipolar Violations	E1 and T1
2	Frame Slips	E1 and T1
3	Out of Frames	E1 and T1
4	Loss of Signal	E1 and T1
5	Frame Bit Errors	E1 only
6	CRC Errors	E1 only
7	Out of Multi-Frames	E1 only
8	All Ones in Timeslot 16	E1 only

Note Bipolar violations are not generally accumulated on E1 trunk and circuit lines. They are accumulated only on E1 lines connected to E1 frame relay ports.

Figure 1-28 illustrates the screens displayed after entering **cnflnstats.**

Figure 1-28 cnflnstats—Configure Line Statistics



cnfmxbutil (Configure Muxbus Utilization)

The **cnfmxbutil** command configures the IPX MUXBUS utilization factor for each FRP.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX

Associated Commands

none

Syntax

cnfmxbutil <slot number> <percentage>

<slot number>	specifies the slot number of the associated FRP card.
<percentage>	specifies the percent of MUXBUS bandwidth to allocate.

Function

This command configures the MUXBUS utilization factor. A certain amount of MUXBUS bandwidth is allocated by system software for each FRP in an IPX node. Since the maximum data rate for an FRP is 2 Mbps, this is also the maximum amount of MUXBUS bandwidth reserved for the FRP.

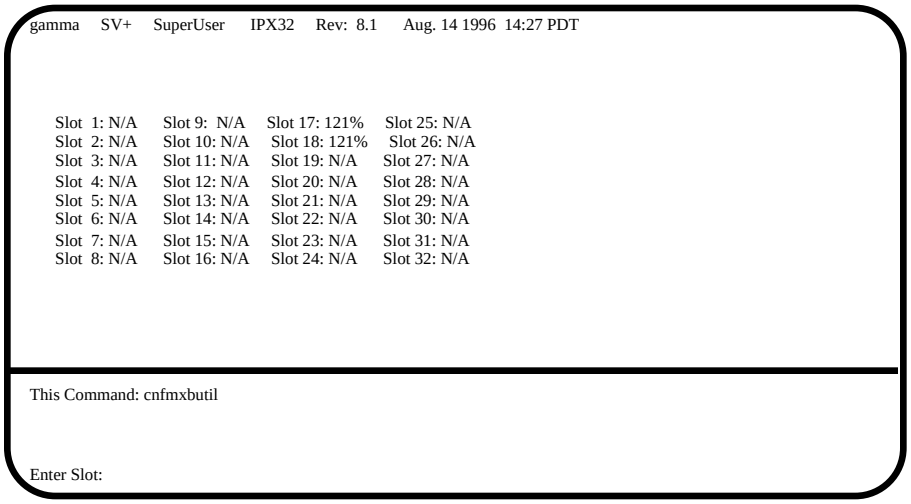
In many applications, each of the four FRP ports is configured for a large number of 56 or 64 Kbps connections. System software adds up the bandwidth required for all the connections, multiplies by 121% to reserve extra bandwidth for overhead, then subtracts this amount from the total available MUXBUS bandwidth.

However, statistical full utilization is not often required on ports with a large number of connections and the MUXBUS bandwidth reserved may be reduced further. In nodes equipped with a T3 or E3 ATMT card, much of the MUXBUS bandwidth may be assigned to the ATM trunk and the remaining MUXBUS bandwidth may need to be allocated carefully.

Prior to release 7.1, the MUXBUS utilization factor was configurable only on a per-node basis using the **cnfnodeparm** command. All FRPs had to be configured the same. This command permits assigning the utilization factor for each FRP in the node on a slot by slot basis.

See Figure 1-29 for a sample screen. N/A is displayed for all slots not equipped with an FRP. Once the slot is selected, the system displays the message "Enter Utilization Factor". The allowable range is from 1 to 250% with a default of 121%. The extra 21% for the default is used to cover the overhead involved in encapsulating the frame relay frame in the FastPacket or ATM cell.

Figure 1-29 cnfmxbutil—Configure Muxbus Utilization screen



cnfnodeparm (Configure Node Parameter)

The **cnfnodeparm** command sets various general, non-related parameters for the various nodes.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

none

Syntax

cnfnodeparm

Function

This command allows changing some of the node-wide system parameters as listed in Table 1-12 and Table 1-13. The defaults for these parameters are selected by StrataCom engineering to operate under normal network conditions. With few exceptions, they should not be changed except under direction of StrataCom ISC. See Figure 1-30 for a sample screen.

Table 1-12 Node Parameters (IPX/IGX)

Index	Parameter	Description	Default *
1	Update Initial Delay (sec.)	This factor, times the number of nodes in the network, is the delay before conditional updates are transmitted to the network after a NPC switchover.	5000 (D)
2	Update Per-Node Delay (ms.)	Delay between updating nodes with the conditional updates.	30000 (D)
3	Comm. Break Test Delay (ms.)	Normal interval between comm. break testing on any node.	30000 (D)
4	Comm. Break Test Offset	Factor between number of comm. test failures and test successes to declare a node in comm. break condition.	10 (D)
5	Network Timeout Period	Interval to wait for a response to a comm. test transmission before declaring a failure. Four failures allowed.	1700 (D)
6	Network Inter-p Period	Same as #5 for inter-domain connections.	4000 (D)
7	Network Sliding Window Size	Controls the number of NPC messages that can be transmitted simultaneously. Defines # of no acknowledgments outstanding on controller before NACKS declared.	1 (D)
8	Number of Normal Timeouts	Number of normal network retransmissions allowed before issuing a comm. break condition (for intra-domain connections).	7 (D)
9	Number of Inter-p Timeouts	Number of normal network retransmissions allowed before issuing a comm. break condition (for inter-domain connections).	3 (D)
10	Number of Satellite Timeouts	Number of satellite network retransmissions allowed before issuing a comm. break.	6 (D)

* Enter value in either decimal (D) or hexidecimal (H).

Index	Parameter	Description	Default *
11	Number of Blind Timeouts	Number of comm. fail timeouts and re-transmissions before declaring comm. fail. One successful acknowledgment will clear CF.	4 (D)
12	Number of CB Msg Timeouts	Number of comm. break timeouts and retransmissions before declaring comm. break condition. One successful acknowledgment will clear CB condition.	2 (D)
13	Comm. Fail Interval (ms.)	Minimum time allocated for communication fail testing of all trunks terminating on this node.	10,000 (D)
14	Comm. Fail Multiplier	Number of Comm. Fail Intervals to skip for good lines.	3 (D)
15	Temperature Threshold (° C.)	Temperature at which an over temperature alarm is sent to the controller card.	50 (D)
16	NPC Redundancy Configured	Yes indicates a redundant controller card is required or an alarm will be generated.	Y
17	MT3	OBSOLETE	
18	Network Packet TX gap (msec)	Min. delay between transmitting NPC control packets.	2 (D)
19	Statistics Memory (x 10 KB)	The amount of controller memory to allocate to statistics collection.	76 (D)
20	Standby Update Timer	Determines how often to send update messages to standby controller	10 (D)
21	Stby Updts Per Pass	Number of messages that can be sent to standby NPC for each update interval.	30 (D)
22	Gateway ID Timer	An inter-domain rerouting timer. How often to look for junction nodes for new route.	30 (D)
23	GLCON Alloc Timer	Another inter-domain rerouting timer controlling gateway LCON function.	30 (D)
24	Comm Fail Delay	Timer to determine how soon after controller switchover to start detecting comm. fail.	60 (D)
25	Nw. Hdlr Timer (msec)	Network handler timer determines how long to wait to send messages to or receive messages from a remote node.	50 (D)
26	CBUS Delay	Minimum interval in msec. the NPC or NPM must wait before it places the next command on the CBUS.	20 (D)

* Enter value in either decimal (D) or hexidecimal (H).

Table 1-13 Node Parameters (BPX)

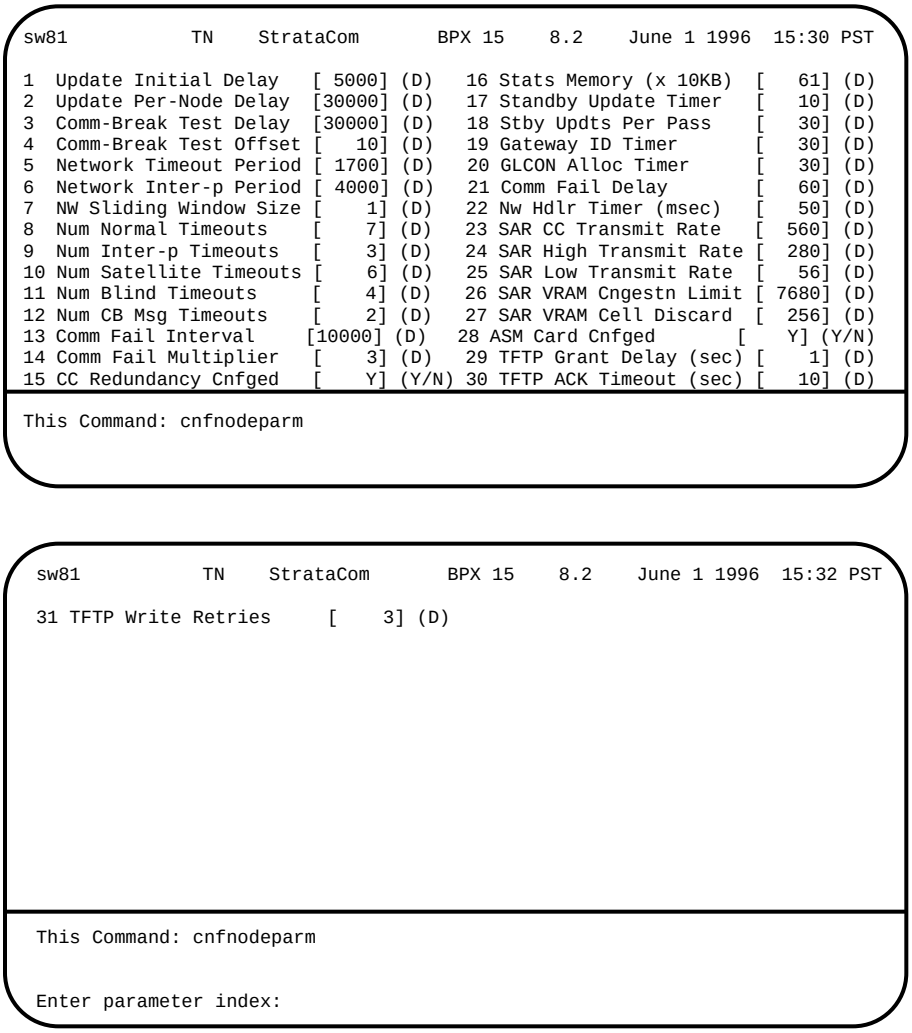
Index	Parameter	Description	Default *
1	Update Initial Delay (sec.)	This factor, times the number of nodes in the network, is the delay before conditional updates are transmitted to the network after a BCC switchover.	5000 (D)
2	Update Per-Node Delay (ms.)	Delay between updating nodes with the conditional updates.	30000 (D)
3	Comm. Break Test Delay (ms.)	Normal interval between comm. break testing on any node.	30000 (D)
4	Comm. Break Test Offset	Factor between number of comm. test failures and test successes to declare a node in comm. break condition.	10 (D)
5	Network Timeout Period	Interval to wait for a response to a comm. test transmission before declaring a failure. Four failures allowed.	1700 (D)

* Enter value in either decimal (D) or hexidecimal (H).

Index	Parameter	Description	Default *
6	Network Inter-p Period	Same as #5 for inter-domain connections.	4000 (D)
7	NW Sliding Window Size	Controls the number of BCC messages that can be transmitted simultaneously. Defines # of no acknowledgments outstanding on controller before NACKS declared.	1 (D)
8	Num. Normal Timeouts	Number of normal network retransmissions allowed before issuing a comm. break condition (for intra-domain connections).	7 (D)
9	Num. Inter-p Timeouts	Number of normal network retransmissions allowed before issuing a comm. break condition (for inter-domain connections).	3 (D)
10	Num. Satellite Timeouts	Number of satellite network retransmissions allowed before issuing a comm. break.	6 (D)
11	Number of Blind Timeouts	Number of comm. fail timeouts and re-transmissions before declaring comm. fail. One successful acknowledgment will clear CF.	4 (D)
12	Number of CB Msg Timeouts	Number of comm. break timeouts and retransmissions before declaring comm. break condition. One successful acknowledgment will clear CB condition.	2 (D)
13	Comm. Fail Interval (ms.)	Minimum time allocated for communication fail testing of all trunks terminating on this node.	10,000 (D)
14	Comm. Fail Multiplier	Number of Comm. Fail Intervals to skip for good lines.	3 (D)
15	BCC Redundancy Configured	Yes indicates a redundant controller card is required or an alarm will be generated.	Y
16	Stats Memory (x 10 KB)	The amount of controller memory to allocate to statistics collection.	76 (D)
17	Standby Update Timer	Determines how often to send update messages to standby controller	10 (D)
18	Stby Updts Per Pass	Number of messages that can be sent to standby NPC for each update interval.	30 (D)
19	Gateway ID Timer	An inter-domain rerouting timer. How often to look for junction nodes for new route.	30 (D)
20	GLCON Alloc Timer	Another inter-domain rerouting timer controlling gateway LCON function.	30 (D)
21	Comm Fail Delay	Timer to determine how soon after controller switchover to start detecting comm. fail.	60 (D)
22	Nw. Hdlr Timer (msec)	Network handler timer determines how long to wait to send messages to or receive messages from a remote node.	50 (D)
23	SAR BCC Transmit Rate	Transmit data rate for BCC traffic to standby BCC (Kbps).	560 (D)
24	SAR High Transmit Rate	Transmit data rate for BCC traffic to other BCC nodes (Kbps).	280 (D)
25	SAR Low Transmit Rate	Transmit data rate for BCC traffic to ICC nodes (Kbps).	56 (D)
26	SAR VRAM Cngestn Limit	BCC traffic receive queue congestion threshold that will cause cell discards.	7680 (D)
27	SAR VRAM Cell Discard	BCC traffic receive queue discard amount in cells.	256 (D)
28	ASM Card Cnfged	Yes indicates an Alarm/Status Monitor card is required or an alarm will be generated.	Y

* Enter value in either decimal (D) or hexidecimal (H).

Figure 1-30 cnfnodeparm—Configure Node Parameters (BPX)



cnfnwip (Configure Network IP Address)

The **cnfnwip** command configures an IP address and subnet mask for the node.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

none

Syntax

cnfnwip <IPAddr> <IPSubnetMask>

<IPAddr>	IP address of the node: the format is *nnn.nnn.nnn.nnn*, where *nnn* can be 1–255
<IPSubnetMask>	subnet mask: the format is *nnn.nnn.nnn.nnn*

An example of this command is:

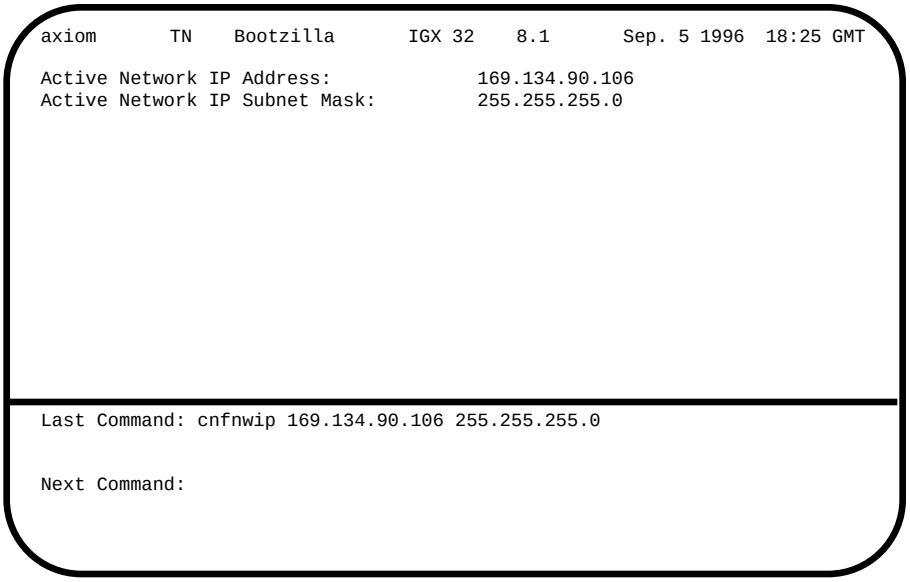
cnfnwip 199.35.96.217 255.255.255.0

where 199.35.96.217 is the IP address, and 255.255.255.0 is the subnet mask.

Function

The network IP address and subnet mask support statistics collection for StrataView Plus. The **cnfwip** command defines the IP address the system uses to pass messages between StrataView Plus and the node. The Statistics Master process in StrataView PlusNetwork collects statistics. The Statistics Manager requests and receives statistics using TFTP Get and Put messages. These TFTP messages pass between the node and the Statistics Master using IP Relay. (See the **cnfstatmast** description for details on setting the Statistics Master address.)

Figure 1-31 cnfnwip—Configure Network IP Address



cnfportstats (Configure Frame Relay Port Statistics Collection)

The **cnfportstats** command configures parameters for frame relay ports.

Attributes

Jobs: Yes Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

none

Syntax

cnfportstats <port> <stat> <interval> <e|d> [<samples> <size> <peaks>]

<port>	specifies the port to configure.
<stat>	specifies the type of statistic to enable/disable.
<interval>	specifies the time interval of each sample (1 - 255 minutes).
<e|d>	enables/disables a statistic. 'E' to enable; 'D' to disable.
[samples]	specifies the number of samples to collect (1 - 255).
[size]	specifies the number of bytes per data sample (1, 2 or 4).
[peaks]	enables the collection of one minute peaks. 'Y' to enable; 'N' to disable.

Function

The **cnfportstats** command configures frame relay port parameters. Primarily, it is for debugging. Table 1-14 lists the configurable statistics. Not all statistic types are apply to all ports. Refer to Figure 1-32 and Figure 1-33 for examples.

Figure 1-33 shows that the selected statistic is 33—transmitted bytes while the ingress LMI is showing a failed condition. After the port number and statistic number (33) on the command line, the remaing parameters are the interval, enable for this statistic, number of samples, and so on.

Table 1-14 Frame Relay Port Statistic Types

Type	Statistic
1–4	Total frames and bytes transmitted and received.
5– 6	Frames transmitted with FECN and BECN set.
7–10	Frames received with problems: CRC errors, invalid format, frame alignment errors, wrong length frames.
11	Number of direct memory access (DMA) overruns on a frame relay port that are probably due to excessive user-data input.
12–17	LMI counts on UNI ports. These include status inquiries, status transmit and update requests, invalid inquiries, and LMI link timeouts.

Type	Statistic
18	Frames received with DLCIs in error.
19	Frames dropped with DE bit set.
20–24	LMI counts on NNI ports: status inquiries, status receive and update requests, LMI link timeouts, keepalive sequence errors.
25–26	Frame and byte count totals for Consolidated Link Layer Message (CLLM) frames that transmit ForeSight messages.

Figure 1-32 cnfportstats—Configure Port Statistics (Screen 1)

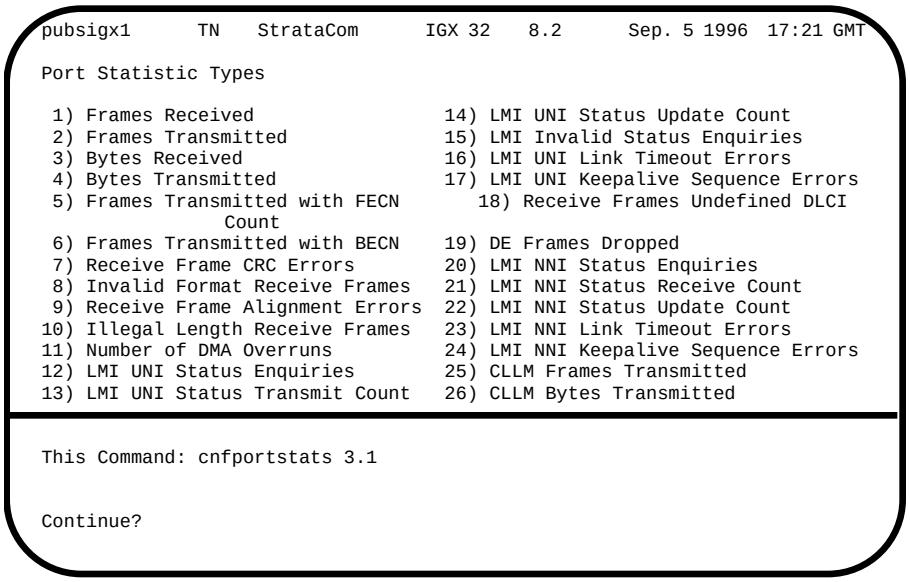
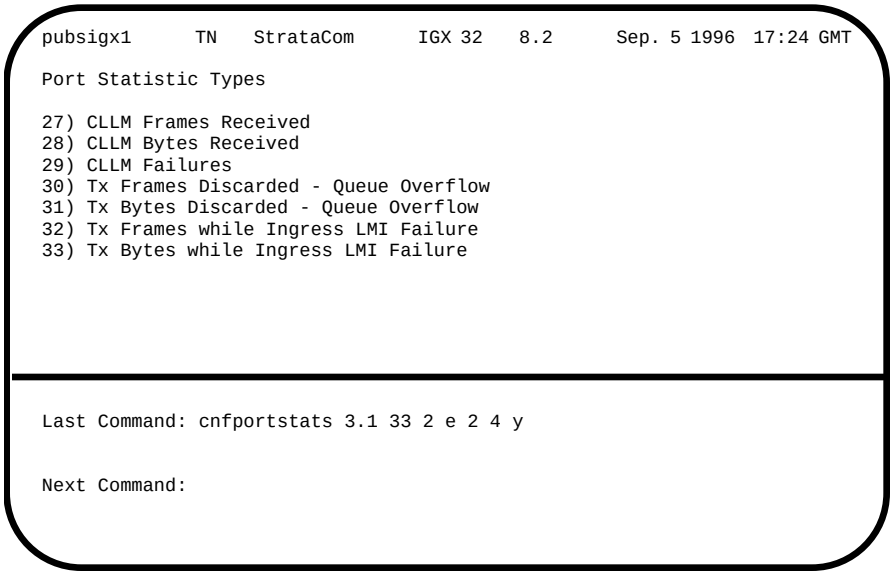


Figure 1-33 cnfportstats—Configure Port Statistics (Screen 2)



cnfrobparm (Configure Robust Alarms Parameters)

The **cnfrobparm** command sets parameters associated with the Robust Alarms feature.

Attributes

Jobs: No Log: No Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

Syntax

cnfrobparm <index> <value>

<index> specifies the parameter to configure.

<value> specifies new value to be entered for the parameter.

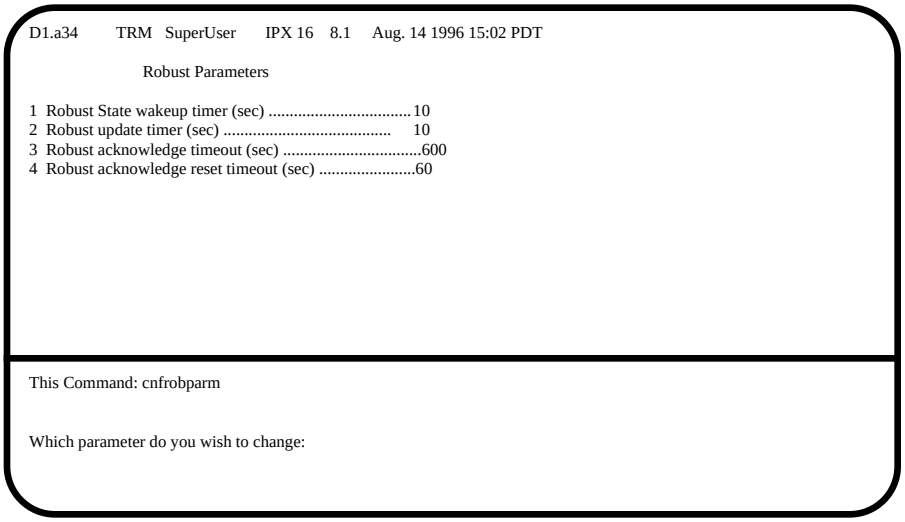
Function

This command sets Robust Alarms parameters. Robust Alarms is a protocol for node to NMS communications. When a node has statistics or alarm information to be sent to the NMS, it requires a response from the NMS as a confirmation of database update. Table 1-15 lists the parameters. Figure 1-34 illustrates the command.

Table 1-15 Robust Communications Parameters

No.	Parameter	Description	Default
1	Robust State wakeup timer (ms.)	This state machine comes to life once a second (default). If this timer is increased, it operates less often and places less of a load on the node processor.	10 ms.
2	Robust update timer (sec)	Once a message has been sent to the NMS, another one will not be sent before this timer expires.	10 sec.
3	Robust acknowledgment timeout (sec.)	An acknowledgment must be returned by the NMS within this time period or it is assumed the communications link is down.	600 sec.
4	Robust acknowledgment reset timeout (sec.)	When the link has gone down, then is repaired, the next message will be sent after this timeout. Provides a settling time for the link.	60 sec.

Figure 1-34 cnfrobparm—Configure Robust Alarm Parameters



cnfslotstats (Configure Slot Statistics Collection)

The **cnfslotstats** command configures the collection of statistics for the selected node slot.

Attributes

Jobs: Yes Log: Yes Lock: Yes Node Type: BPX

Associated Commands

dspsloterrs

Syntax

cnfslotstats <slot number>

<slot number> specifies the shelf slot in the BPX node for which to configure statistics collection.

Function

This command sets the collection interval for each of the BPX node slot statistics. The default is for no statistics to be collected. The collection interval range is 1 minute to 255 minutes (4-1/4 hrs).

Table 1-16 lists the nine statistics associated with each slot in the BPX. Figure 1-35 illustrates the command screen. This command is primarily a troubleshooting tool for use when hardware errors are experienced that may not be detected by the individual care self-test routines. An associated display command (**dspsloterrs**) is available for all users.

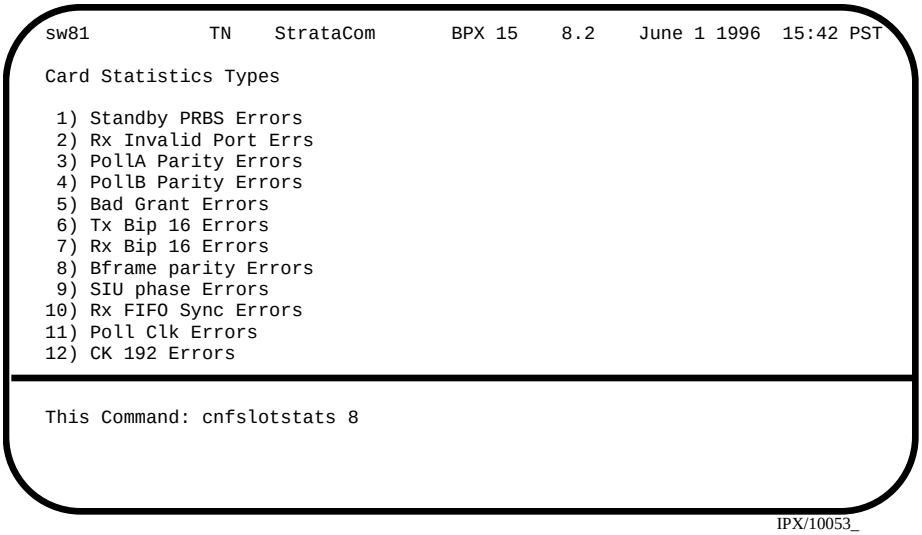
Table 1-16 Slot Errors

Error	Description
Standby Bus Errors	Indicates a background test over the standby bus produced an error.
Rx Invalid Port Errors	Indicates port number was out of the range 1–3.
Polling Bus A Errors	Parity error occurred on this polling bus.
Polling Bus B Errors	Parity error occurred on this polling bus.
Bad Grant Errors	Error indicates arbiter did not issue a grant to send data before a timeout.
Tx BIP-16 Errors	Data frame transmitted had a checksum error.
Rx BIP-16 Errors	Data frame received with a checksum error.
SIU Phase Errors	Serial Interface Unit on the card did not detect the frame synch properly.
Bframe Errors	Errors detected in the BPX frame on the StrataBus or in a memory operation.

You must enter the statistic type (1–9) to set the collection interval. When the command is entered, the system responds with the prompt:

"Collection Interval (1–255 minutes): __

Figure 1-35 cnfslotstats—Configure Slot Statistics Parameters



IPX/10053_

cnftcpparm (Configure TCP Parameters)

The **cnftcpparm** command configures the TCP parameter.

Attributes

Jobs: Yes Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

dsptcpparm

Syntax

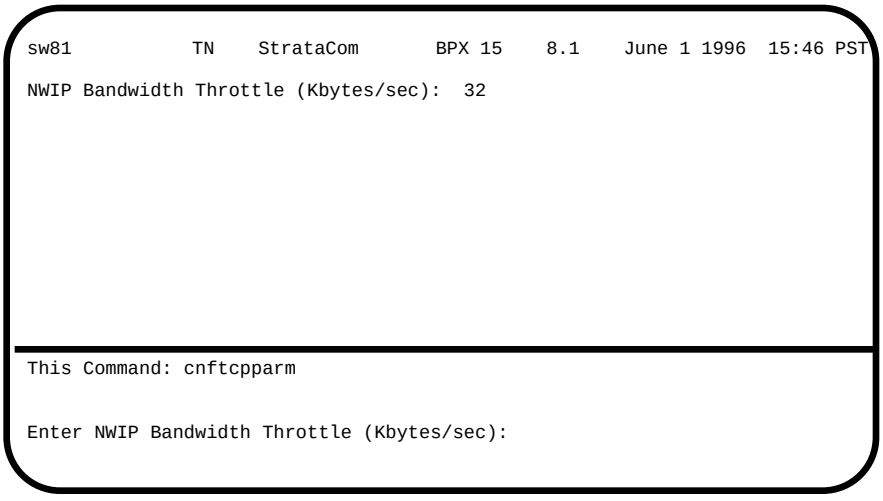
cnftcpparm <network ip throttle>

<network ip throttle> specifies the number of times that the BCC card polls the LAN for attention requests.

Function

This command configures the amount of number of times each second that the BCC card will check the IP addressees for attention requests. Figure 1-36 illustrates the system response when the command is issued:

Figure 1-36 Configure TCP Parameters



cnftrkparm (Configure Trunk Card Parameter)

The **cnftrkparm** command sets specified trunk parameters for the following front cards:

- AIT
- BTM
- NTC
- NTM
- BNI

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

dsptrkstathist, dsptrkstatcnf

Syntax

cnftrkparm <trk number> <parm index> <parm value>

<trk number>	specifies the trunk to configure (can be a virtual trunk).
<parm index>	specifies the parameter to change.
<parm value>	specifies the value of the parameter.

Function

Use the **cnftrkparm** command to optimize a network for particular traffic mixes. This command configures any of the trunk-specific parameters associated with a trunk card. It applies to either a FastPacket trunk (“packet line”) or an ATM trunk. For ATM trunks, **cnftrkparm** applies to both physical and virtual trunks. Spacer queues indicated for the CLP and EFCN thresholds pertain to AIT and BTM cards.

When the system receives this command and trunk number, it displays the configurable parameters with an index number for each. The parameters vary with the trunk type, as the subsequent figures and tables show. Table 1-17, Table 1-18, and Table 1-19 list the parameters for trunks carrying FastPackets and ATM cells, respectively. Figure 1-37, Figure 1-38, and Figure 1-39 show the response when a FastPacket line or trunk is specified.

This command is also used to reconfigure trunk queue depths to meet the CEPT requirement of a maximum end-to-end delay of 10 ms. To do this, enter the following:

cnftrkparm <trk number> <parm index> <parm value>

Where: <trk number> specifies the trunk to be configured.
<parm index> is 2 (which corresponds to the NTS queue).
<parm value> is 7 (which is the maximum allowable queue depth).

Figure 1-37 cnftrkparm for an IPX

```
sw83          TN    StrataCom      IPX 16    8.1      Apr. 23 1996 15:58 PST

PLN 13 Parameters:
 1 Yel Alm-In/Out (D) [   600/   600]     18 Red Alm-In/Out (D) [  2500/ 15000]
 2 Rx Max Age - Voice    (D)   [ N/A]      19 Tx Max Age - Voice    (D)   [  20]
 3 Rx EFCN  - BdataB     (D)   [ N/A]      20 Tx EFCN    - BdataB   (D)   [  30]
 4 Gateway Efficiency      (D)   [ N/A]
 5 EFCN     - Rx Space   (D)   [ N/A]      Tx Age Step2 (D)     Tx Age Step  (D)
 6 Low CLP  - Rx_Space   (%)   [ N/A]      21 BDataA [ 128]     23 BDataA [ 128]
 7 High CLP - Rx_Space   (%)   [ N/A]      22 BDataB [ 128]     24 BDataB [ 128]
Rx High CLP  (%)     Rx Low CLP   (%)      Tx High CLP  (%)     Tx Low CLP   (%)
 8 BDataA [ N/A]     10 BDataA [ N/A]      25 BDataA [ 100]     27 BDataA [ 100]
 9 BDataB [ N/A]     11 BdataB [ N/A]      26 BDataB [  75]     28 BDataB [  25]
Receive Queue Depth               (D)     Transmit Queue Depth              (D)
12 Voice  [ N/A]     15 BDataA [ N/A]      29 Voice  [  22]     32 BDataA [ 301]
13 Non TS [ N/A]     16 BDataB [ N/A]      30 Non TS [ 114]     33 BDataB [ 301]
14 TS     [ N/A]     17 HighPri[ N/A]      31 TS     [2616]     34 HighPri[ 100]

Last Command: cnftrkparm 13


Next Command:
```

Table 1-17 IPX/IGX Trunk Parameters

Index	Parameter	Description
1, 18	Yel/Red Alarm In/Out	These are the assert and clear times in msec for yellow and red trunk alarms for input or output.
2, 19	Rx/Tx Max. Age: - Voice	This is the maximum time (in 125 µsec units) a voice packet can be aged in the queue before it is discarded.
3, 20	Rx/Tx EFCN - BdataB	Packets/cells received from the trunk carrying ForeSight frame relay above this threshold will have their EFCN bit set. Set for both transmit and receive queues.
4	Gateway Efficiency	This a factor that determines how many FastPackets from an AIP source will be delivered to the payload of an ATM cell. Ranges from 1.0 to 3.0.
5	EFCN - Rx Space	Same as 3, 20 except sets the threshold in the RX spacer queues in the ATMT. Rx space queues face towards the IPX node.
6, 7	Low-High CLP-Rx Space	Same as 8, 9 except this threshold is for setting CLP in receive spacer queues for data to send to the local node.
8, 9	Rx High CLP (Bdata A/BdataB)	Frame relay cells/packets received from trunk with CLP bit set above this high threshold will be dropped and will continue to be dropped until the low threshold is crossed. Separate queues for ForeSight and non-ForeSight data. Given in terms of % of queue depth.
10, 11	Rx Low CLP (Bdata A/BdataB)	Same as for 8, 9 except sets low threshold.
25, 26	Tx High CLP	Same as 8, 9 except this is threshold for setting CLP in transmit queues for data to be output to the next link.
27, 28	Tx Low CLP	Same as for 25, 26 except sets low threshold.
12–17	Receive Queue Depth (Voice, NTS, TS, BData A, BData B, High Pri.)	Reserves an amount of RAM in the trunk card for each of the various queues in terms of number of packets. For the receive direction of traffic.
29–34	Transmit Queue Depth	Same as 12 - 17 except for the transmit queues.

Note For parameter 12, the system displays the following: "Warning - don't change Voice Q size, use Max Voice Age."

Figure 1-38 cnftrkparm for a BPX Trunk

```
batman        TN    StrataCom      BPX 15    8.2     Apr. 23 1996 05:07 PST

TRK 1.2 Parameters
 1 Q Depth - Voice     [ 1008] (Dec)    15 Q Depth  - CBR      [  600] (Dec)
 2 Q Depth - Non-TS    [ 1008] (Dec)    16 Q Depth  - VBR      [ 1000] (Dec)
 3 Q Depth - TS        [ 1000] (Dec)    17 Q Depth  - ABR      [ 7656] (Dec)
 4 Q Depth - BData A   [ 1000] (Dec)     18 Low  CLP - CBR      [ 100] (%)
 5 Q Depth - BData B   [ 8000] (Dec)     19 High CLP - CBR      [ 100] (%)
 6 Q Depth - High Pri  [ 1000] (Dec)     20 Low  CLP - VBR      [ 100] (%)
 7 Max Age - Voice     [   20] (Dec)     21 High CLP - VBR      [ 100] (%)
 8 Red Alm - I/O (Dec) [  2500 /  15000]22 Low  CLP - ABR      [  25] (%)
 9 Yel Alm - I/O (Dec) [  2500 /  15000]23 High CLP - ABR      [  75] (%)
10 Low  CLP - BData A  [ 100] (%)       24 EFCN     - ABR      [  30] (Dec)
11 High CLP - BData A  [ 100] (%)
12 Low  CLP - BData B  [  25] (%)
13 High CLP - BData B  [  75] (%)
14 EFCN     - BData B  [  30] (Dec)

This Command: cnftrkparm 1.2


Which parameter do you wish to change:
```

Table 1-18 BPX Trunk Parameters

Index	Parameter	Description

Figure 1-39 cnftrkparm for a Virtual Trunk

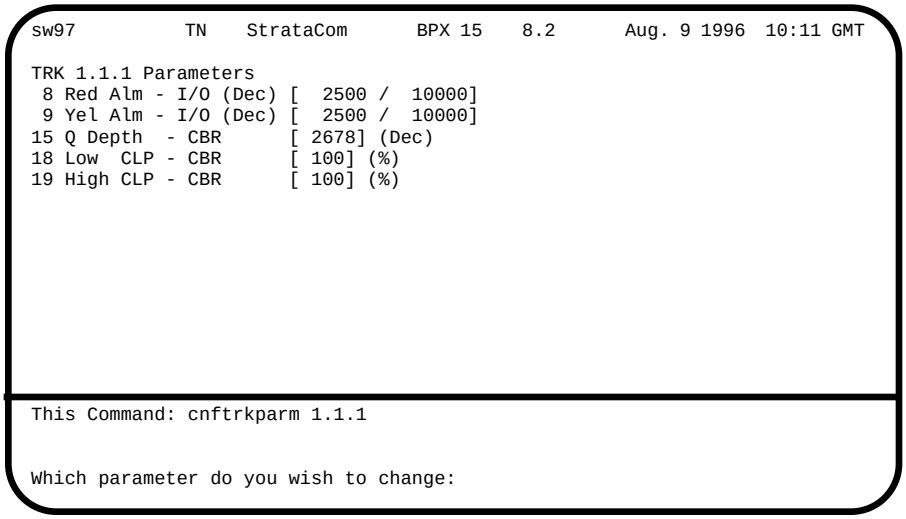


Table 1-19 Virtual Trunk Parameters

Index	Parameter	Description
8	Red Alarm	??
9	Yellow Alarm	
15	Q Depth	
18	Low CLP	
19	High CLP	

cnftrkstats (Configure Trunk Statistics Collection)

The **cnftrkstats** command configures collection of statistics for a selected trunk.

Attributes

Jobs: Yes Log: Yes Lock:Yes Node Type: IPX, IGX, BPX

Associated Commands

dsptrkstatcnf, dsptrkstathist

Syntax

cnftrkstats <line> <stat> <interval> <e|d> [<samples> <size> <peaks>]

<line>	specifies the trunk to configure.
<stat>	specifies the type of statistic to enable/disable.
<interval>	specifies the time interval of each sample (1–255 minutes).
<e|d>	enables/disables a statistic. 'E' to enable; 'D' to disable.
[samples]	specifies the number of samples to collect (1–255).
[size]	specifies the number of bytes per data sample (1, 2 or 4).
[peaks]	enables/disables collection of ten second peaks. 'Y' enables; 'N' disables.

Function

The **cnftrkstats** command is primarily a debug command. It configures the collection of statistics for a physical or virtual trunk. After displaying all statistic types for the trunk, the system prompts for “statistic type.” Enter the index number associated with the statistic.

Not all types of statistics are available for all lines. Unavailable selections appear in half-tone. Table 1-20 lists the types of statistics that are configurable for FastPacket T1 trunks and ATM T3 trunks. The subsequent figures show the screens associated with T1 packet trunks and T3 ATM trunks.

Table 1-20 Trunk Statistics Types

Categories of Statistics Types	Categories of Statistics Types
Line faults	Line errors and errored seconds
Frame Slips and Loss	Path errors
Transmit packets dropped	Cell framing errors
Packets transmitted for various packet types	EFCN packets transmitted to bus
Packets dropped for various packet types	Queue Service Engine (QSE) cells transmitted
Bursty data CLP packets and cells dropped	Spacer packets transmitted and dropped for each of the 16 queues
Errored seconds	The number of seconds in which errors occurred.

Figure 1-40 is the only screen for T1 trunks.

Figure 1-40 cnftrkstats—Configure T1 Trunk Statistics

```
sw83          TN    StrataCom      IPX 16   8.2      June 1 1996  14:42 PST

Line Statistic Types
 1) Bipolar Violations                  18) Voice Packets Transmitted
 3) Out of Frames                       19) TS Packets Transmitted
 4) Losses of Signal                    20) NTS Packets Transmitted
 5) Frames Bit Errors                   21) CC Packets Transmitted
 6) CRC Errors                          22) BDA Packets Transmitted
 9) Packet Out of Frames                23) BDB Packets Transmitted
10) Packet CRC Errors                   24) Total Packets Transmitted
12) Tx Voice Packets Dropped            25) BDA CLP Packets Dropped
13) Tx TS Packets Dropped               26) BDB CLP Packets Dropped
14) Tx NTS Packets Dropped              27) BDA EFCN Pkts Transmitted
15) Tx CC Packets Dropped               28) BDB EFCN Pkts Transmitted
16) Tx BDA Packets Dropped             149) Bdata A CLP Packets Tx to Line
17) Tx BDB Packets Dropped             150) Bdata B CLP Packets Tx to Line

Last Command: cnftrkstats 13


Next Command:
```

The following screens, shown in Figure 1-41 through Figure 1-47, pertain to an ATM trunk (AIT card) on an IPX. Other trunk types and cards have other parameters. To see the list of these, enter the command and continue from page to page without entering an index number.

Figure 1-41 cnftrkstats—Configure ATM Trunk Statistics (Screen 1)

```
sw83          TN    StrataCom      IPX 16    8.2      June 1 1996  14:45 PST

 Line Statistic Types
  3) Out of Frames                        22) BDA Packets Transmitted
  4) Losses of Signal                     23) BDB Packets Transmitted
 10) Packet CRC Errors                    24) Total Packets Transmitted
 12) Tx Voice Packets Dropped             25) BDA CLP Packets Dropped
 13) Tx TS Packets Dropped                26) BDB CLP Packets Dropped
 14) Tx NTS Packets Dropped               27) BDA EFCN Pkts Transmitted
 15) Tx CC Packets Dropped                28) BDB EFCN Pkts Transmitted
 16) Tx BDA Packets Dropped               29) Line Code Violations
 17) Tx BDB Packets Dropped               30) Line Errored Seconds
 18) Voice Packets Transmitted            31) Line Severely Err Secs
 19) TS Packets Transmitted               32) Line Parity Errors
 20) NTS Packets Transmitted              33) Errored Seconds - Line
 21) CC Packets Transmitted               34) Severely Err Secs - Line

 This Command: cnftrkstats 11


 Continue?
```

Figure 1-42 cnftrkstats—Configure ATM Trunk Statistics (Screen 2)

```
sw83          TN    StrataCom      IPX 16    8.2      June 1 1996  14:46 PST

 Line Statistic Types
 35) Path Parity Errors                  48) Tx Voice Cells Drpd
 36) Errored Secs - Path                 49) Tx TimeStamped Cells Drpd
 37) Severely Err Secs - Path            50) Tx NTS Cells Dropped
 38) Severely Err Frame Secs             51) Tx Hi-Pri Cells Drpd
 39) AIS Signal Seconds                  52) Tx BData A Cells Drpd
 40) Unavail. Seconds                    53) Tx BData B Cells Drpd
 41) BIP-8 Code Violations               54) Voice Cells Tx to line
 42) Cell Framing Errored Seconds        55) TimeStamped Cells Tx to ln
 43) Cell Framing Sev. Err Secs.         56) NTS Cells Tx to line
 44) Cell Framing Sec. Err Frame Secs    57) Hi-Pri Cells Tx to line
 45) Cell Framing Unavail. Secs.         58) BData A Cells Tx to line
 46) ATM Cell Header HEC Errs            59) BData B Cells Tx to line
 47) Pkts. Rx from Muxbus                60) Half Full cells Tx to ln

 This Command: cnftrkstats 11
```

Figure 1-43 cnftrkstats—Configure ATM Trunk Statistics (Screen 3)

```
sw83          TN    StrataCom      IPX 16    8.2     June 1 1996  14:47 PST

 Line Statistic Types
 61) Full cells Tx to ln                 74) Rx Hi-pri Pkts Dropped
 62) Total Cells Tx to line              75) Rx BDA Pkts Dropped
 63) Tx Bdata A CLP Cells Drpd           76) Rx BDB Pkts Dropped
 64) Tx Bdata B CLP Cells Drpd           77) Voice pkts Tx to Muxbus
 65) Bdata A EFCN Cells Tx ln            78) TS pkts Tx to Muxbus
 66) Bdata B EFCN Cells Tx ln            79) NTS pkts Tx to Muxbus
 67) Half Full Cells Rx from ln          80) Hi-pri pkts Tx to Muxbus
 68) Full Cells Rx from line             81) Bdata A pkts Tx to Muxbus
 69) Total Cells Rx from line            82) Bdata B pkts Tx to Muxbus
 70) Total pkts Rx from line             83) Rx Bdata A CLP pkts drpd
 71) Rx Voice Pkts Dropped               84) Rx Bdata B CLP pkts drpd
 72) Rx TS Pkts Dropped                  85) Bdata A EFCN Pkts Tx muxbus
 73) Rx NTS Pkts Dropped                 86) Bdata B EFCN Pkts Tx muxbus

 This Command: cnftrkstats 11


 Continue?
```

Figure 1-44 cnftrkstats—Configure ATM Trunk Statistics (Screen 4)

```
sw83          TN    StrataCom      IPX 16    8.2     June 1 1996  14:48 PST

 Line Statistic Types
 87) Total Pkts Tx to muxbus             100) Rx Spacer 2 Pkts dropped
 88) Rx voice cells drpd                 101) Rx Spacer 3 Pkts dropped
 89) Rx TimeStamped Cells drpd           102) Rx Spacer 4 Pkts dropped
 90) Rx NTS Cells dropped                103) Rx Spacer 5 Pkts dropped
 91) Rx Hi-pri Cells dropped             104) Rx Spacer 6 Pkts dropped
 92) Rx Bdata A Cells dropped            105) Rx Spacer 7 Pkts dropped
 93) Rx Bdata B Cells dropped            106) Rx Spacer 8 Pkts dropped
 94) Rx Bdata A CLP cells drpd           107) Rx Spacer 9 Pkts dropped
 95) Rx Bdata B CLP cells drpd           108) Rx Spacer 10 Pkts dropped
 96) Rx Spacer CLP Pkts drpd             109) Rx Spacer 11 Pkts dropped
 97) Spacer EFCN Pkts Tx to Muxbus       110) Rx Spacer 12 Pkts dropped
 98) Frame Sync Errors                   111) Rx Spacer 13 Pkts dropped
 99) Rx Spacer 1 Pkts dropped            112) Rx Spacer 14 Pkts dropped

 This Command: cnftrkstats 11
```

Figure 1-45 cnftrkstats—Configure ATM Trunk Statistics (Screen 5)

```
sw83          TN    StrataCom      IPX 16    8.2     June 1 1996  14:49 PST

 Line Statistic Types
 113) Rx Spacer 15 Pkts dropped          126) Spacer 10 Pkts Tx to Muxbus
 114) Rx Spacer 16 Pkts dropped          127) Spacer 11 Pkts Tx to Muxbus
 115) Rx Spacer Pkts drpd                128) Spacer 12 Pkts Tx to Muxbus
 116) Spacer 0 Pkts Tx to Muxbus         129) Spacer 13 Pkts Tx to Muxbus
 117) Spacer 1 Pkts Tx to Muxbus         130) Spacer 14 Pkts Tx to Muxbus
 118) Spacer 2 Pkts Tx to Muxbus         131) Spacer 15 Pkts Tx to Muxbus
 119) Spacer 3 Pkts Tx to Muxbus         132) Spacer 16 Pkts Tx to Muxbus
 120) Spacer 4 Pkts Tx to Muxbus         133) Rx Voice QSE Cells Tx
 121) Spacer 5 Pkts Tx to Muxbus         134) Rx Time Stamped QSE Cells Tx
 122) Spacer 6 Pkts Tx to Muxbus         135) Rx NTS QSE Cells Tx
 123) Spacer 7 Pkts Tx to Muxbus         136) Rx Hi Priority QSE Cells Tx
 124) Spacer 8 Pkts Tx to Muxbus         137) Rx BData A QSE Cells Tx
 125) Spacer 9 Pkts Tx to Muxbus         138) Rx Bdata B QSE Cells Tx

 This Command: cnftrkstats 11
```

Figure 1-46 cnftrkstats—Configure ATM Trunk Statistics (Screen 6)

```
sw83          TN    StrataCom      IPX 16    8.2      June 1 1996  15:02 PST

 Line Statistic Types
 139) Rx BData A EFCN QSE Cells Tx       152) Cell Framing Yel Transitions
 140) Rx BData B EFCN QSE Cells Tx       153) AIS Transition Count
 141) FEBE Counts                        161) CGW Packets Rx From IPX Net
 142) FERR Counts (M or F bit)           162) CGW Cells Tx to Line
 143) Cell Framing FEBE Err Secs         163) CGW Frms Relayed to Line
 144) Cell Framing FEBE Sev. Err. Secs.  164) CGW Aborted Frames Tx to Line
 145) Cell Framing FEBE Counts           165) CGW Dscd Pkts From Abted Frms
 146) Cell Framing FE Counts             166) CGW 0-Lngth Frms Rx from Line
 147) ATM CRC Errored Seconds            167) CGW Packets Tx to IPX Net
 148) ATM CRC Severely Err. Secs.        168) CGW Cells Rx from Line
 149) Bdata A CLP Packets Tx to Line     169) CGW Frms Relayed from Line
 150) Bdata B CLP Packets Tx to Line     170) CGW Aborted Frms Rx From Line
 151) Yellow Alarm Transition Count      171) CGW Dscd Cells From Abted Frms

 This Command: cnftrkstats 11
```

Figure 1-47 cnftrkstats—Configure ATM Trunk Statistics (Screen 7)

```
sw83          TN    StrataCom      IPX 16    8.2      June 1 1996  14:51 PST

Line Statistic Types
172) CGW Bd CRC32 Frms Rx from Line     185) OAM Valid OAM Cells Rx
173) CGW Bd Lngth Frms Rx from Line     186) OAM Loopback Cells Rx
174) CGW Bd CRC16 Frms Rx from IPX      187) OAM AIS Cells Rx
175) CGW Bd Length Frms Rx from IPX     188) OAM FERF Cells Rx
176) CGW 0-Length Frms Rx from IPX      189) OAM RTD Cells Rx
177) OAM Valid OAM Cells Tx             190) OAM RA Cells Rx
178) OAM Loopback Cells Tx              191) OAM Invalid OAM Cells Rx
179) OAM AIS Cells Tx                   192) OAM CC Cells Rx
180) OAM FERF Cells Tx
181) OAM RTD Cells Tx
182) OAM RA Cells Tx
183) OAM Invalid Supv Packets Rx
184) OAM CC Cells Tx

This Command: cnftrkstats 11
```

cnftstparm (Configure Card Self Test Parameters)

The **cnftstparm** command sets parameters for the internal diagnostic self tests that can be performed for each card type in the node.

Attributes

Jobs: Yes Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

cnfdiagparm, dspcderrs, prtcderrs, tststats

Syntax

cnftstparm <tp> <freq> <s_e> <s_inc> <s_thr> <s_to> <b_e> <b_inc> <b_thr>

<tp>	specifies the card type for which to modify test parameters.
<freq>	specifies the time between the finish of one test and the start of the next (in seconds).
<s_e>	enables/disables the card self test. 'E' to enable; 'D' to disable.
<s_inc>	specifies the threshold counter increment for self test failures.
<s_thr>	specifies the failure threshold for self tests.
<s_to>	specifies time to wait for a self test response (in seconds).
<b_e>	enables/disables the card background test. 'E' to enable; 'D' to disable.
<b_inc>	specifies the threshold counter increment for background test failures.
<b_thr>	specifies the failure threshold for background tests.

Function

This command sets internal diagnostic, self-test parameters. Upon command entry, the system displays a two-page screen illustrating each of the various card types equipped in the node along with their self test parameters. Each card has two tests: a diagnostic self-test and a background test. The self-test affects the normal operation of the card. The background test can execute while the card is carrying traffic.

The following is a list of the configurable test parameters for each card type:

- Frequency For Test Execution (sec)
- Enable/Disable Self Test (e or d)
- Self Test Failure Increment
- Self Test Failure Threshold
- Timeout For Self Test (sec)
- Enable/Disable Background Test (e or d)

- Background Test Failure Increment
- Background Test Failure Threshold

After **cnftstparm** is entered, Figure 1-48 shows the first page of the display.

Figure 1-48 cnftstparm—Configure Card Self-Test Parameters

```
sw88           TN    StrataCom       IPX 8     8.2     Aug. 9 1996 14:32 GMT

Card   Test    - - - - - - Self Test - - - - - - - -   - - Background Test - - -
Type   Freq    Enable        Inc   Thresh  Timeout   EnableInc      Thresh
----   -----   --------  -------  -------  -------   ----------------------
NPC       90   Enabled       100      300       60        N/A           100300
PSM      300   Enabled       100      300       31       N/A100     300
SDP      300   Enabled       100      300       80     Enabled100   300
LDP      300   Enabled       100      300       80     Enabled100   300
NTC      300   Enabled       100      300       31      N/A100      300
FRP      300   Enabled       100      300       80     Enabled100   300
CDP      300   Enabled       100      300      300    N/A  100      300




Last Command: cnftstparm

Next Command:
```

To see the second screen, enter “y” at the Continue prompt.

cnfuiparm (Configure User Interface Parameters)

The **cnfuiparm** command sets various control terminal user interface parameters.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

cnfnodeparm

Syntax

cnfuiparm <parameter number> <value>

<parameter number> specifies the index number of the parameter to set. (See Table 1-21).

<value> specifies the new parameter value to enter.

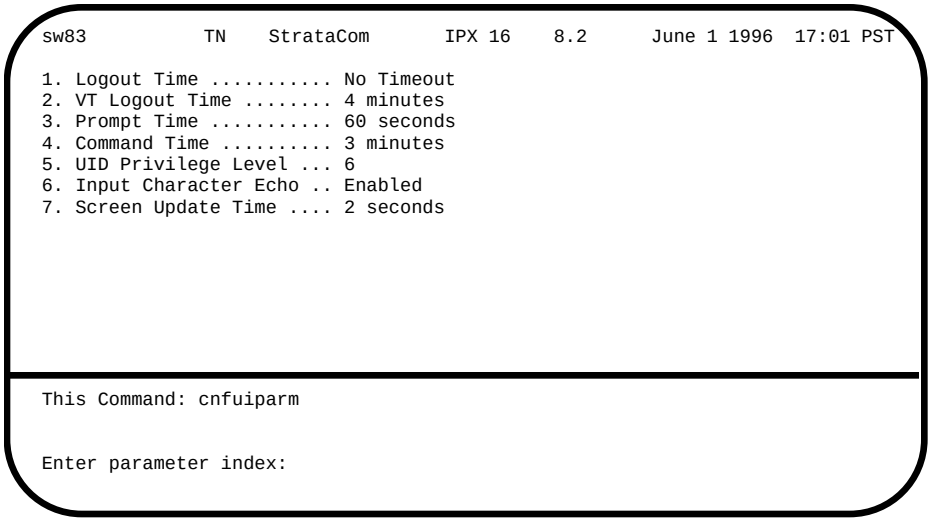
Function

This command sets user interface parameters for the control terminal. These parameters can be changed at the local node only. It may be necessary to change these parameters in special circumstances, e.g. when a continuous screen is to be observed for a long time or modem password protection makes logging in a difficult procedure. Table 1-21 lists the user interface parameters. Figure 1-49 illustrates the associated display.

Table 1-21 User Interface Parameters

No.	Parameter	Description	Default *
1	Logout Time	Idle time before a local user is logged out (0 = never).	20 min.
2	VT Logout Time	Idle time before a Virtual Terminal user is logged out.	4 min.
3	Prompt Time	Idle time before a parameter prompt times out.	2 min.
4	Command Time	Idle time before a continuous command times out	3 min.
5	UID Privilege Level	Privilege level of User ID allowed to use control terminal. Default is 6, the lowest level user.	6
6	Input Char Echo	If enabled, characters are echoed as they are typed.	enabled
7	Screen Update Time	The time between screen updates.	2 secs.

Figure 1-49 cnfuiparm—Configure User Interface Parameters



IPX SU/0019_

cnfvchparm (Configure Voice Channel Parameter)

The **cnfvchparm** command modifies CDP (IPX) or CVM (IGX) channel parameters.

Attributes

Jobs: Yes Log: Yes Lock: Yes Node Type: IPX, IGX

Associated Commands

cnfcdpparm, dspchan

Syntax

cnfvchparm <channel(s)> <parameters>

<channel(s)> specifies the voice channel number(s) to configure.

<parameters> specifies the new parameter value to enter.

Function

This command specifies CDP card parameters relating to Voice Activity Detection (VAD), background noise injection, VF channel loss, echo suppression, and modem detection.

Upon **cnfvchparm** entry, the system displays "Enter channel(s).” After it has received all the parameters, the system displays "Reconfigure active CDP channels? (y/n)" for confirmation. A “y” entry immediately causes channel reconfiguration. Otherwise, channel re-configuration occurs by switching CDP cards or deleting and re-adding a connection.

The parameters that can be modified are listed in Table 1-22. Table 1-23 lists some sample calculated values for parameters 1 and 2. Table 1-24 lists the applicable values for parameter 3. Figure 1-50 and Figure 1-51 illustrates the system display for this command.

Table 1-22 VF Channel Parameters

No.	Parameter	Description	Default *
1	Sample delay for VAD connections	Adds processing to speech information to prevent front-end clipping due to speech detector latency. In units of 125 µsec. See Table 1-23 for samples.	A8 (H)
2	Sample delay for non-VAD connections	Same for non-VAD circuits.	01 (H)
3	Background Noise	Sets the level of induced background noise injected when there are no voice packets being received at the far end. See Table 1-24 for levels.	2 (H)
4	High Pass Filter mode	Enables/disables high-pass filter to assist in VAD and modem detect.	enabled
5	Floating Priority mode	When enabled, sets higher priority for modem detection on "c'" and "v" channels. Effectively changes the NTC queue.	enabled
6	V.25 modem detect mode	Enables/disables V.25 modem detect mode. Because the default state is detect-64K, the subsequent displayed options are “disable” and the parameters that are available for the enabled state. These parameters are “32” for fax transmission at 32 Kbps FAX Optimized ADPCM and “64” for fax transmission at 64 kbps PCM.	enabled
7	32K	Automatically upgrade line to 32 Kbps ADPCM when a 32K modem is detected.	disabled
8	64K	Automatically upgrade line to 64 Kbps clear channel PCM when a high speed modem is detected.	disabled

Table 1-23 Sample Delay Parameter

Parameters 1 & 2	Delay
01	0.125 msec.
50	10 msec.
A8	21 msec.

Table 1-24 Background Noise Parameter

Parameter 3	Injected Noise Level
00	dynamic—set noise level to a level equal to noise detected at the far end. Requires CDP Model B F/W.
0	0 dBrnC0— no noise
1	18 dBrnC0: –70 dBm
2	21 dBrnC0: –67 dBm
3	23 dBrnC0: –65 dBm
4	25 dBrnC0: –63 dBm
5	27 dBrnC0: –61 dBm
6	30 dBrnC0: –58 dBm
7	49 dBrnC0: –39 dBm

Figure 1-50 cnfvchparm—Configure VF Channel Parameters (Screen 1)

```
 pubsipx1      TN    StrataCom      IPX 16    8.2.     Aug. 9 1996  00:42 PDT

CDP Models All                        None             All

         Sample Delay  Bkgnd

From 7.1   VAD  Non-VAD  Noise  HPF  Float   Function    Loss   Detect  Delay
7.1-31     A8   01       67     ON   ON      ON          ON     64K     5


 Last Command: cnfvchparm 7.1

 Next Command:
```

Figure 1-51 cnfvchparm—Configure VF Channel Parameters (Screen 2)

```
gamma          TRM      SuperUser       Rev: 8.1  Aug. 14 1996  14:10 PST

CDP Models All                        None             All
VDP Models All                        C Only           D/E Only
         Sample Delay  Bkgnd             Echo Suppression   V.25    Xmit
From 11.1  VAD  Non-VAD  Noise  HPF  Float   Function    Loss   Detect  Delay
11.1-15    A8   01       2      ON   ON      ON          ON     ON      5
11.17-31   A8   01       2      ON   ON      ON          ON     ON      5


 This Command: cnfvchparm 11.1
```

IPX SU/0020_

cpyfpmap (Copy FastPAD Map Table)

The **cpyfpmap** command copies the FastPAD map table from one FastPAD port to another.

Attributes

Jobs: No Log: No Lock: Yes Node Type: IPX, IGX

Associated Commands

cnffpmap

Syntax

cpyfpmap <source slot.port> <nodename> <destination slot.port>

<source slot.port> specifies the FTC port to copy from.

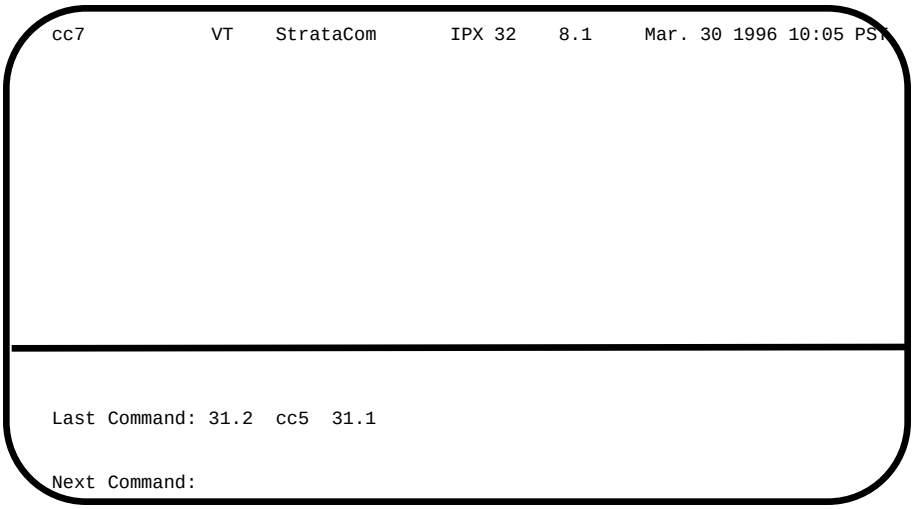
<nodename> specifies the nodename

<destination slot.port> specifies the FTC port to copy to.

Function

This command copies a FastPAD map table from one FastPAD port to another FastPAD port. When you enter this command, the system responds as shown in Figure 1-52.

Figure 1-52 cpyfpmap—Configure FastPAD Map Table



dchst (Display Channel Status)

The **dchst** command displays CDP or CVM card parameters.

Attributes

Jobs: No Log: No Lock: Yes Node Type: IPX, IGX

Associated Commands

cnfcdpparm

Syntax

dchst <channel> [interval]

<channel(s)> specifies the voice channel number(s) to configure.

<interval> specifies the refresh time for the data (1–60 sec.)

Function

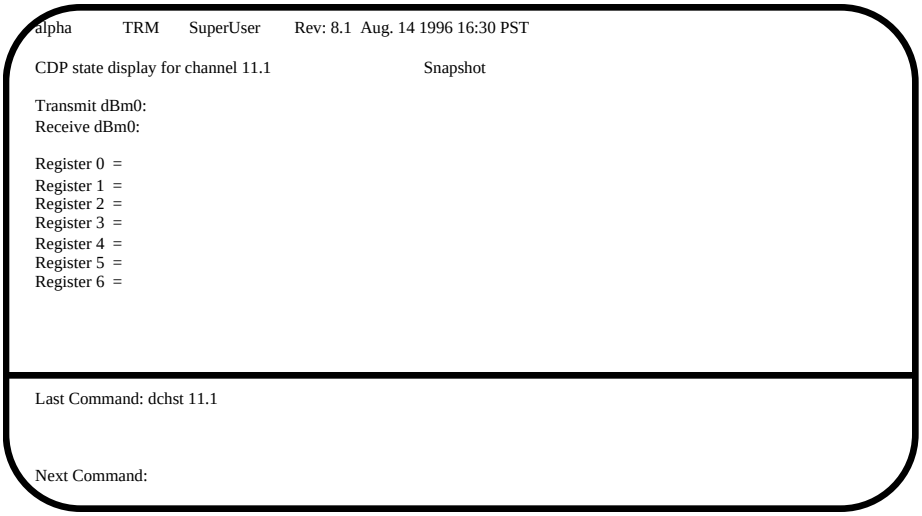
This command displays state information for a CDP or CVM channel used for a specific connection. The interval parameter specifies the refresh time for the data. It defaults to 5 seconds. The Transmit and Receive dBm0 for both CDP or CVM indicate the input (towards the circuit line) and output power (from the circuit line) levels for the channel. Modem state indicates whether modem-detect is on or off.

Table 1-25 lists the parameters for the CDP or CVM card. Figure 1-53 illustrates the system display for a CDP or CVM.

Table 1-25 Display Channel Status Parameters for CDP or CVM

Register	Byte	Parameter	Description
0	high	zcr total	Zero Crossing Total
	low	signal state mem	Signal State Memory
1	high	hpf z1 hi - hi	High-Pass Filter
	low	hpf z1 hi - lo	High-Pass Filter
2	high	sam - hi	Encoded Voice Sample
	low	sam - lo	Encoded Voice Sample
3	high	vad state-hi	Voice Activity Detector state
	low	vad state-lo	Voice Activity Detector state
4	high	sil cnt	Silent Count
	low	mad signal state	Modem Activity Detector Signal State
5	high	mad wnd cnt	Modem Activity Detector Wnd. Count
	low	mad fail cnt	Modem Activity Detector Fail Count
6	high	mad state-hi	Modem Activity Detector state
	low	mad state-lo	Modem Activity Detector state

Figure 1-53 dchst—Display Channel Status



IPX SU/0022_

diagbus (Diagnose Failed Bus)

The **diagbus** command is used to diagnose a failed IPX MUXBUS.

Attributes

Jobs: No Log: Yes Lock:Yes Node Type: IPX, IGX

Associated Commands

none

Syntax

diagbus

Function

This command runs detailed diagnostics to isolate muxbus problems to a failed card or bus. It is used when a minor alarm is indicated and displaying the alarm (dspalms) screen indicates the message "bus needs diagnosis".

This command can only be run locally with a terminal connected directly to the CONTROL port or remotely from a modem connection. It can not be executed through a VT (virtual terminal) command or when the node's CONTROL port is configured for StrataView mode.

Caution This command may cause a major disruption in service on all lines and connections and should only be run at a time when this can be tolerated.

Performing this test can result in a major disruption in the operation of the node. It should not be performed except as a last resort. To fully isolate the failure may require manual removal of cards, including controller cards etc. For this reason, the command may not be executed over a Virtual Terminal connection.

If the test is successful, and no problems found, the system displays:

Both buses are OK

Otherwise, the system displays various messages to the operator for additional steps to perform in isolating the problem. These messages depend on the results of the diagnostics testing.

drtop (Display Route Op Table)

The **drtop** command displays the routing table from the local node to each connected remote node.

Attributes

Jobs: No Log: No Lock: No Node Type: IPX, IGX, BPX

Associated Commands

dsptrkcons

Syntax

drtop

Function

This command displays the routing table from the local node to each remote node to which it is connected. It shows how NPC/B.C. traffic is routed to other nodes in the network. Use this command to find which trunks are used to send control cells/packets to other nodes.

The display includes remote node name, number of hops to the remote node, the trunk(s) used, and number of satellite hops if any, and the number of unused DS0s (open space) if any on the route. Figure 1-54 illustrates the display.

Figure 1-54 drtop—Display Route Op Table

```
pubsipx2      VT    StrataCom      IPX 32    8.2     June 2 1996  02:27 GMT

Node Number   Node Name    Hops To  Via Trk  SAT Hops  No HP Hops  Open Space
1             D1.pubsbpx1      2        6         0         0           3
2             D1.pubsigx1      3        6         0         0           3
3             D1.pubsipx2      0        0         0         0           0
5             D1.pubsipx1      1        6         0         0           24
7             D1.pubsipx3      2        6         0         0           24

Last Command: drtop

Next Command:
```

IPX SU/0024_

dspasich (Display ASI Channel Routing Entry)

The **dspasich** command displays the ATM channel routing entries for an ASI card.

Attributes

Jobs: No Log: No Lock: Yes Node Type: BPX

Associated Commands

None

Syntax

dspasich <line> <channel>

<line>	specifies the line for which to display the entry in the format <slot.port>
<channel>	specifies for which to display the entry in the format <vpi.vci>.

Function

This command displays the routing entries for an ASI card shown in Figure 1-55.

Figure 1-55 dspasich—Display ASI Channel Routing Entry

```
pubsbpx1      VT    StrataCom      BPX 15    8.2      May  24 1996 21:09 GMT
ASI Channel Configuration Query & Display

Slot.port.lcn:5.1.1
Status:       Added        BF hdr: 4145 9002 8012 0501 8640 0000 2DEB
[00] BF tp:   4      [11] VCI:   00000064 [22] UPC CDV: 0      [33] FST up:  0
[01] Pri SDA: 5      [12] Con tp:  VC     [23] UPC CIR: 500    [34] FST dn:  0
[02] Dst Prt: 1      [13] Rmt tp:  ASI    [24] UPC CBS: 1000   [35] FST fdn: 0
[03] Dst lcn: 2      [14] Srv tp:  VBR    [25] UPC IBS: 0      [36] FST rmx: 0
[04] BCF tp:  0     [15] Gen AIS: N     [26] UPC MFS: 200    [37] Q max:64000
[05] Qbin#:   12     [16] Mcst:    0      [27] CLP enb: Y      [38] EFCI: 100
[06] BF VPI:  64     [17] Mc grp:  1      [28] FST enb: N      [39] CLP hi: 100
[07] BF VCI:  0     [18] & msk: 0000000F [29] FST MIR: 500    [40] CLP lo: 100
[08] Pl Cls:  0      [19] | msk: 06400640 [30] FST PIR: 500    [41] BCM:    N
[09] Rmt lp:  N      [20] Prt QBN: 2      [31] FST QIR: 500    [42] Inhibit:N
[10] VPI:   00000064 [21] UPC GCR: 0      [32] QIR TO:  0      [43] UPC enb:Y


Last Command: dspasich 5.1 1 N

Next Command:
```

dspbmpst (Display Priority Bumping Statistics)

The **dspbmpst** command displays the priority bumping statistics at the local node if the priority bumping feature is enabled.

Attributes

Jobs: No Log: No Lock: No Node Type: IPX, IGX

Associated Commands

cnfbmpparm

Syntax

dspbmpst [clear]

[clear] specifies an optional entry that clears all bumping statistics counters.

Function

This command displays statistics on the IPX optional priority bumping feature. This is primarily a debugging tool for the priority bumping feature. Included are counts on bump requests, successful bumps, and bumps in progress. Table 1-26 describes the statistics and Figure 1-56 illustrates a typical display. Adding "clear" to the command clears the bumping statistics counters. The **cnfbmpparm** command can be used to change these parameters.

Table 1-26 Priority Bumping Statistics

Statistic	Description
PROCESSING:	Process statistics monitor the periodic priority bumping routine that occurs approximately once a minute.
Attempts	No. of times the priority bumping routine was initiated.
Successes	No. of times the priority bumping routine was successfully completed.
Idles, waits, fails, aborts, errors, and timeouts	No. of times the priority bumping routine was not completed for these various reasons.
SUCCESSFUL STATS	Statistics for priority bumping routines that were successfully completed.
Max/Avg. Time	The time it took to complete the priority bumping routine. The maximum is the longest routine over the measuring interval.
Max/Avg. Candidates	Candidates are the failed higher level COS connections that need to be rerouted.
Max/Avg. Removed	Calculated number of connections network-wide that would have to be removed to fit the failed connections onto a new route. This is just a calculated number.

Statistic	Description
Max/Avg. Bumped	Number of lower COS connections network-wide that were actually removed (bumped) to provide the bandwidth needed for failed connections.
Max/Avg. Bumps per Node	No. of bumped connections for any one particular node.
Rx BUMP REQUESTS	Received bump request statistics
Number of requests	No. of bump requests received by this node. from other nodes
Max/Avg Bumps/req:	Maximum and average number of bumps requested network-wide.

Figure 1-56 dspbmpst—Display Priority Bumping Statistics

```
pubsipx2       VT    StrataCom       IPX 32    8.2      June 2 1996  02:31 GMT

                           Priority Bumping Statistics

PROCESSING                  SUCCESSFUL STATS           Rx BUMP REQUESTS
Attempts:           0       Max time :       0.00      Num requests:       0
Successes:          0       Avg time :       0.00      Max bumps/req:      0
Idles:              0       Max cands:          0      Avg bumps/req:      0
Waits:              0       Avg cands:          0
Fails:              0       Max rmvd :          0
Aborts:             0       Avg rmvd :          0
Errors:             0       Max bumps:          0
Timeouts:           0       Avg bumps:          0
                            Max bumps/nd:       0
                            Avg bumps/nd:       0

Last Command: dspbmpst


Next Command:
```

IPX SU/0025_

dspbuses (Display Bus Status)

Displays the available MUXBUS bandwidth. The display is not updated and is referred to as a snapshot. The command lists the dedicated and pooled bandwidth units as well as the status of the available MUXBUS.

Attributes

Jobs: No Log: No Lock: No Node Type: IPX, IGX, BPX

Associated Commands

cnfbus

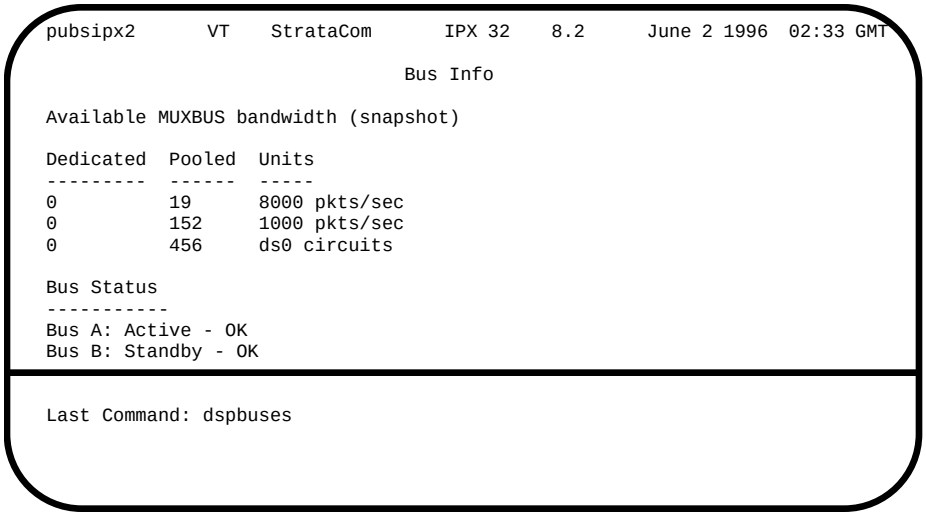
Syntax

dspbuses

Function

This command displays the available MUXBUS bandwidth. The display is not updated and is referred to as a snapshot. The command lists the dedicated and pooled bandwidth units as well as the status of the available MUXBUS.

Figure 1-57 dspbuses—Display Bus Status



IPX SU/0025_

dspcderrs (Display Card Errors)

The **dspcderrs** command displays detailed card failure information resulting from card diagnostics testing at the local node.

Attributes

Jobs: No Log: No Lock: No Node Type: IPX, IGX, BPX

Associated Commands

clrcderrs, prtcderrs

Syntax

dspcderrs [<slot>]

[<slot>] specifies the shelf slot in the local node.

Function

This command displays a history of card failures associated with a specified slot. If no argument is specified, a summary is displayed, indicating which slots have failures recorded against them. The command displays the results of the self tests and background tests as well as the total hardware errors.

To clear the card error counters, use the **clrcderrs** command. To obtain a hard copy of the report, use the **prtcderrs** command. Figure 1-58 illustrates the command display.

Figure 1-58 dspcderrs—Display Card Errors

```
sw83          TN    StrataCom      IPX 16    8.2     June 1 1996  17:56 PST

AIT in Slot 11 : 176767 Rev AEF    Failures Cleared: Mar. 19 1996 11:25:29 PST
---------------------------------- Records Cleared:  Mar. 20 1996 13:14:03
                PST
Self Test          Threshold Counter: 0          Threshold Limit: 300
Total Pass: 0             Total Fail: 0              Total Abort: 0
First Pass:                              Last Pass:
First Fail:                              Last Fail:

Hardware Error     Total Events: 0     Threshold Counter: 0
First Event:                           Last Event:




Last Command: dspcderrs 11


Next Command:
```

IPX SU/0026_

dspcftst (Display Comm. Fail Test Pattern)

The **dspcftst** command displays the test pattern used for the communications fail test.

Attributes

Jobs: No Log: No Lock: No Node Type: IPX, IGX, BPX

Associated Commands

cnfcftst

Syntax

spcftst

Function

This command displays the test pattern used to test the controller communication path to a node that does not respond to normal controller traffic. The test pattern defaults to an alternating 8-byte sequence of 00 and FF. Refer to **cnfcftst** command for other patterns and how to reconfigure this pattern. Figure 1-59 illustrates the command display.

Figure 1-59 dspcftst—Display Comm. Fail Test Pattern

```
sw83          TN    StrataCom       IPX 16    8.2      June 1 1996  17:57 PST

Comm Fail Test Pattern.

    Byte  0: FF     Byte 12: 00     Byte 24: FF     Byte 36: 00     Byte 48: FF
    Byte  1: FF     Byte 13: 00     Byte 25: FF     Byte 37: 00     Byte 49: FF
    Byte  2: FF     Byte 14: 00     Byte 26: FF     Byte 38: 00     Byte 50: FF
    Byte  3: FF     Byte 15: 00     Byte 27: FF     Byte 39: 00     Byte 51: FF
    Byte  4: 00     Byte 16: FF     Byte 28: 00     Byte 40: FF     Byte 52: 00
    Byte  5: 00     Byte 17: FF     Byte 29: 00     Byte 41: FF     Byte 53: 00
    Byte  6: 00     Byte 18: FF     Byte 30: 00     Byte 42: FF     Byte 54: 00
    Byte  7: 00     Byte 19: FF     Byte 31: 00     Byte 43: FF     Byte 55: 00
    Byte  8: FF     Byte 20: 00     Byte 32: FF     Byte 44: 00     Byte 56: FF
    Byte  9: FF     Byte 21: 00     Byte 33: FF     Byte 45: 00     Byte 57: FF
    Byte 10: FF     Byte 22: 00     Byte 34: FF     Byte 46: 00     Byte 58: FF
    Byte 11: FF     Byte 23: 00     Byte 35: FF     Byte 47: 00     Byte 59: FF

Last Command: dspcftst


Next Command:
```

dspchan (Display Channel Configuration)

The **dspchan** command displays the configuration of various IPX or IGX voice channels.

Attributes

Jobs: No Log: No Lock: No Node Type: IPX, IGX

Associated Commands

cnfcdpparm

Syntax

dspchan <channel>

<channel> specifies the voice channel connection to display.

Function

This command displays the configuration of IPX or IGX voice channels. It is primarily a debug command and allows inspection of the data structure defining a channel. Parameters for voice and signalling processing on a CDP or CVM voice channel are displayed by this command. Table 1-27 lists the parameters. Many of these parameters are also displayed elsewhere. Figure 1-60 illustrates the command display.

Table 1-27 Voice Channel Configuration Parameters

Parameter	Parameter	Parameter	Parameter
VC Index	Dial Type	TX Sig	iec converg.
In Loss	TX A–D bit	RX Sig	Hi Pass F
Out Loss	RX A–D bit	Clr Chn	es loss
Chan Type	Signalling	Sig Rate	Fmodem
Sig. Intg	Echo supr	PLY MSBhx	ADV
Xmt. dlay	Wink Puls	PLY LSBhx	Cond ID
Smpl dlay	TX A–D Qual	In use	iec erl lvl
Bk noise	RX A–D Qual	DPU	iec Hregs.
DSI smple	TX Code	iec cancel	iec tone dsbl
Chan Util	RX Code	iec nlp	adpcm flag
Onhk A–D			

Figure 1-60 dspchan—Display Channel (CDP card)

```
sw83          TN    StrataCom       IPX 16    8.2     June 1 1996  18:06 PST

Channel Data Base for CDP card  7  chan. 000000 at address 30BF29EC

VC Index      -1                Onhk C         4
In Loss       0                 Onhk D         4
Out Loss      0                 Dial Type      0
Chan Type     1                 TX A bit       1
Sig. Intg     96                TX B bit       1
Xmt. dlay     5                 TX C bit       0
Smpl dlay     1                 TX D bit       1
Bk noise      67                RX A bit       1
DSI smple     168               RX B bit       1
Chan Util     40                RX C bit       0
Onhk A        3                 RX D bit       1
Onhk B        3                 Signalling     TSP MODE

This Command: dspchan 7.1


Continue?
```

```
w83           TN    StrataCom       IPX 16    8.2      June 1 1996  18:07 PST

Channel Data Base for CDP card  7  chan. 000000 at address 30BF29EC

Echo supr     1                 TX A Qual      3
Hi Pass F     1                 TX B Qual      3
Float         1                 TX C Qual      3
es loss       1                 TX D Qual      3
Fmodem        64                RX A Qual      3
ADV           1                 RX B Qual      3
Cond ID       0                 RX C Qual      3
Wink Puls     20                RX D Qual      3
END OF UNI CNFG


This Command: dspchan 7.1


Continue?
```

```
sw83          TN    StrataCom       IPX 16    8.2.     June 1 1996  18:07 PST

Channel Data Base for CDP card  7  chan. 000000 at address 30BF29EC

TX CODE       3                 iec cancel     0
RX CODE       3                 iec nlp        1
TX SIG        0                 iec converg.   1
RX SIG        0                 iec erl lvl    1
CLR CHN       0                 iec Hregs.     1
SIG RATE      0                 iec tone dsbl  1
PLY MSBhx     1                 adpcm flag     0
PLY LSBhx     90
In use        0
DPU           -


Last Command: dspchan 7.1


Next Command:
```

dspchstatcnf (Display Statistics Enabled For A Channel)

The **dspchstatcnf** command displays the configuration of enabled statistics for a channel.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX

Associated Commands

cnfchstats, dspchstathist

Syntax

dspchstatcnf <channel> <stat> <interval> <e|d> [<samples> <size> <peaks>]

<channel> specifies the channel for whose statistics are to be listed

Function

The **dspchstatcnf** command displays the enabled interval statistics for a channel. It is intended to help debug problems with statistics gathering. The command output is a list of the connection statistics as set by the **cnfchstats** command, by StrataView Plus, or by IPX or IGX features. Figure 1-61 illustrates a typical example.

The Owner column identifies who or what set the statistic. If the Owner column shows "Automatic," the node's features set the statistic. If the node name appears under Owner, SV+ set the statistic. If the user name appears under Owner, the **cnfchstats** command executed from the command line interface set the statistic.

Figure 1-61 dspchstatcnf—Display Channel Statistics Enabled (FR channel)

```
pubsbpx1      VT    StrataCom      BPX 15    8.2      May  24 1996 23:13 GMT
Statistics Enabled on Channel 5.1.100.100

    Statistic                          Samples Interval Size Peaks  Owner
    ---------------------------------- ------- -------- ---- -----
                ----------
 41) AAL5 Cells Discarded for VCQ Full          1       30    4  NONE  TFTP
 42) Average VCq Depth in Cells                 1       30    4  NONE  TFTP
 43) Cells lost due to Rsrc Overflow            1       30    4  NONE  TFTP
 44) Cells discarded for SBIN full              1       30    4  NONE  TFTP
 45) Cells Transmitted with EFCI(Port)          1       30    4  NONE  TFTP
 46) Cells Transmitted(Port)                    1       30    4  NONE  TFTP
 47) Cells Recieved from Network                1       30    4  NONE  TFTP
 48) Cells discarded for QBIN full              1       30    4  NONE  TFTP
 49) Cells discarded when QBIN>CLP              1       30    4  NONE  TFTP
 50) Cells Transmitted with CLP(Port)           1       30    4  NONE  TFTP
 51) BCM Cells Received(Port)                   1       30    4  NONE  TFTP

This Command: dspchstatcnf 5.1.100.100


Continue?
```

IPX 3C/0625_

dspchstathist (Display Statistics History For A Channel)

The **dspchstathist** command displays a history of statistics configured as enabled for a selected channel.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

cnfchstats, dspchstatcnf

Syntax

dspchstathist <channel>

<channel> specifies the specific channel for which to list data.

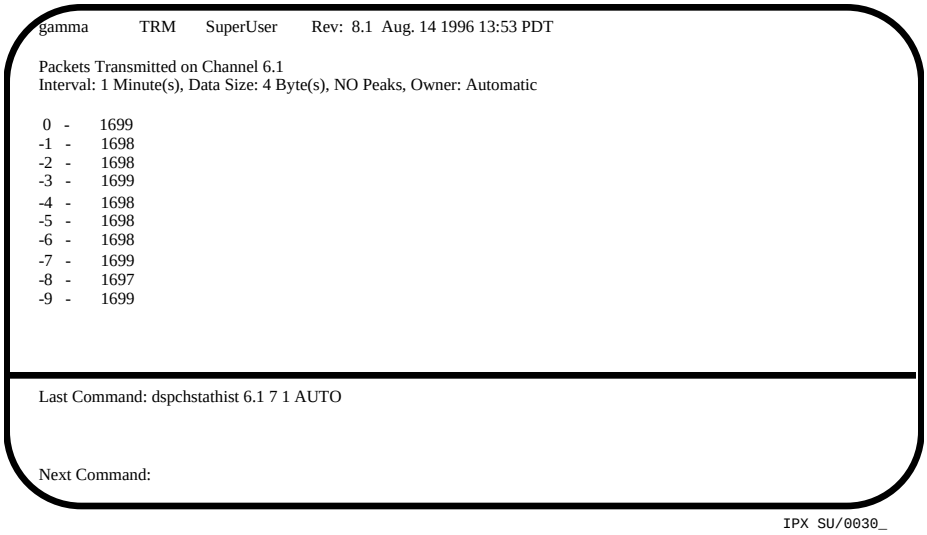
Function

This command displays a history of the enabled statistics for a selected channel. It is intended for debugging problems with statistics gathering. It displays the data for the last five occurrences of the channel statistic. The channel statistic is selected from the list displayed when this command is first entered.

Use the **dspchstatcnf** to display the statistics enabled on the selected channel. Record the statistics types enabled, the collection interval, and owner; you will need this information to obtain the statistics history. Use **cnfchstats** to enable a statistic if it is not already enabled. Figure 1-62 illustrates a display for channel 6.1 packets transmitted (1 second interval) history.

Note You may have to enter owner "auto" in all capital letters.

Figure 1-62 dspchstathist—Display Channel Statistics History



dspclnstatcnf (Display Statistics Enabled For A Circuit Line)

The **dspclnstatcnf** command displays statistics configured as enabled for a selected circuit line.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX

Associated Commands

cnfclnstats

Syntax

dspclnstatcnf <line>

<line> specifies the circuit line for which to list statistics.

Function

This command displays the circuit line statistics as enabled by the **cnfclnstats** command, by StrataView Plus, or by IPX features. Figure 1-63 illustrates an example display.

The owner column shows what set the statistic. If "Automatic", it is set by features, if node name it was is set by SV+, if user it was set with the **cnfchstats** command.

Figure 1-63 dspclnstatcnf—Display Circuit Line Statistics Enabled (T1 line)

```
sw83          TN    StrataCom      IPX 16    8.2     June 1 1996  18:14 PST

Statistics Enabled on Circuit Line 7

Statistic                           Samples  Interval  Size  Peaks  Owner
----------------------------------  -------  --------  ----  -----
                ----------
Frames Slips                            60         0     4   NONE  IPX
Out of Frames                           60         0     4   NONE  IPX
Losses of Signal                        60         0     4   NONE  IPX
Frames Bit Errors                       60         0     4   NONE  IPX
CRC Errors                              60         0     4   NONE  IPX
Out of Multi-Frames                     60         0     4   NONE  IPX
All Ones in Timeslot 16                 60         0     4   NONE  IPX


Last Command: dspclnstatcnf 7


Next Command:
```

IPX SU/0031_

dspclnstathist (Display Statistics History For A Circuit Line)

The **dspclnstathist** command displays a history of statistics configured as enabled for a selected circuit line

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX

Associated Commands

cnfclnstats, dspclnstatcnf

Syntax

dspclnstathist <circuit line>

<circuit line> specifies the circuit line for which to list statistics.

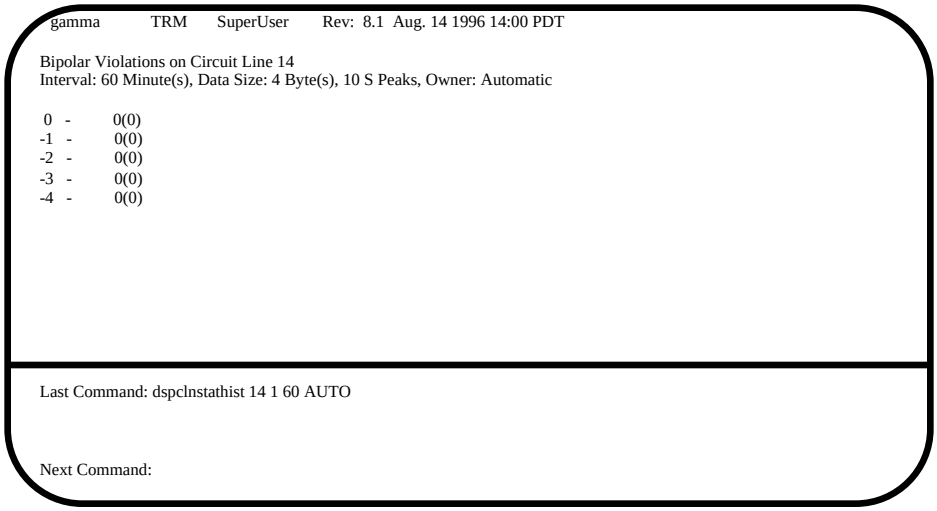
Function

This command displays the last five occurrences of the circuit line statistic. The circuit line statistic is selected from the list displayed when this command is first entered. Use the **dspclnstatcnf** to display the statistics enabled on the selected channel. Use **cnfclnstats** to enable a statistic.

Figure 1-64 illustrates a display for T1 circuit line 14 bipolar violations (60 second interval) history.

Note You may have to enter owner "auto" in all capital letters.

Figure 1-64 dspclnstathist—Display Circuit Line Statistics History



IPX SU/0032_

dspcnf (Display Configuration Save/Restore Status)

The **dspcnf** command displays the status for the configuration save/restore processes on all nodes in the network.

Attributes

Jobs: No Log: No Lock: No Node Type: IPX, IGX, BPX

Associated Commands

savecnf, loadcnf, runcnf

Syntax

dspcnf

Function

This command displays the status for the configuration save/restore process. The display lists the various nodes, the backup ID name of the saved configuration, the time and date saved, and the StrataView + terminal it is saved on. See Figure 1-65 for an example.

If the status displays " Reserved for Firmware" a firmware image is being maintained in memory after being loaded. Use the **getfwrev 0.0** command to clear the firmware image. Likewise, if a configuration image is displayed, clear the old configuration image using **savecnf clear** or **loadcnf clear**.

Figure 1-65 dspcnf—Display Configuration Save/Restore Status

```
sw83           TN    StrataCom       IPX 16    8.2     June 1 1996  18:21 PST

Node     Backup ID Revision Date/Time (GMT)   Status
-------- --------- -------- -----------------
                  --------------------------------
sw78     mark      8.1.12   05/22/96 16:36:26 Unreachable
sw81     mark      8.1.12   05/22/96 16:36:26 Unreachable
sw84     mark      8.1.ay   05/22/96 16:36:26 Save on SV+ at sw78 complete
sw79     mark      8.1.1b   05/22/96 16:36:26 Save on SV+ at sw78 complete
sw86     mark      8.1.12   05/22/96 16:36:26 Unreachable
sw83     mark      8.1.1b   05/22/96 16:36:26 Save on SV+ at sw78 complete


Last Command: dspcnf


Next Command:
```

IPX SU/0033_

dspdnld (Display Download)

The **dspdnld** command displays the status of a download to a nodes.

Attributes

Jobs: No Log: Yes Lock: No Node Type: IPX, IGX, BPX

Associated Commands

loadrev, getfwrev

Syntax

dspdnld

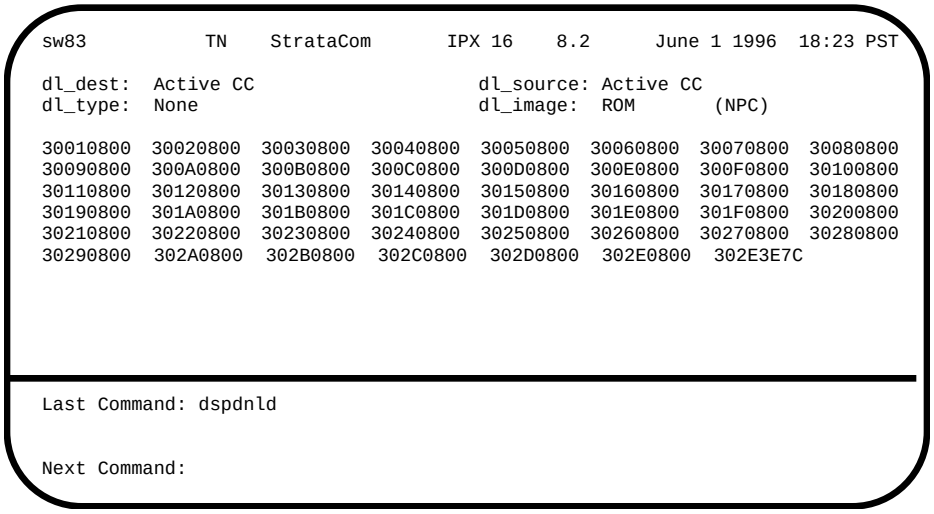
Function

This command displays the status of any software or firmware download operation from StrataView Plus to the node controller card. You should be connected to the node being downloaded either directly or via virtual terminal connection. The display download command shows:

- download destination—node currently being downloaded.
- download type—destination of the downloaded image, standby RAM or active or standby ROM, or firmware.
- download source—where the image to be downloaded is currently stored, StrataView or StrataView Plus, standby controller, active or standby controller, or remote node.
- download image—where the image is located, ROM or RAM.

This command can be used to check how far along the download has progressed. Figure 1-66 illustrates the command screen. Blocks of data already downloaded appear highlighted; the remaining blocks are appear dim. If there was no download initiated when this command is entered, the blocks of data will appear as all zeros.

Figure 1-66 dspdnld—Display Download



dspdutl (Display Data Channel Utilization)

The **dsputl** command displays the percentage utilization for data connections.

Attributes

Jobs: No Log: No Lock: No Node Type: IPX, IGX

Associated Commands

dsputl

Syntax

dspdutl <start bslot> [clear]

<start bslot>	specifies the slot where the data card is located.
[clear]	specifies that all data channel utilization buffers should be cleared after the display.

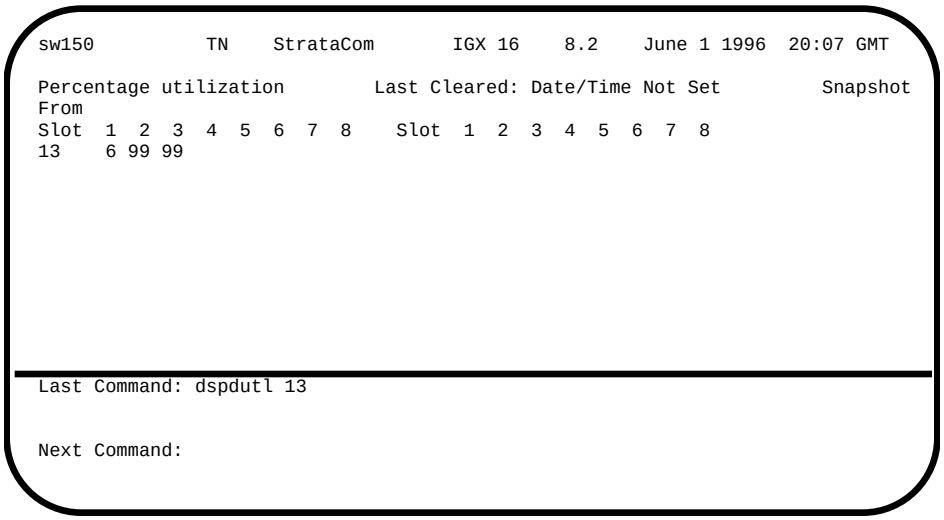
Function

This command displays the percentage utilization for the data connections starting at the back slot (bslot) number specified. All data connections for the node are displayed (maximum of 32).

The percentage is calculated by dividing the number of packets transmitted over the total number of packets allocated to the specified channel. Only transmit packet rates are used. If percentage utilization exceeds configured utilization the channel appears in reverse video.

Figure 1-67 illustrates a display where there is very low utilization (2%) on three of the four ports and no utilization of the forth port. The clear option clears all slots. Use **dsputl** to display utilization for voice channels.

Figure 1-67 dspdutl—Display Data Channel Utilization



IPX SU/0035_

dspecparm (Display Echo Canceller Parameters)

The **dspecparm** command displays statistics configured as enabled for a selected CDP echo canceller.

Attributes

Jobs: No Log: Yes Lock: No Node Type: IPX, IGX

Associated Commands

cnfecparm

Syntax

dspecparm <line>

<line> specifies the circuit line to display.

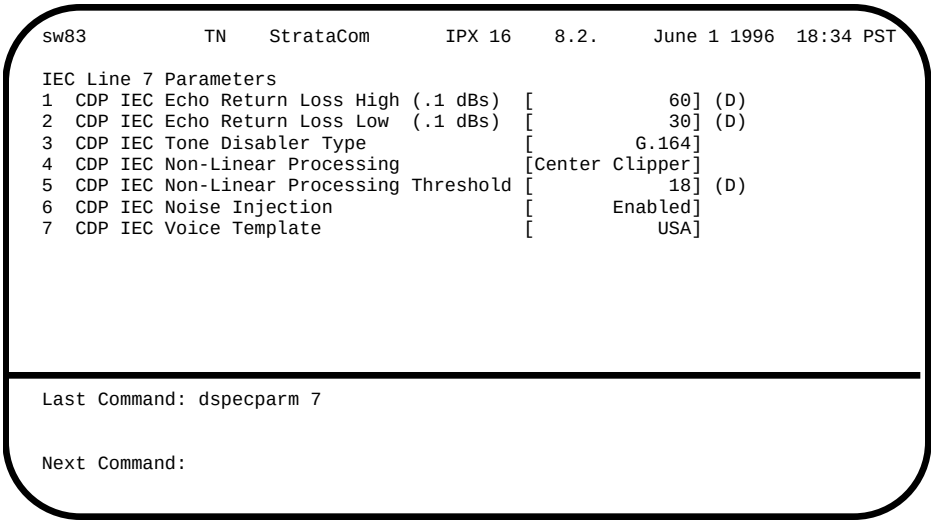
Function

This command displays the Integrated Echo Canceller card parameters associated with the specified circuit line. These parameters are set using the **cnfecparm** command. Table 1-28 lists the parameter options. Figure 1-68 illustrates a typical display.

Table 1-28 Echo Canceller Parameters

Number	Parameter	Description
1	Echo Return Loss High	Maximum ERL required for echo canceller to be enabled.
2	Echo Return Loss Low	Minimum ERL required for echo canceller to be enabled.
3	Tone Disabler Type	Selection of protocol to enable tone disabler.
4	Non-Linear Processing	Selects type of post-canceller signal.
5	NLP Threshold	Threshold to enable non-linear processing.
6	Noise Injection	Determines if noise will be injected when NLP is active.
7	Voice Template	Selection of echo canceller template to use.

Figure 1-68 dspecparm—Display Echo Canceller Parameter



IPX SU/0036_

dspfpdsc (Display FastPAD Card Descriptor)

The **dspfpdsc** command displays FastPAD card descriptor information.

Attributes

Jobs: No Log: No Lock: No Node Type: IPX, IGX, BPX

Associated Commands

dspfp, dspfps

Syntax

dspfpdsc <slot.port.subslot>

Function

This command displays FastPAD card descriptor information including:

- Card in use
- Card state
- FastPAD configuration index
- FastPAD port index

Figure 1-69 illustrates the system response.

Figure 1-69 dspfpdsc—Display FastPAD Card Descriptor

```
cc7            VT    StrataCom       IPX 32    8.2     Mar. 30 1996 11:08 PST

                    FastPad Card Descriptor Configuration

    Card in Use   :  01     Card State    :  03     FPD CNFG indx :  00


                             Port Index Array

                             FastPad Port Indx
          0    1    2    3    4    5    6    7    8    9    A    B
        0000 0001 0002 0003 0004 0005 0006 FFFF FFFF FFFF FFFF FFFF


Last Command: dspfpdsc 31.2.B

                      Next Command:
```

dspfwrev (Display Firmware Revision)

The **dspfwrev** command displays the status of card firmware revision image loaded in the controller card's RAM.

Attributes

Jobs: No Log: No Lock: No Node Type: IPX, IGX, BPX

Associated Commands

getfwrev, burnfwrev

Syntax

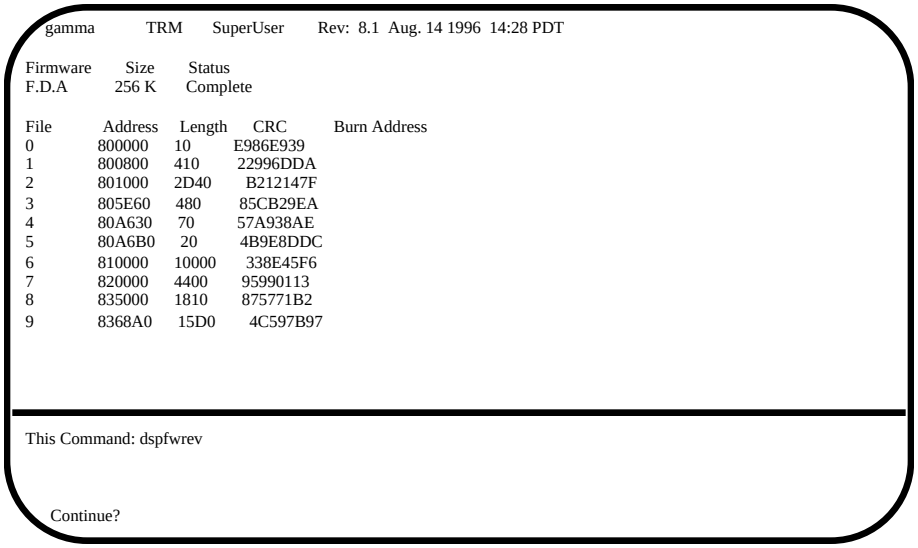
dspfwrev

Function

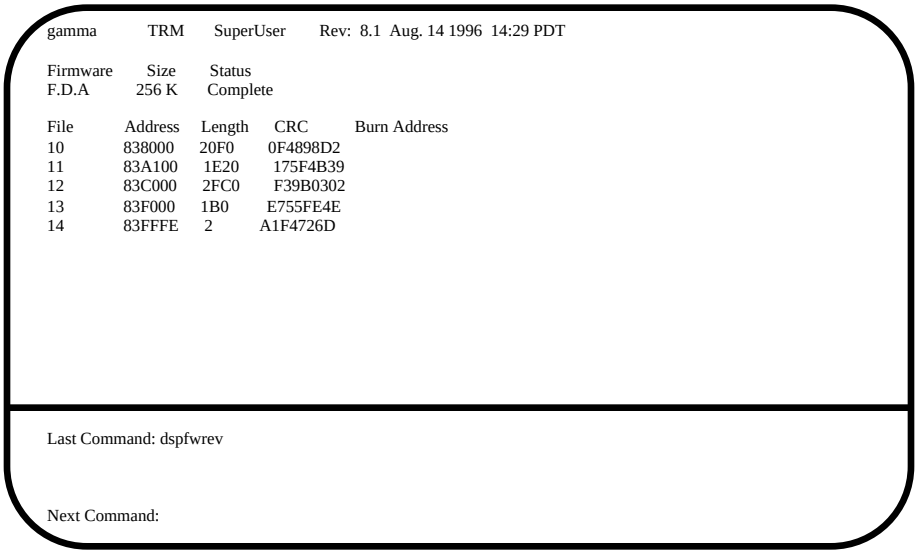
This command displays the revision level and an indication of the length of the firmware in the controller card. It may require two screens to display all the parameters. Figure 1-70 illustrates the screen display. This command can be used during firmware download to get an idea of how far along the downloading process has progressed. The blocks already downloaded appear normal. Blocks that are yet to be downloaded appear shaded.

If no **getfwrev** command was issued, nothing displays. If "Configuration image present" displayed, use the **loadcnf clear** command to clear this status.

Figure 1-70 dspfwrev—Display Firmware Revision



IPX SU/0037_



IPX SU/0038_

dsplnstatcnf (Display Statistics Enabled for a Line)

The **dsplnstatcnf** command displays statistics configured as enabled for a selected line.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX

Associated Commands

cnflnstats

Syntax

dsplnstatcnf <line>

<line> specifies the line for which to display statistics.

Function

This command displays the line statistics as enabled by the **cnflnstats** command, by StrataView Plus, or by IPX features. Figure 1-71 illustrates an example display.

The owner column shows what set the statistic. If "Automatic", it is set by features, if node name it was is set by SV+, if user it was set with the **cnfchstats** command.

Figure 1-71 dsplnstatcnf—Display Statistics Enabled for a Line

```
cc2            LAN   StrataCom       IPX 32    8.1     Mar. 30 1996 11:38 PST

Statistics Enabled on Circuit Line 15

Statistic                           Samples  Interval  Size  Peaks  Owner
----------------------------------  -------  --------  ----  -----  ----------
Bipolar Violations                       60         0     4   NONE  IPX
Frames Slips                             60         0     4   NONE  IPX
Out of Frames                            60         0     4   NONE  IPX
Losses of Signal                         60         0     4   NONE  IPX
Frames Bit Errors                        60         0     4   NONE  IPX
CRC Errors                               60         0     4   NONE  IPX
Out of Multi-Frames                      60         0     4   NONE  IPX
All Ones in Timeslot 16                  60         0     4   NONE  IPX




Last Command: dsplnstatcnf 15

                    Next Command:
```

IPX SU/0038_

dsplnstathist (Display Statistics Data for a Line)

The **dsplnstathist** command displays a history of statistics configured as enabled for a selected line.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX

Associated Commands

cnflnstats, dsplnstatcnf

Syntax

dsplnstathist <line>

<line> specifies the line for which to display statistics.

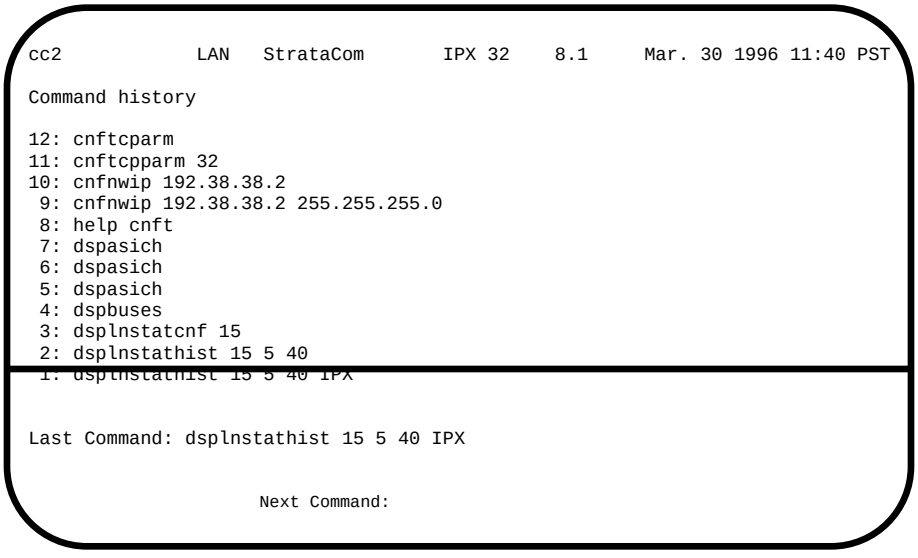
Function

This command displays the last five occurrences of the line statistic. The line statistic is selected from the list displayed when this command is first entered. Use the **dsplnstatcnf** to display the statistics enabled on the selected channel. Use **cnflnstats** to enable a statistic.

Figure 1-72 illustrates an example display.

Note You may have to enter owner "auto" in all capital letters

Figure 1-72 dsplnstathist—Display Statistics Data for a Line



dspplnmcons (Display Packet Line Connection Counts)

The **dspplnmcons** command displays the number of packet line connections by master node.

Attributes

Jobs: No Log: Lock: Node Type: IPX, IGX

Associated Commands

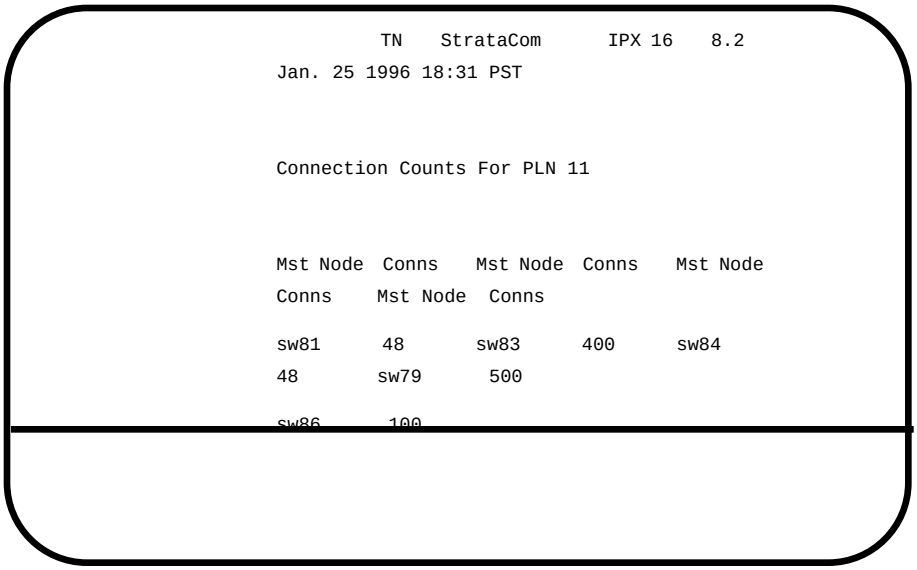
Syntax

dspplnmcons <line number> [l | j]

<line number>	specifies the line number for gathering the connection count
l	refers to local connections
j	refers to junction

Function

Figure 1-73 dspplnmcons—Display Packet Line Connection Counts



dspportstatcnf (Display Statistics Enabled For A FR Port)

The **dspportstatcnf** command displays statistics configured as enabled for a selected frame relay port.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX

Associated Commands

cnfportstats

Syntax

dspclnstatcnf <port>

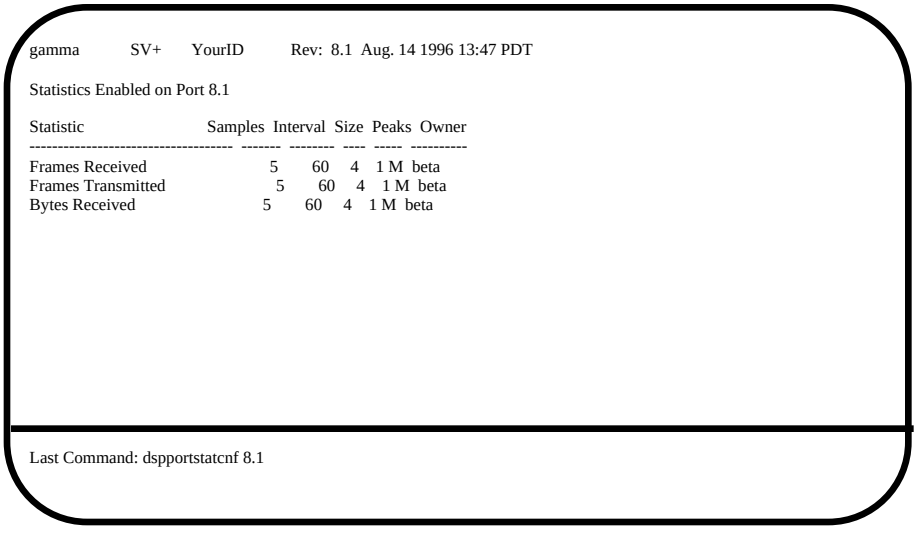
<port> specifies the port for which to list statistics. Do NOT enter the DLCI for frame relay ports.

Function

This command displays the enabling of frame relay port statistics. These are the statistics set by the **cnfportstats** command, by StrataView Plus, or by IPX features. Figure 1-74 illustrates an example screen.

The owner column shows what set the statistic. If "Automatic", it is set by features, if node name it was is set by SV+, if user it was set with the **cnfportstats** command.

Figure 1-74 dspportstatcnf—Display Port Statistics Enabled



IPX SU/0042_

dspportstathist (Display Statistics History For A FR Port)

The **dspportstathist** command displays a history of statistics configured as enabled for a selected port.

Attributes

Jobs: No Log: Yes Lock: Yes Type: IPX, IGX

Associated Commands

cnfportstats, dspportstatcnf

Syntax

dspportstathist <port>

<port> specifies the port for which to list data.

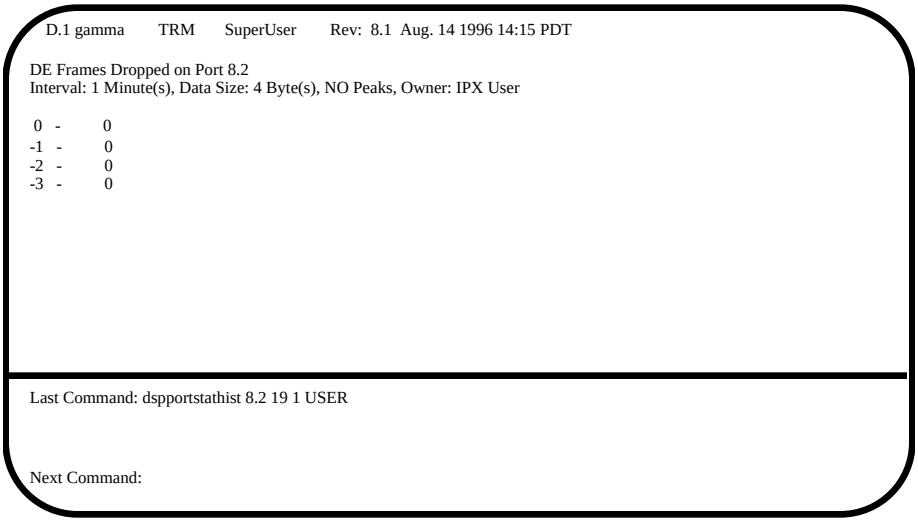
Function

This command displays the data for the last five occurrences of the port statistic. The port statistic is selected from the list displayed when this command is first entered. Use the **dspportstatcnf** to display the statistics enabled on the selected port. Use **cnfportstats** to enable a statistic.

Figure 1-75 illustrates a display for FR port 8.2 DE Frames Dropped (1 second interval) history.

Note You may have to enter owner "auto" or "user" in all capital letters.

Figure 1-75 dspportstathist—Display Port Statistics History



IPX SU/0043_

dsprevs (Display Revisions)

The **dsprevs** command displays the system software revision loaded and running on all nodes in the network.

Attributes

Jobs: No Log: No Lock: No Node Type: IPX, IGX, BPX

Associated Commands

runrev, loadrev, forcerev

Syntax

dsprevs

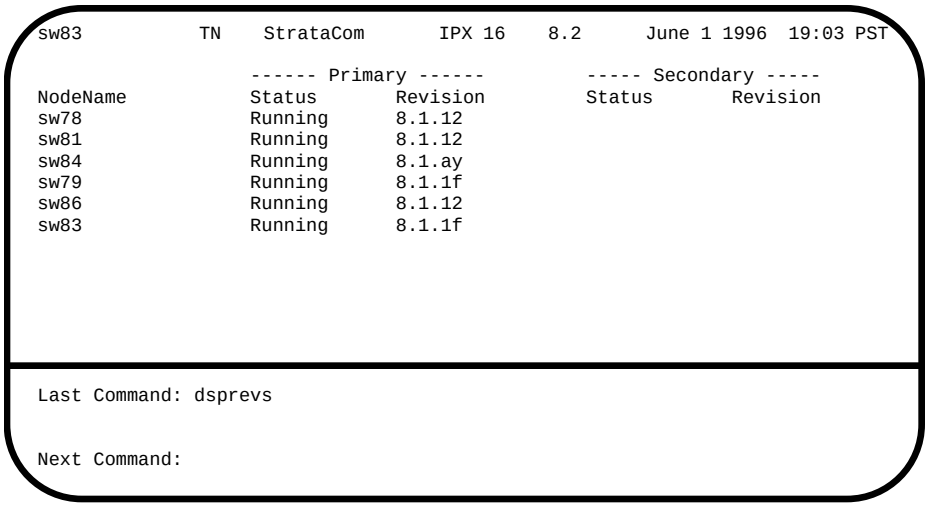
Function

This command displays the configuration and status of the primary and secondary software revisions for all nodes in the network. The primary revision is the software that is running the node. The secondary revision is the software that is available in memory but not being run. Table 1-29 lists the various status messages. Figure 1-76 illustrates a typical display.

Table 1-29 Status of Node Software Revisions

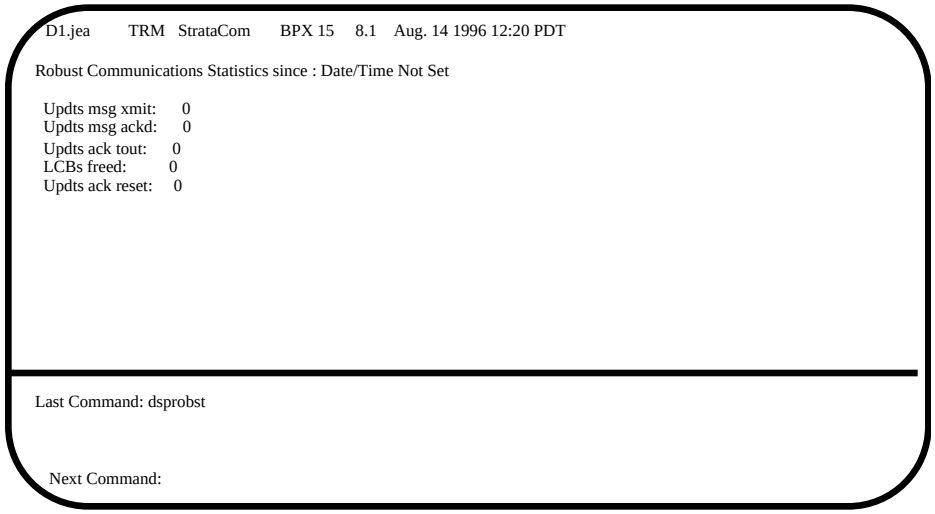
Status	Description
unavailable	The revision is currently unavailable for the node displayed. The revision has not propagated to the node yet.
available	The node has located the specified revision but has not yet downloaded it.
partial	The revision was only partially downloaded. Indicates the download was temporarily interrupted.
downloading	The revision is in the process of being downloaded. Blocks of data are being transferred.
loaded	The revision has completed downloading but is not ready for running.
upgrading	The controller card is being upgraded by the current revision. This process generally occurs immediately follows the downloading.
upgraded	The upgrade procedure has been completed.
running	The primary revision is currently being used to run the node.

Figure 1-76 dsprevs—Display Revisions



IPX SU/0044_

Figure 1-77 dsprobparm—Display Robust Communications Statistics



IPX/10052_

dsprobst (Display Robust Statistics)

The **dsprobst** command displays the statistics associated with the Robust Alarms feature.

Attributes

Jobs: No Log: No Lock: No Node Type: IPX, IGX, BPX

Associated Commands

cnfrobparm

Syntax

dsprobst [clear**]**

[clear] specifies that the statistics buffers should be cleared after the display.

Function

This command displays the statistics associated with the Robust Alarms messages between the node and StrataView Plus NMS. The optional clear field clears the statistics buffers. Figure 1-78 illustrates a sample display screen.

Figure 1-78 dsprobst—Display Robust Statistics

```
cc2           LAN   StrataCom       IPX 32    8.1 Mar. 30 1996 11:40 PST

Command history
12: cnftcparm
11: cnftcpparm 32
10: cnfnwip 192.38.38.2
 9: cnfnwip 192.38.38.2 255.255.255.0
 8: help cnft
 7: dspasich
 6: dspasich
 5: dspasich
 4: dspbuses
 3: dsplnstatcnf 15
 2: dsplnstathist 15 5 40
 1: dsplnstathist 15 5 40 IPX

Last Command: dsplnstathist 15 5 40 IPX

Statistic not enabled for specified object
Next Command:
```

dsprrst (Display Reroute Statistics)

The **dsprrst** command displays the connection rerouting statistics for the network.

Attributes

Jobs: No Log: No Lock: No Node Type: IPX, IGX, BPX

Associated Commands

rrtcon, drtop

Syntax

dsprrst [-j] [clear]

[-j]	specifies
[clear]	specifies that the reroute statistics buffers should be cleared after the display.

Function

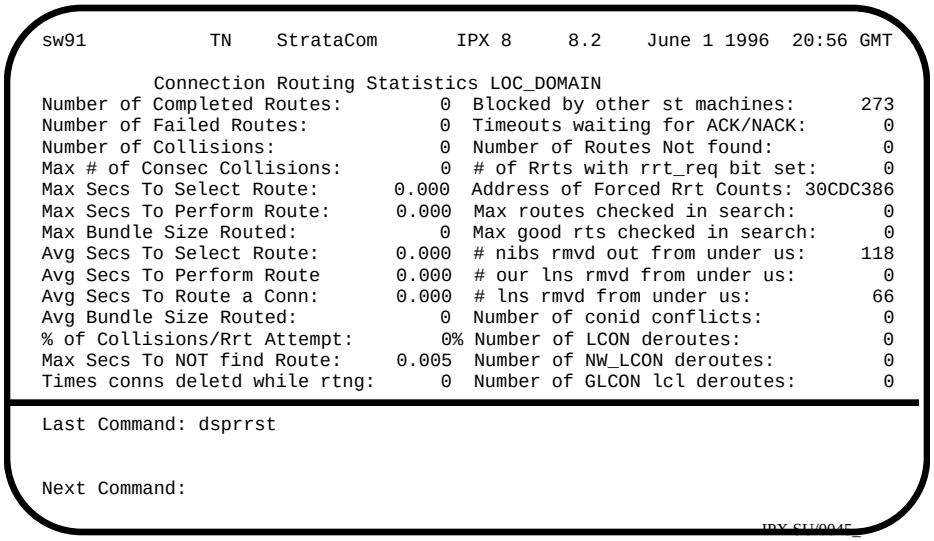
This command displays the statistics related to connection rerouting resulting from failed trunks. These statistics may be useful in determining the performance of the reroute algorithm. Use the clear option to clear the counters before accumulating the statistics. Table 1-30 lists the applicable reroute statistics. Figure 1-79 illustrates a typical display.

Table 1-30 Display Reroute Statistics

Statistic	Description
Number of Completed Routes	This is the total number of connections routed since the NPC rebuilt.
Number of Failed Routes	This is the number of attempted reroutes that failed for any reason.
Number of Collisions	When a reroute is in progress, the initiating node locks all nodes on the route until the rerouting process is complete. If another node attempts to reroute through one of the locked nodes, a collision is reported and the second node must retry after a delay.
Max. # of Consec. Collisions	Is the count of consecutive collisions as defined above.
Max/Avg Secs To Select Route	Time taken within the initiating node to select a new route.
Max/Avg Secs To Perform Route	Time taken to contact and lock the nodes on the new route and perform the rerouting process.
Avg Secs to Route a Conn:	Time to perform a reroute divided by the average number of connections in a bundle.
% of Collisions/Rrt Attempt	Another statistic derived from the number of collisions and the number of reroute attempts.
Max Secs To NOT find Route	Similar to "max secs to select a route" except that the algorithm finished and no route was found.
Number of Routes not found	Number of routes not found in the rerouting process. This parameter updates periodically as a heartbeat to check for activity.

Statistic	Description
# of Rrts with rrt req_bit set	A measure of the connections awaiting rerouting. When rrt_req bit is set, indicates a reroute is not totally successful or trunk deletions or loading additions mean connections must be rerouted. Cleared by rerouting the connection.
Address of Forced Rrt Counts	A NPC memory address for database information.
Max routes checked in search	Maximum no. of PLNs examined in any one search for a new route.
Max good rts checked in search	Maximum no. of possible routes found before the search was terminate Should be 1.
# our lns rmvd from under us	Measure the number of changes to topology and loading that occurred while rerouting was in progress.
# lines rmvd out from under us	Same as above.

Figure 1-79 dsprts—Display Reroute Statistics



dspsig (Display Signalling)

The **dspsig** command displays the current signalling state received at the node from the specified voice channel.

Attributes

Jobs: No Log: No Lock: No Node Type: IPX, IGX

Associated Commands

cnfclnsigparm, cnfrcvsig, cnfclnsigparm

Syntax

dspsig <start_channel>

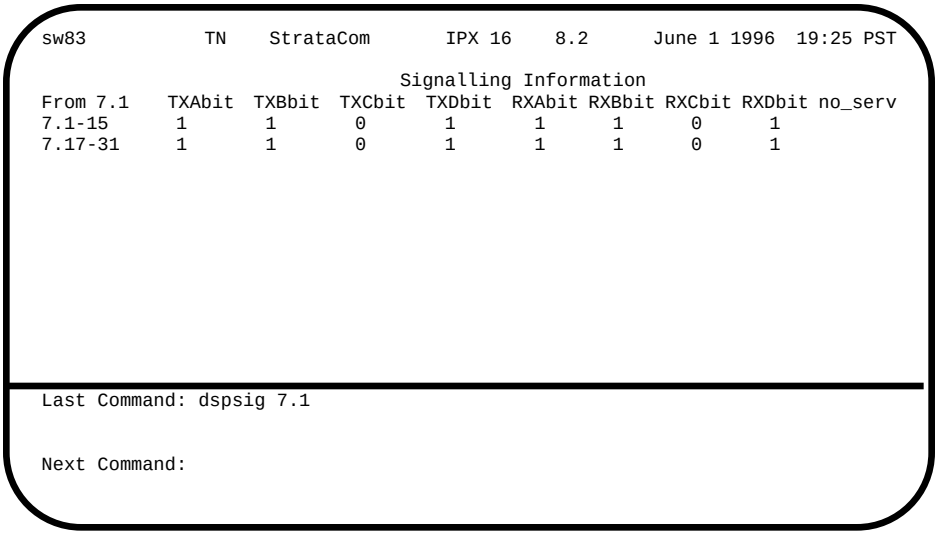
<start_channel> the first voice channel to be monitored.

Function

This command displays the current signalling state received at the node from the specified voice channel. The status of the transmit and receive A and B signalling bits (for DS1 trunks) or A, B, C and D signalling bits (for E1 trunks) are displayed as a 0 or 1. The status of the bits (0 or 1) depends on the signalling type utilized on the connection displayed. The transmit direction of transmission is towards the remote node; the receive direction is towards the local circuit line.

The **dspsig** command can be used to verify the connection signalling type. Figure 1-80 illustrates a typical screen. If you compare the A/B bit states on-hook and off-hook with those shown in the dspchcnf command, you will note that the node passes signalling straight through. The signalling definition is only important for monitoring the on-hook/off-hook state and setting conditioning patterns.

Figure 1-80 dspsig—Display Signalling



IPX SU/0046_

dspslot (Display Slot)

The **dspslot** command displays system information associated with a specific card slot in the node.

Attributes

Jobs: No Log: No Lock: No Node Type: IPX, IGX, BPX

Associated Commands

none

Syntax

dspslot <slot number>

<slot number> specifies the shelf slot number for which to display information.

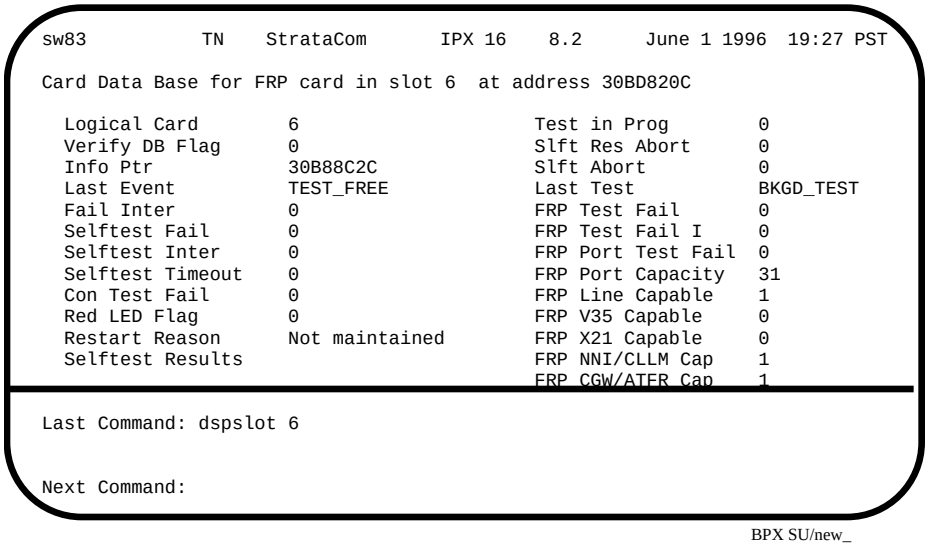
Function

This command displays system information associated with a specific card slot in the node. It is used for debugging card failures. When a card failure is reported to StrataCom ISC, the ISC engineer records the parameters for the associated slot displayed using the **dspslot** command.

The information displayed by the **dspslot** command is unique to the card slot in the shelf and is used primarily by the controller card to supervise background system tasks. Table 1-31 lists the slot parameters displayed. Figure 1-81 illustrates a typical display.

Use this command for more information on failed cards. Print and return to StrataCom with faulty cards for better diagnosis of the failure.

Figure 1-81 dspslot—Display Slot



BPX SU/new_

Table 1-31 Display Slot Parameters

Item	Parameter	Description
1	Logical Card	This is a number representing a particular card type.
2	Verify DB Flag	Verify database flag. Concerned with database and memory.
3	Info Ptr	Information pointer. Concerned with database and memory.
4	Last Event	This is the previous state of the card known to the NPC.
5	Fail Inter	Indicates intermittent card failure.
6	Selftest Fail	Indicates self-test fail condition.
7	Selftest Inter	Indicates intermittent self-test failure.
8	Selftest Timeout	Self-test routine timed out before completing.
9	Con Test Fail	Indicates failure of the test con command.
10	Red LED Flag	Indicates front panel FAIL LED on.
11	Restart Reason	Reason for last card reset.
12	Selftest Results	Results of last self-test for card.
13	Test in Prog	Indicates card test is in progress.
14	Slft Res Abort	Not used.
15	Slft Abort	Not used.
16	Card Stats Up	A "1" indicates statistics are being collected on this card.
17	Sib Pointer	Pointer to database concerning statistics.
18	Summary stats	Pointer to database concerning statistics.
19	Detailed stats	Pointer to database concerning statistics.
20	Bus Mastership	For BCC, this indicates whether this is the slave BCC. For other cards, this is not used.
21	Last Test	Last test performed on card in this slot.

dspstatmem (Display Statistics Memory Use)

The **dspstatmem** command displays memory usage for statistics collection.

Attributes

Jobs: No Log: Yes Lock: No Node Type: IPX, IGX, BPX

Associated Commands

none

Syntax

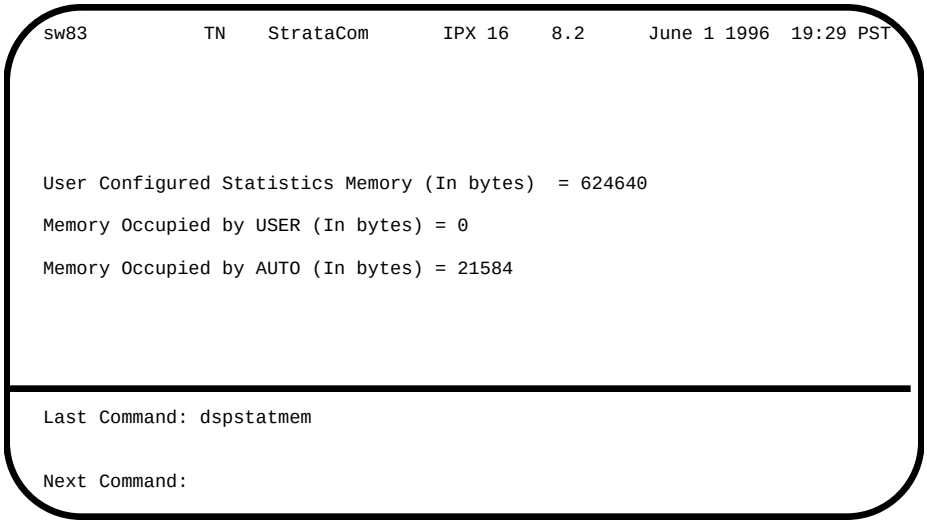
dspstatmem

Function

This command displays memory usage for statistics collection. It is intended for debugging statistics collection problems, not everyday use. The command shows the amount of controller card memory allocated by the user to statistics display (defaults to 650 Kbytes).

The memory occupied by USER is used for user-enabled statistics. Figure 1-82 illustrates an example screen. The memory occupied by USER figure is that used by the SV+ user. Memory occupied by AUTO is that used by node features.

Figure 1-82 dspstatmem—Display Statistics Memory Usage



IPX SU/0053_

dsptcpparm (Display TCP Parameters)

The **dspftcpparm** command displays the TCP parameter.

Attributes

Jobs: No Log: No Lock: No Node Type: IPX, IGX, BPX

Associated Commands

cnftcpparm

Syntax

dsptcpparm

Function

This command displays. The following illustrates an example display.

Figure 1-83 dsptcpparm—Display TCP Parameters

```
cc2            LAN   StrataCom       IPX 32    8.1     Mar. 30 1996 11:42 PST

NWIP Bandwidth Throttle (Kbytes/sec):  32









Last Command: dsptcpparm

Next Command
```

dsptrkcons (Display Trunk Connection Counts)

The **dsptrkcons** command displays the number of connections routed over the specified trunk. This command applies to physical and virtual trunks.

Attributes

Jobs: No Log: No Lock: No Node Type: IPX, IGX, BPX

Associated Commands

dsptrkmcons, dspplnmcons

Syntax

dsptrkcons <line number>

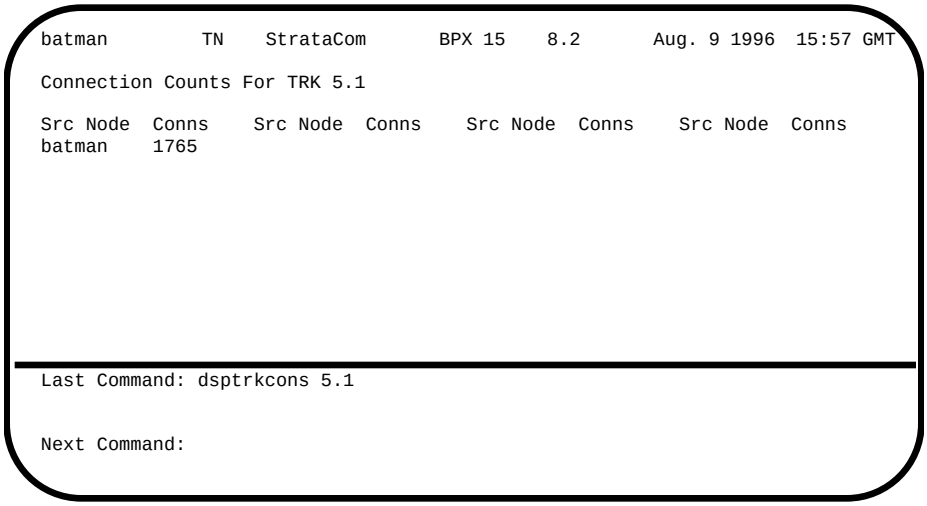
<line number> trunk number.

Function

This command displays the total number of connections being carried by the specified trunk. The connections are summed for each terminating node in the network and lists the connection count for the transmit direction (out of the node).

This command is useful in determining the source of dropped packets in cases where the specified trunk is oversubscribed. Use the **dsptrks** command to list the trunks that originate at each node. Next, use the **dsptrkcons** to determine the number of connections (the more connections per trunk the greater the possibility of over-subscription). Then use the **dsprts** command to identify any through nodes (where the trunk is not terminated). Finally, look at the utilization factor for each of these lines using the **dsputl** and **dspdutl** commands. Figure 1-84 illustrates the **dsptrkcons** command display.

Figure 1-84 dsptrkcons—Display Trunk Connection Counts



IPX SU/0039_

dsptrkmcons (Display Trunk Connection Counts by Master Node)

The **dsptrkmcons** command displays the number of connections routed over the specified trunk (BNI) by the master node.

Attributes

Jobs: No Log: Lock: Node Type: IPX, IGX, BPX

Associated Commands

dsptrkcons

Syntax

dsptrkmcons <line number>

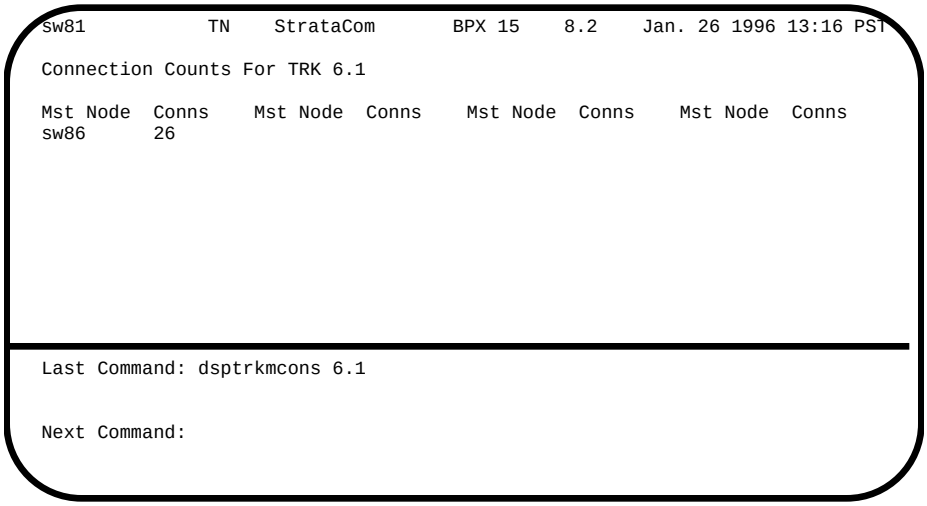
<line number>	specified trunk number. Note that in a BPX, the line number must include a port number.

Function

This command displays the total number of connections being carried by the specified trunk. Rather than showing the remote end of the connection, the display lists the connection and the node that owns that connections.

This command is useful in determining the source of dropped packets in cases where the specified trunk is oversubscribed. First, use the **dsptrkmcons** command to list the trunks that originate at each node (the more connections per trunk, the greater the possibility of over-subscription). Next, use the **dsprts** command to identify any through-nodes (on which the trunk is not terminated). Finally, look at the utilization for each of these lines by using the **dsputl** and **dspdutl** commands. Figure 1-85 illustrates the **dsptrkmcons** command display.

Figure 1-85 dsptrkmcons—Display Trunk Connection Counts by Master Node



dsptrkstatcnf (Display Statistics Enabled For A Trunk)

The **dsptrkstatcnf** command displays the enabled statistics a physical or virtual trunk.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

cnftrkstats

Syntax

dsptrkstatcnf <line>

<line> specifies the trunk: *line* can have the form *slot*, *slot.port*, or *slot.port.vtrk*. The format depends on whether the trunk card has only one or more physical ports and whether the trunk is a virtual trunk.

Function

This command displays the statistics configured as enabled for a selected trunk. It is intended for debugging statistics collection problems. It displays the trunk statistics set by the **cnftrkstats** command, by StrataView Plus, or by node features. Figure 1-86 *i*llustrates an example display for an ATM trunk.

The owner column shows what set the statistic. If "Automatic", it is set by features, if node name it was is set by SV+, if user it was set with the **cnftrkstats** command. The display may take up to four screens to display completely depending on statistics displayed.

Figure 1-86 dsptrkstatcnf—Display E3 Trunk Statistics Enabled (Screen 1)

```
sw86          TN    StrataCom      BPX 15    8.2     June 1 1996  20:24 PDT

Statistics Enabled on Trunk 6.2

     Statistic                          Samples Interval Size Peaks Owner
     ---------------------------------- ------- -------- ---- ----- ----------
  3) Out of Frames                          60        0    4  NONE BPX
  4) Loss of Signal                         60        0    4  NONE BPX
 29) Line Code Violation                    60        0    4  NONE BPX
 41) BIP-8 Errors                           60        0    4  NONE BPX
 46) HCS Errors                             60        0    4  NONE BPX
 48) Tx Voice Overflow Drpd Cells           60        0    4  NONE BPX
 49) Tx TS Overflow Drpd Cells              60        0    4  NONE BPX
 50) Tx NTS Overflow Drpd Cells             60        0    4  NONE BPX
 51) Tx Hi-Pri Overflow Drpd Cells          60        0    4  NONE BPX
 52) Tx BData A Overflow Drpd Cells         60        0    4  NONE BPX
 53) Tx BData B Overflow Drpd Cells         60        0    4  NONE BPX

This Command: dsptrkstatcnf 6.2


Continue?
```

Figure 1-87 dsptrkstatcnf—Display T1Trunk Statistics Enabled (Screen 2)

```
sw86          TN    StrataCom      BPX 15    8.2     June 1 1996  20:26 PDT

Statistics Enabled on Trunk 6.2

     Statistic                          Samples Interval Size Peaks Owner
     ---------------------------------- ------- -------- ---- ----- -----
                  ----------
167) Tx CBR Overflow Drpd Cells              60        0    4  NONE BPX
168) Tx VBR Overflow Drpd Cells              60        0    4  NONE BPX
169) Tx ABR Overflow Drpd Cells              60        0    4  NONE BPX

Last Command: dsptrkstatcnf 6.2


Next Command:
```

dsptrkstathist (Display Statistics History for a Trunk)

The **dsptrkstathist** command displays a history of configured statistics for a physical or virtual trunk.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

cnftrkstats, dsptrkstatcnf

Syntax

dsptrkstathist <trunk>

<trunk> specifies the trunk for which to list data.

Function

The **dsptrkstathist** command is a statistics debugging command. It displays the data for the last five occurrences of the selected statistic. The available trunk statistics appear on screen upon entry of the **dsptrkstathist** command. (The **cnftrkstats** command enables individual statistics. The **dsptrkstatcnf** command displays the enabled statistics for a trunk.) Figure 1-88 displays a statistic history for virtual trunk 1.1.1. The statistic is TX ABR Overflow Dropped Cells. This is statistic number 169, which execution of **dsptrkstatcnf** shows as enabled for this trunk. (If a *disabled* statistic is selected, a message stating this appears above the command line prompt.) The entered bucket interval is 0 minutes, which means that only the preceding 60 seconds worth of gathered data for number 169 appears.

Note Enter the owner in all capital letters. You may have to enter owner "auto" in all capital letters.

Figure 1-88 dsptrkstathist—Display Trunk Statistics History

```
sw97          TN    StrataCom       BPX 15    8.2       Aug. 9 1996  12:42 GMT

Tx ABR Overflow Drpd Cells on Trunk 1.1.1
Interval: 10 Second(s), Data Size: 4 Byte(s), NO Peaks, Owner: IPX

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

This Command: dsptrkstathist 1.1.1 169 0 BPX


Continue?
```

IPX SU/0041_

dsputl (Display Utilization)

The **dsputl** command displays the utilization factor for all voice connections on a specified circuit line.

Attributes

Jobs: No Log: No Lock: Yes Node Type: IPX, IGX

Associated Commands

dspdutl

Syntax

dsputl <bslot> [clear]

<bslot>	specifies the shelf back slot number of the circuit line for which to display the utilization factor.
[clear]	specifies that the utilization counters should be cleared after the display.

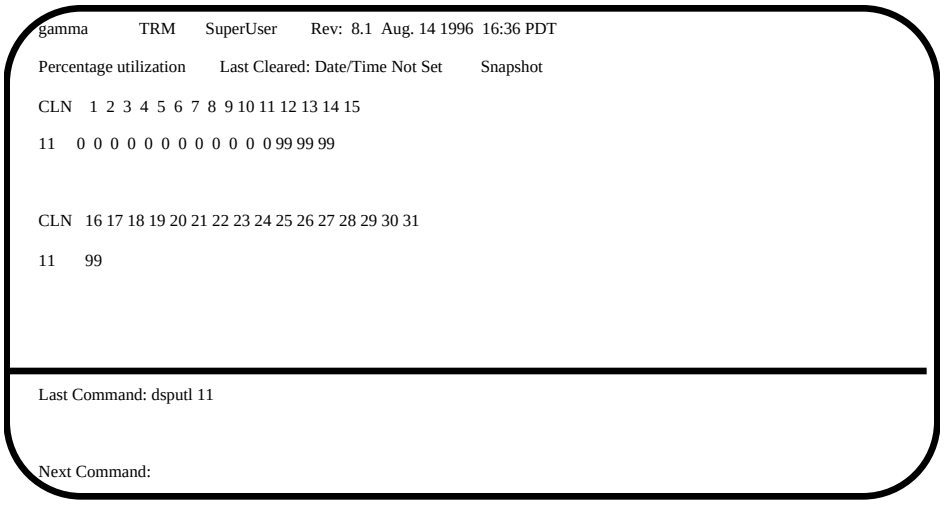
Function

This command displays the actual percentage utilization for all voice connections on a single circuit line specified by the back slot (bslot) number. The percentage is calculated by dividing the number of packets transmitted over the total number of packets allocated to the specified channel. Only transmit packet rates are used. If percentage of actual utilization exceeds the configured utilization the channel appears in reverse video.

Figure 1-89 illustrates a typical display. In this example, the connections from 11.1 to 11.11 use VAD and the connections from 11.12 to 11.17 do not. The connections using VAD do not use any network bandwidth (0 utilization) until the connection is used. The other connections utilize the full bandwidth (100% utilization) even though they may be idle.

Use the **dspdutl** command to display utilization for data channels.

Figure 1-89 dsputl—Display Voice Channel Utilization



IPX SU/0048_

forcerev (Force Revision)

The **forcerev** command forces a software revision to be sent down a trunk to a remote node.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

dsprevs, loadrev

Syntax

forcerev <line number> <primary/secondary> <revision>

<line number>	specifies the trunk number used to send the revision.
<primary/secondary>	specifies which revision is to be sent.
<revision>	specifies the software revision to be forced down the line.

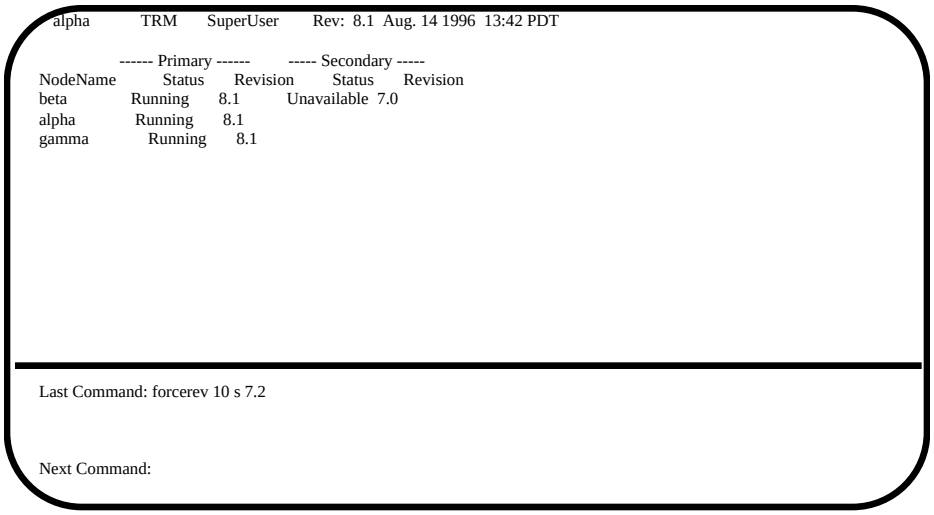
Function

This command sends a change revision message blindly down the specified trunk from the local node to the remote node. This allows primary revisions to be changed regardless of communication breaks and unreachable nodes. Usage of this command should only be necessary if a problem results in inconsistent revisions throughout a network.

Figure 1-90 illustrates an example screen. If the local node does not have the SW revision specified, the system will display "Unavailable X.X" as indicated. Use the **getfwrev** command to load the desired software revision into the node. Use the **dsprevs** command to display the revisions available on each node in the network.

Caution Use this command only when requested by StrataCom and under StrataCom supervision.

Figure 1-90 forcerev—Force Revision Down a Line



IPX SU/0049_

getfwrev (Get Firmware Revision)

The **getfwrev** command gets and loads a firmware image from StrataView, StrataView Plus, or a remote node into the specified node(s).

Attributes

Jobs: Yes Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

burnfwrev, dspfwrev, dspdnld

Syntax

getfwrev <image name> <nodename>

<image name>	specifies the name assigned to the firmware revision. Image names are generally in all capital letters and are case-sensitive when being entered.
<nodename>	specifies the node on which to load the revision.

Function

This command gets and loads a firmware revision image into the specified node's NPC memory. This firmware image can then be downloaded to specific interface cards within the node with the **burnfwrev** command. The firmware image must be already loaded into the StrataView or StrataView + terminal before using this command.

When the command is first entered, the status is temporarily "Unavailable" while the node attempts to locate the source of the firmware image. Once the download begins, a list of all of the files that make up the image is displayed and as the downloading progresses, the address of the file is updated.

- **getfwrev a.b.cd ***—loads firmware revision a.b.cd at all reachable nodes
- **getfwrev a.b.cd nodename**—loads firmware revision a.b.cd at one node only (nodename specifies the node).
- **getfwrev 0.0**.—clears a firmware revision image from NPC memory. Should be issued after every firmware download to clear the NPC memory.

Caution This command is not to be confused with **loadrev**. It loads system software, not firmware.

loadcnf (Load Configuration)

The **loadcnf** command loads a configuration image from StrataView Plus to a node.

Attributes

Jobs: Yes Log: Yes Lock: Yes Node Type: IPX, IGX, BPX, IPX/AF

Associated Commands

dspcnf, runcnf, savecnf

Syntax

loadcnf <backup_id | clear> <node_name> <source_SV_node>

<backup_id >	specifies the name of the backup configuration file to be loaded. Configuration names are case-sensitive.
<clear>	specifies that the control card buffer area used for loading a configuration be cleared.
<node name>	specifies the target node where the backup configuration file is to be loaded.
<source_SV_node>	specifies the node connected to the StrataView Plus where the configuration file *backup_id* resides.

Function

This command causes a saved network configuration file to be downloaded from StrataView Plus to one node or all nodes. (See **savecnf**.) The configuration image downloaded is temporarily stored in a buffer area in a node's controller card memory. The process runs in the background and may take several minutes if the configuration file is large. Although loaded, the configuration is not yet restored. The configuration is restored to the controller card's BRAM memory using the **runcnf** command.

After loading and restoring a network configuration, the control card buffer area used for this purpose should be cleared so it is available for other downloading processes, such as that of firmware. To clear the buffer area, execute **loadcnf** with the *clear* parameter specified instead of *backup_id*. Specify the buffer of an individual node with *node_name* or all nodes with *. For the purpose of clearing the buffer area, do not specify the *source_SV_node* parameter.

To execute this command on an IPX/AF interface shelf, telnet to the shelf or use a control terminal attached to the shelf.

loadrev (Load Revision)

The **loadrev** command loads a secondary system software revision image from StrataView or StrataView Plus into a node.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

runrev, dsprevs

Syntax

loadrev <revision> <nodename/*>

<revision >	specifies the revision level of the system software file to be loaded.
<nodename>	specifies the target node where the secondary revision is to be loaded.
<*>	is a shorthand notation used to specify all nodes in the network.

Function

This command loads the secondary revision system software for the specified nodes. The secondary revision system software is the code that is loaded onto a controller card but is not being run. Use the **runrev** command after loading of a revision is complete to make the secondary revision the primary revision. The previous primary revision then becomes the secondary.

Examples of this command:

- **loadrev a.b.cd *—**loads revision a.b.cd at all reachable nodes.
- **loadrev a.b.cd nodename**—loads revision a.b.cd at nodename only
- **loadrev 0.0**.—clears a software revision image from controller memory. This command should be issued after every software download to clear the controller memory.

After entering the command, system responds with: "Enter Rev Number:" The **dsprevs** command is used to observe the software revisions that are currently loaded into the controller memory. The **dspdnld** command is used to display a running picture of the status of the download procedure once it has commenced.

Caution This command is not to be confused with **getfwrev**. It loads firmware, not system software.

prtcderrs (Print Card Errors)

The **prtcderrs** command prints out detailed card failure information.

Attributes

Jobs: Yes Log: No Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

clrcderrs, dspcderrs

Syntax

prtcderrs [<slot>]

<slot > specifies the shelf slot where the selected card is installed.

Function

Prints a history of card failures associated with a specified slot on the network printer. If no argument is specified, a summary is printed, indicating the slots that have failures recorded against them. Refer to **dspcderrs** command for an example of a typical card error record that might be printed.

rrtcon (Reroute Connection)

The **rrtcon** command is used to manually reroute one or more connections.

Attributes

Jobs: Yes Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

drtop

Syntax

rrtcon <group|channel(s)|*>

<group|channel(s)|*>: specifies a group, a channel, or a range of channels to be rerouted. A '*' specifies all locally owned groups and connections.

Function

This command forces a group, channel or range of channels to be rerouted. If a free-routing connection is rerouted by the system for whatever reason, it will not automatically return to its original route when the trouble clears. This may leave the connection on a path that is not the most direct or cost effective.

This command can be used to force a reroute that will likely put the connection back to its original route if available. Over time, many routes may need to be rerouted back to their original paths. In this case, use the "*" to reroute all connections.

To use this command you must first vt to the node that owns the connection (local node). If not at the local node, the system displays "This node is not owner of the connection(s)".

There is no provision for specifying a route. The node determines the connection route according to the same rules that are used when adding a new connection. If there is no network bandwidth available to reroute the connection, the connection will be marked as failed.

Caution Entering this command on a connection that is in service should be done with some discretion as the reroute will interrupt service for as long as it takes to reroute the connection.

rststats (Reset Statistics Collection TIme)

The **rststats** command resets the statistics collection time for the **tststats** command.

Attributes

Jobs: Yes Log: No Lock: Yes Node Type: IPX, IGX

Associated Commands

tststats

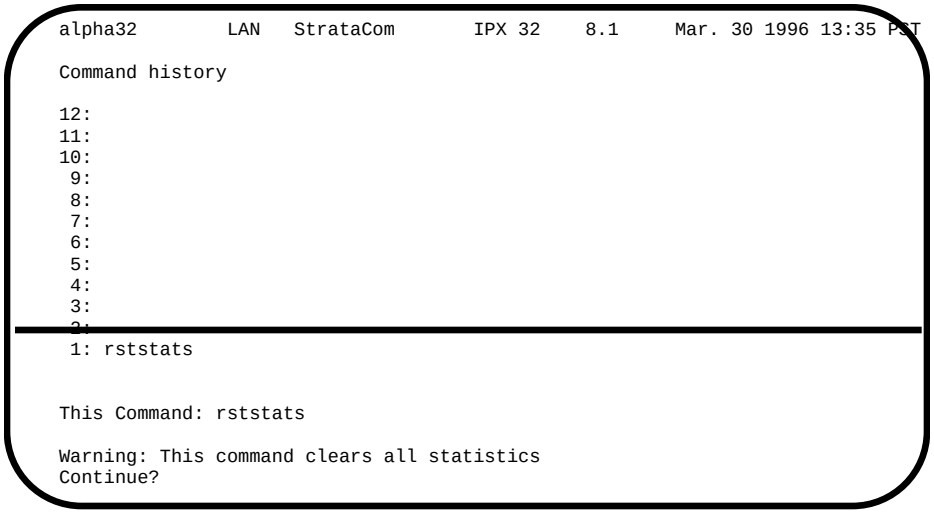
Syntax

rststats

Function

This command resets the collection time for the **tststats** command. The **tststats** command displays a test statistics summary. Before there will be any meaningful statistics, the **tstcon** command must be performed on one or more network connections. Refer to the *Command Reference* for information on the **tstcon** command. Figure 1-91 illustrates the system response.

Figure 1-91 rststats—Reset Statistics Collection TIme



runcnf (Run Configuration)

The **runcnf** command restores a network configuration image at one or all nodes.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX, BPX, IPX/AF

Associated Commands

savecnf, loadcnf, clrcnf

Syntax

runcnf <backup_id> <node_name>

<backup_id>	specifies the name of the configuration image loaded from StrataView Plus. Configuration names are case-sensitive.
<node_name>	specifies the node name to receive the configuration. An asterisk (*) specifies all nodes.

Function

This command restores the specified configuration to the controller card's BRAM memory and overwrites the current configuration. Once restored, the specified node (or all nodes) rebuilds with the restored configuration image. To execute this command on an IPX/AF interface shelf, telnet to the shelf or use a control terminal attached to the shelf.

This command is usually run after a previous configuration has been lost. If doubts exist about the state of the configuration at other nodes in the network, load the configuration into all nodes by specifying "*" for the node name. The new configuration must have previously been loaded into the controller buffer area with the **loadcnf** command.

Caution All network nodes must be run with the same configuration.

The system may display two warnings in response to the **runcnf** command:

A. When single node specified:

- Warning—node_name not reachable. Continue? Y/N.
- Warning—node_name does not have the specified configuration. Continue? Y/N.

B. When all nodes specified:

- Warning—all nodes not reachable. Continue? Y/N.
- Warning—all nodes do not have the specified configuration. Continue? Y/N.

If a single node is not reachable, responding with a “Y” does not affect the operation of the network. If node(s) do not all have the specified configuration or all are unreachable, it is not recommended that you continue until after the problem is resolved.

runrev (Run Revision)

The **runrev** command runs a specific revision of the system software revision at a node.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

dsprevs, loadrev

Syntax

runrev <revision> <nodename/*>

<backup_id>	specifies the name of configuration image loaded from StrataView Plus. Image names are generally in all capital letters and are case-sensitive when being entered.
<node_name>	specifies the node name to rebuild with a new configuration.
'*'	is a shorthand notation used to specify all nodes in the network.

Function

This command sets the primary revision for the specified nodes. The primary software revision is the one that is actively controlling node operation. A non-active secondary revision that does not match the primary revision may also be loaded in the controller. To set the primary software revision, enter:

- **runrev a.b.cd ***—to run revision a.b.cd at all reachable nodes.

  or

- **runrev a.b.cd nodename**—to run revision a.b.cd at a single node (nodename) only.

After entering the command, system responds with "Enter Rev Number". Use the **dsprevs** command to determine which rev(s), primary and secondary, are available on the node. The **runrev** command will be ignored if the required revision is not present on the node.

You may need to load the new revision onto the StrataView Plus terminal and then use **loadrev** command to download the new software image into the standby controller before you issue the **runrev** command. If you enter a revision number that does not exist at the node, the system displays the message

"Warning—the node does not have the specified revision. Continue? Y/N

Caution All network nodes must be run with the same software revision or abnormal network operation will be experienced.

If you respond “no”, the system takes you back to the main StrataView Plus prompt and you have an opportunity to change the rev. number and make a second attempt to run the corrected revision.

savecnf (Save Configuration)

The **savecnf** command saves a configuration image on a StrataView Plus workstation disk.

Attributes

Jobs: Yes Log: Yes Lock: Yes Node Type: IPX, IGX, BPX, IPX/AF

Associated Commands

loadcnf, runcnf, clrcnf

Syntax

savecnf <backup_id | clear> <node_name> <dest_SV_node> [<dest_SV_ip>]

<backup_id>	specifies the name of a configuration to be saved on StrataView Plus. The Backup ID must be 1–8 alphanumeric characters with the first character being alphabetic. Configuration names are case-sensitive.
<clear>	specifies that the buffer area should be cleared.
<node_name>	specifies the node name to save configuration on. '*' may be specified to indicate all nodes.
<dest_SV_node>	specifies the node name where StrataView Plus is connected and that is to receive the specified backup_id.
<dest_SV_IP>	for IPX/AF interface shelves only, this optional specification is the IP address of the StrataView Plus that is to receive the configuration image.

Function

The **savecnf** command has two possible applications. It saves all the configurations for the nodes in a routing network, or it saves the configuration of one IPX/AF interface shelf to a specific StrataView Plus workstation. Once saved, the configuration may be restored to BRAM using the **loadcnf** and **runcnf** commands. The **savecnf** command should be executed in the following situations:

- After making any configuration changes in a network
- Before upgrading to a new system software release

Execution on a Routing Node

In a routing network, **savecnf** saves a configuration image for one node or all routing nodes (*node_name* = *) on the StrataView Plus workstation specified by *dest_SV_node*.

Execution on an IPX/AF Interface Shelf

To execute **savecnf** on an IPX/AF, either telnet to the shelf or use a control terminal attached to it: **savecnf** saves a configuration image of only this IPX/AF. The image is stored on the workstation with the IP address in the parameter *dest_SV_ip*. (In a routing network, *dest_SV_ip* is not necessary.) Note that *node_name* and *dest_SV_node* must *both* be the name of the IPX/AF. The IP address of the destination StrataView Plus workstation uniquely identifies where to store the configuration image.

setfpevt (Set FastPAD Event Reporting)

The **setfpevt** command enables the reporting of FastPAD events.

Attributes

Jobs: No Log: Lock: Node Type: IPX, IGX

Associated Commands

clrfpevt

Syntax

setfpevt <slot.port>

<slot.port> specifies the slot and port of the FastPAD.

Function

Figure 1-92 illustrates a typical test statistics display.

Figure 1-92 setfpevt—Set FastPAD Event Reporting

tststats (Test Statistics)

The **tststats** command displays a summary of the test statistics that result from performing a **tstcon** command on various network connections.

Attributes

Jobs: No Log: No Lock: No Node Type: IPX, IGX, BPX

Associated Commands

tstcon

Syntax

tststats [clear]

[clear]	specifies that the test statistics buffers be cleared.

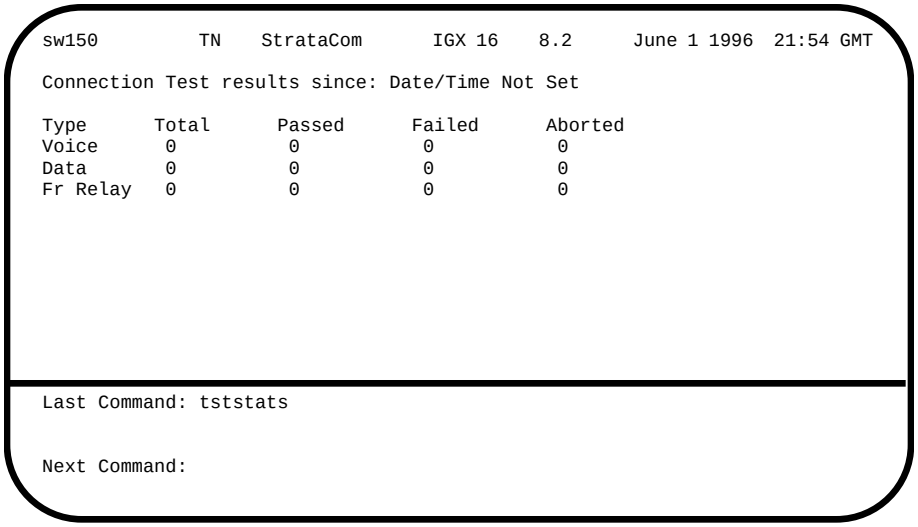
Function

Before **tststats** displays any meaningful statistics, the **tstcon** command must run on one or more network connections. Refer to the *Command Reference* for information on the **tstcon** command. The following are displayed for voice, data, and frame relay connections.

- Tests Completed, Passed, Failed, and Aborted
- Failure data per failed connection (applies only to voice connections):
- Slot.channel—indicates which connection has failed.
- Good reads—indicates number of good reads on the test failure.
- Bad reads—indicates number of bad reads on the test failure.

Figure 1-93 illustrates a typical test statistics display.

Figure 1-93 tststats—Display Test Statistics



IPX SU/0050_