



Show Commands for the Cisco 6400 NSP

This chapter describes the show commands specific to the Cisco 6400 node switch processor (NSP). Additional commands used to configure and monitor the Cisco 6400 NSP are described in:

- [Chapter 3, “Commands for the Cisco 6400 NSP”](#)
- *Cisco ATM and Layer 3 Switch Router Command Reference*, available at www.cisco.com or on the Documentation CD-ROM.

show aps

To display the SONET APS configuration for each redundant interface, use the **show aps** command.

show aps

Command Modes

EXEC

Usage Guidelines

This command displays the APS status of all cards configured for APS mode linear 1+1 nonreverting unidirectional operation. The output is closely associated with the generation of K_1/K_2 bytes transmitted from the redundant interface.

Examples

The following is sample output from the **show aps** EXEC command.

```
Switch# show aps
ATM7/0/0: APS Lin NR Uni, Failure channel: Protection
    Active Channel: CHANNEL7/0/0, Channel stat: Good
    Port stat (w,p): (Good, Good)
ATM7/0/1: APS Lin NR Uni, Failure channel: Protection
    Active Channel: CHANNEL7/0/1, Channel stat: Good
    Port stat (w,p): (Good, Good)
```

[Table 4-1](#) describes the fields shown in the display.

Table 4-1 show aps Field Description

Field	Description
APS	This interface is operating in APS mode. (Default configuration.)
Lin	This interface is operating in linear mode. (Default configuration.)
NR	This interface is operating in nonreverting mode. (Default configuration.)
Uni	This interface is operating in unidirectional mode. (Default configuration.)
Failure channel:	The name of the failure channel specified by the b_5 - b_8 field of the K_1 byte used in APS operation. Options can be Protection or Working.
Active channel:	The number of the active channel specified as the physical channel in use. These values correspond to the physical slot/subslot/port used within the chassis.
Channel stat:	The status of the active channel specified by the b_1 - b_4 field of the K_1 byte used in APS operation.
Port stat:	The status of the individual physical working (w) and protection (p) channels.

show atm input-xlate-table

To view the Input Translation Table utilization details, use the **show atm input-xlate table** command in EXEC mode.

show atm input-xlate table [inuse]

Syntax Description	inuse	Shows a detailed list of in-use blocks by port and virtual path identifier (VPI) .
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Defaults No default behavior or values.

Command Modes EXEC

Command History	Release	Modification
	12.1(4)DB	This command was introduced on the Cisco 6400 NSP.
	12.2(13)T	This command was integrated into Cisco IOS Release 12.2(13)T.
	12.3	This command was integrated into Cisco IOS Release 12.3.

Examples The following example shows how to use the command to view the ITT utilization details—with and without the **inuse** keyword:

```
Switch> show atm input-xlate-table
```

```
Input Translation Table Free Blocks:
```

```
Block-start Size Bank
```

```
1 1 0
2 2 0
4 4 0
8 8 0
16 16 0
32 32 0
64 64 0
17408 64 0
128 128 0
17536 128 0
256 256 0
17664 256 0
512 512 0
17920 512 0
1024 1024 0
2048 2048 0
18432 2048 0
4096 4096 0
20480 4096 0
8192 8192 0
24576 8192 0
32769 1 1
32770 2 1
32772 4 1
```

■ show atm input-xlate-table

```

32776    8    1
32784   16    1
32800   32    1
49248   32    1
32832   64    1
49152   64    1
49344   64    1
32896  128    1
33024  256    1
49408  256    1
33280  512    1
49664  512    1
33792 1024    1
50176 1024    1
34816 2048    1
51200 2048    1
36864 4096    1
53248 4096    1
40960 8192    1
57344 8192    1

```

Input Translation Table Total Free = 64350

Input Translation Table In Use (display combines contiguous blocks):

```

Inuse-start Inuse-end Size
0           0           1
16384      17407     1024
17472      17535      64
32768      32768       1
49216      49247      32
49280      49343      64

```

The output of the command with the **inuse** keyword is:

```

Switch> show atm input-xlate-table inuse
Interface   VPI  VP/VC Address Size
ATM0/1/0    0    VC 17472 64
ATM0/1/0    2    VP 32768 1
ATM0/1/2    0    VC 49216 32
ATM0/1/2    2    VP 0     1
ATM1/0/0    0    VC 49280 64
ATM1/0/0    9    VC 16384 1024

```

Related Commands

Command	Description
atm input-xlate-table autominblock	Automatically determines the minimum ITT block size needed for each VPI populated by permanent virtual circuits (PVC's) and Soft PVC source legs.
atm input-xlate-table autoshrink	Shrinks the existing ITT blocks in place when high-numbered virtual circuits (VC's) are deleted.

show controllers async

To display information on the NRP-2 PAM mailbox serial interface from the NSP, use the **show controllers async** EXEC command.

show controllers async

Syntax Description This command has no arguments or keywords.

Defaults No default behavior or values.

Command Modes EXEC

Command History	Release	Modification
	11.2	This command was introduced on the Cisco 1005 router.
	11.3(2)T	This command was implemented on Cisco 3600 series routers.
	12.1(4)DB	This command was implemented on the Cisco 6400 NSP to support the NRP-2.
	12.2(13)T	This command was integrated into Cisco IOS Release 12.2(13)T.

Usage Guidelines On the Cisco 6400, the **show controllers async** command can be used on the NSP or NRP-2 to view information for the NRP-2 PAM mailbox serial interface.

Examples In the following example, the **show controllers async** command is used to view the NRP-2 PAM mailbox serial interface from the NSP:

```
NSP# show controllers async
Async NRP2 Pam bus controller
TTY line 1 not available
TTY line 2 not available
TTY line 3 not available
TTY line 4 not available
TTY line 5 not available
TTY line 6
PAM bus data for mailbox at 0xA8A8FFC0
  magic1 = 0xDEADBABE, magic2 = 0x21524541
  in_data = 0x0000000D, out_data = 0x0000003E
  in_status.received_break = 0
  out_status.received_break = 0
  tx_owned = TRUE, rx_owned = FALSE
Buffer information
Rx ttycnt 0
Tx ttycnt 0
Rx Buffs:inpk 0/0 inheadpk 0 dataq 0 0 0
  pakq 0 0 0
Tx Buffs:outpk 0 txpkq 0 0 0
Rx totalin 1302 Tx totalout 69
```

```
TTY line 7 not available
TTY line 8 not available
TTY line 9 not available
TTY line 10 not available
TTY line 11 not available
TTY line 12 not available
TTY line 13 not available
TTY line 14
PAM bus data for mailbox at 0xA8E8FFC0
  magic1 = 0xDEADBABE, magic2 = 0x21524541
  in_data = 0x00000000, out_data = 0x00000000
  in_status.received_break = 0
  out_status.received_break = 0
  tx_owned = TRUE, rx_owned = FALSE
Buffer information
  Rx ttycnt 0
  Tx ttycnt 0
  Rx Buffs:inp 0/0 inheadpk 0 dataq 0 0 0
    pakq 0 0 0
  Tx Buffs:outpk 0 txpkq 0 0 0
  Rx totalin 0 Tx totalout 0
TTY line 15 not available
TTY line 16 not available
NSP#
```

show facility-alarm status

To show the current major and minor alarms and the thresholds for all user-configurable alarms on a Cisco 6400, use the **show alarm status** command.

show facility-alarm status

Syntax Description This command has no keywords or arguments.

Command Modes Global configuration

Usage Guidelines The **show facility-alarm status** command displays all of the current major and minor alarms and the user-configurable alarm thresholds for temperature. The Cisco 6400 has physical connections to a highly visible alarm display within the Central Office. After an alarm condition is indicated (by LEDs or bells), the **show facility-alarm status** command can be used to determine the cause of the alarm.

Examples The following is an example of the output from the **show facility-alarm status** command:

```
Switch# show facility-alarm status
Thresholds:
Intake minor 40 major 50 Core minor 55 major 53
SOURCE:Network Clock TYPE:Network clock source, priority level 2 down
SEVERITY:Minor ACO:Normal
SOURCE:NSP EHSA TYPE:Secondary failure SEVERITY:Minor ACO:Normal
SOURCE:ATM2/0/1 TYPE:Sonet major line failure SEVERITY:Major ACO:Normal
SOURCE:ATM6/0/1 TYPE:Sonet major line failure SEVERITY:Major ACO:Normal
SOURCE:ATM7/0/1 TYPE:Sonet major line failure SEVERITY:Major ACO:Normal
SOURCE:ATM6/1/0 TYPE:Sonet major line failure SEVERITY:Major ACO:Normal
SOURCE:ATM6/1/1 TYPE:Sonet major line failure SEVERITY:Major ACO:Normal
SOURCE:ATM7/1/1 TYPE:Sonet major line failure SEVERITY:Major ACO:Normal
```

Related Commands **debug pmbox**

show redundancy

To show which slots, subslots, ports, and CPUs are defined as being redundant on the Cisco 6400, use the **show redundancy** command.

show redundancy [*slot/subslot*]

Syntax Description This command has no keywords or arguments.

Command Modes EXEC

Usage Guidelines This command displays a redundancy configuration table showing each object in a redundant pair and indicating which object is currently the master. Chassis redundancy is displayed if no slot or subslot is specified. If a slot or subslot is specified, the redundancy configuration for only that slot is displayed.

Examples The following is sample output from the **show redundancy** command on the NSP:

```
Switch# show redundancy
Preferred main-cpu : B
NSP A      : Primary
NSP B      : Secondary
```

The following is sample output from the **show redundancy** command on the NRP:

```
Router# show redundancy
Primary NRP in slot 2, system configured non redundant
```

User EHSA configuration (by CLI config):

```
slave-console = off
keepalive    = on
config-sync modes:
  standard   = on
  start-up   = on
  boot-var   = on
  config-reg = on
```

NSP EHSA configuration (via pam-mbox):

```
redundancy      = off
preferred (slot 2) = yes
```

Debug EHSA Information:

```
NRP specific information:
Backplane resets    = 0
NSP mastership changes = 0
```

print_pambox_config_buff: pmb_configG values:

```
valid          = 1
magic          = 0xEBDDBE1 (expected 0xEBDDBE1)
nmacaddrs      = 1
run_redundant  = 0x0
preferred_master = 0x1
macaddr[0][0] = 0010.7b79.af93
macaddr[1][0] = 0000.0000.0000
```



```
EHSA pins:  
peer present = 0  
peer state = SANTA_EHSA_SECONDARY  
crash status: this-nrp=NO_CRASH(1) peer-nrp=NO_CRASH(1)
```

```
EHSA related MAC addresses:  
peer bpe mac-addr = 0010.7b79.af97  
my bpe mac-addr = 0010.7b79.af93
```

Related Commands **show nrp**

show redundancy sync-status

To display the status of PCMCIA disk mirroring and synchronization type, use the **show redundancy sync-status EXEC** command.

show redundancy sync-status

Syntax Description This command has no keywords or arguments.

Defaults No default behavior or values.

Command Modes EXEC

Command History	Release	Modification
	12.1(5)DB	This command was introduced on the Cisco 6400 NSP.
	12.2(13)T	This command was integrated into Cisco IOS Release 12.2(13)T.
	12.3	This command was integrated into Cisco IOS Release 12.3.

Usage Guidelines The command output displays several lines:

Line Number (from top)	Description of Output
1	Displays disk mirroring status (enabled or disabled). Also displays whether disk mirroring is configured to copy all files blindly (full sync), or compares file names, sizes, and time stamps before synchronizing data (proper sync).
2	Displays the file threshold size (0 MB is the default) configured with the mirror command.
3	Displays whether or not the secondary NSP is in the chassis.
4	Displays whether or not a PCMCIA disk is missing from disk slot 1 of the primary or secondary NSP.
5	Displays whether or not the disks in slot 0 are synchronized between the primary and secondary NSP.
6	Displays whether or not the disks in slot 1 are synchronized between the primary and secondary NSP.
7	Only appears while synchronization is in progress. Identifies which disks are being synchronized, and what percentage of the synchronization is complete.

Examples

The following example shows that disk mirroring is enabled and that disk synchronization is in progress:

- Switch# **show redundancy sync-status**
 Disk Mirror is enabled in configuration:proper sync
 (Mirror threshold is 0 MB:smaller files will be copied blindly)
- Peer Secondary NSP is present
 disk1 or sec-disk1 is wrong or missing
- mir-disk0 (disk0 -> sec-disk0):out of sync.
 mir-disk1 (disk1 -> sec-disk1):out of sync.
- Disk Mirror full sync is in progress (disk0 to sec-disk0, 23%)

Switch#

The following example shows that disk mirroring is enabled and that the PCMCIA disks in slot 0 of the NSPs are synchronized:

- Switch# **show redundancy sync-status**
 Disk Mirror is enabled in configuration:proper sync
 (Mirror threshold is 0 MB:smaller files will be copied blindly)
- Peer Secondary NSP is present
 disk1 or sec-disk1 is wrong or missing
- mir-disk0 (disk0 -> sec-disk0):in sync.
 mir-disk1 (disk1 -> sec-disk1):out of sync.

Switch#

Related Commands

Command	Description
mirror	Enables PCMCIA disk mirroring.
redundancy sync	Copies the data from one PCMCIA disk to its mirror disk.

show tag-switching atm-tdp bindings

To display the requested entries from the ATM LDP label bindings database, use the following **show tag-switching atm-tdp bindings** EXEC command.

```
show tag-switching atm-tdp bindings [A.B.C.D {mask / length}]
    [local-tag | remote-tag vpi vci] [neighbor atm slot/subslot/port]
    [remote-tag vpi vci]
```

Syntax Description		
	<i>A.B.C.D</i>	Destination of prefix.
	<i>mask</i>	Destination netmask prefix.
	<i>length</i>	Netmask length, in the range from 1 to 32.
	local-tag <i>vpi vci</i>	Matches locally assigned label values.
	neighbor atm <i>slot/subslot/port</i>	Matches labels assigned by a neighbor on the specified ATM interface.
	remote-tag <i>vpi vci</i>	Matches remotely assigned label values.

Defaults Displays all database entries.

Command Modes EXEC

Command History	Release	Modification
	12.0(5)T	This command was introduced on the Cisco 6400 NSP.
	12.2(13)T	This command was integrated into Cisco IOS Release 12.2(13)T.
	12.3	This command was integrated into Cisco IOS Release 12.3.

Usage Guidelines The display output can show the entire database or a subset of entries based on the prefix, the VC label value, or an assigning interface.

Examples The following is sample output from this command.

```
Switch# show tag-switching atm-tdp bindings
Destination: 13.13.13.6/32
    Headend Router ATM1/0.1 (2 hops) 1/33 Active, VCD=8, CoS=available
    Headend Router ATM1/0.1 (2 hops) 1/34 Active, VCD=9, CoS=standard
    Headend Router ATM1/0.1 (2 hops) 1/35 Active, VCD=10, CoS=premium
    Headend Router ATM1/0.1 (2 hops) 1/36 Active, VCD=11, CoS=control

Destination: 102.0.0.0/8
    Headend Router ATM1/0.1 (1 hop) 1/37 Active, VCD=4, CoS=available
    Headend Router ATM1/0.1 (1 hop) 1/34 Active, VCD=5, CoS=standard
    Headend Router ATM1/0.1 (1 hop) 1/35 Active, VCD=6, CoS=premium
    Headend Router ATM1/0.1 (1 hop) 1/36 Active, VCD=7, CoS=control
```

Destination: 13.0.0.18/32
 Tailend Router ATM1/0.1 1/33 Active, VCD=8

Table 4-2 describes the significant fields in the sample command output shown above.

Table 4-2 Show Tag-switching Atm-tdp Bindings Field Descriptions

Field	Description
Destination:	Destination IP address/length of netmask
Headend Router	VC type: <ul style="list-style-type: none"> • Headend—VC that originates at this router • Tailend—VC that terminates at this router
ATM1/0.1	ATM interface
1/33	VPI/VCI
Active	LVC state: <ul style="list-style-type: none"> • Active—Set up and working • Bindwait—Waiting for response

Related Commands

Command	Description
show tag-switching atm-tdp bindwait	Displays the number of bindings waiting for label assignments for a remote MPLS ATM switch.

■ show tag-switching atm-tdp bindings