



**U.S. DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
NATIONAL WEATHER SERVICE  
Silver Spring, Md. 20910

MEMORANDUM FOR: All NWS Regional Headquarters, Regional Maintenance Specialists, Electronic Systems Analysts, and Electronics Technicians [Engineering Handbook (EHB)-13, Series II distribution]

FROM: W/OPS1 - Acting, Mark Paese *Has not been signed*

SUBJECT: Transmittal Memorandum for EHB-13 Series II, Issuance 02-11

1. Material Transmitted:

Engineering Handbook No. 13 Series II, Advanced Weather Interactive Processing System (AWIPS), section 5.1, AWIPS System Modification Note 6, AWIPS Linux Communications Processor (CP) Replacement and Waveswitch 1216 High Speed Local Area Network (LAN) Upgrade for NRS Systems

2. Summary:

AWIPS System Modification Note 6 provides high speed local area network hardware installation and AWIPS CP replacement instructions for NRS Systems.

3. Effect on Other Instructions:

None. File this note in EHB-13, Series II, Section 5.1.



## AWIPS SYSTEM MODIFICATION NOTE 6 (for Electronic Systems Analysts)

Maintenance Logistics &amp; Acquisition Division

W/OPS1: FJZ

- SUBJECT** : AWIPS Linux Communications Processor (CP) Replacement and Waveswitch 1216 High Speed Local Area Network (LAN) Upgrade for NRS Systems
- PURPOSE** : To provide hardware installation procedures for two Linux CPs and high speed Local Area Network (LAN) equipment.
- AUTHORIZATION** : The authority for this patch modification note is Request for Change AA321
- EQUIPMENT AFFECTED** : Advanced Weather Interactive Processing System (AWIPS) HP 743RT based Satellite Broadcast Network (SBN) CPs at sites listed in attachment A.
- SITES AFFECTED** : See attachment A. For NRS sites with WaveSwitch 1216.
- PARTS REQUIRED** : Northrop Grumman Information Technology, Inc [(NGIT) formerly PRC] will ship all required parts to the sites. Sites will receive 4 boxes.
- MODIFICATION PROCUREMENT** : None
- TOOLS REQUIRED** : Standard site tool kit, anti-static mat, table (on which to set CPSBN1 and 2), and electrostatic discharge (ESD) strap, and a long #2 phillips screwdriver.
- TEST EQUIPMENT REQUIRED** : None
- EFFECT ON OTHER: INSTRUCTIONS** : None. File this note in EHB-13, Series II, section 5.1.
- VERIFICATION STATEMENT** : This modification was tested at the National Weather Service Headquarters NMTW, Silver Spring, MD (SLVM2).
- TIME REQUIRED** : 6 hours
- TECHNICAL SUPPORT** : For questions or problems regarding these installation instructions please contact Franz J.G. Zichy at 301-713-1833 x128. For any other questions, please contact the NCF at 301-713-9344.

**GENERAL**

The increase in throughput of AWIPS operational data, has identified performance problems in older AWIPS components. The CPs are recognized as one of the limiting factors and are replaced by Dell 2550, 2U high rack mounted servers. Because the Dell 2550 server is deeper than the current CP, minor repositioning of rack components is necessary. The CP characteristics are:

Hardware:

- Pentium III, clocked at 1 Ghz
- 256MB RAM
- 4 x 18 GB SCSI Hard Drive in RAID-0 configuration (disk striping)
- on-board SCSI controller
- 3.5" floppy drive
- 24x IDE CD-ROM
- 19" Rack mount kit
- single 10/100BaseT NIC
- single 330W power supplies
- SBE Inc. wanXL400 PCI EIA-530 adapter w/EIA 530 cable

The HSL components include:

- PTI 344 High Speed Serial 4 port I/O board and drivers
- 100 Mbps PlainTree WaveSwitch LAN Module
- 10/100/1000 Mbps HP Procurve Ethernet LAN switch

Service: The CP hardware will be covered by a 90 Linuxcare Service agreement, providing 4 hour response (5x10) parts and labor, and on-site hardware maintenance for 3 years.

Software: NGIT will install the disk image containing Red Hat operating system (OS) version 7.0, device drivers, and AWIPS specific user accounts and disk partitions. The CP runs the AWIPS Communications Processor software. The disk image described above will support the scripted installation of version 5.1.2 of the AWIPS CP software.

## PROCEDURE

The CP hardware kit is sent by NGIT in 4 boxes. The boxes will contain two Dell 2550, 2U high rack mounted servers and rails, two 10/100 Switch2, two Waveswitch 100Base-TX modules, cables, labels, and other supporting supplies. The LAN upgrade and CP installations are performed by the site ESA using the procedures outlined below.

<p><b>NOTE:</b> Only sites with Waveswitch 1216 should use this procedure. Non NRS WFOs, collocated WFOs, and RFCs refer to AWIPS Modification Note 4 and 5.</p>
--

**A. AWIPS CP Rack Preparation Procedure**

To minimize data loss, the HP communications processors are removed from the rack, placed on a table, but are not disconnected. Removal of the rack doors may facilitate maintenance.

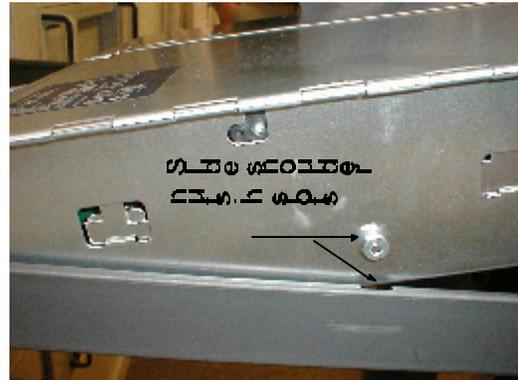
**Call the NCF before performing these instructions.** Read each step **thoroughly** before performing a procedure. Follow the procedures outlined below.

1. Prepare a table with a surface at a sufficient height to place the 2 communications processors (CP).
2. From the back of the rack, identify the cables leading to the NRS CPSBNs and cut the tie wraps to allow adequate cable length when the CPs are pulled out of the rack.
3. Using 2 people, carefully pull CPSBN2 out, remove it from the slide rails and place it on the table.
4. Repeat for CPSBN1 and place it on top of CPSBN2.
5. Remove the CPSBN slide rail kits from the rack.
6. Install capture nuts over the 24<sup>th</sup> hole (approximately 15 inches) from the rear of the rack, on the side braces.
7. Attach the newly provided vertical mounting rails to the capture nuts with the face of the rail facing the front of the rack (opposite of the existing rear rail). Pull the vertical rails to the rearward most limit of the adjustment slots and tighten.

This completes the NRS rack preparation procedure.

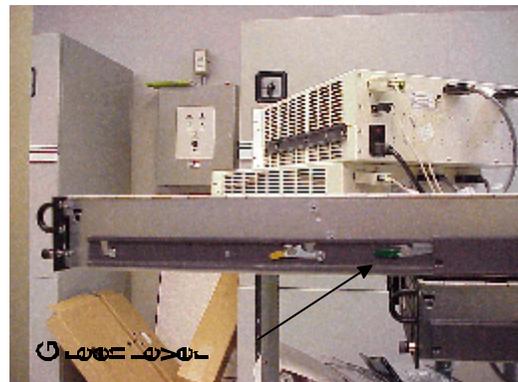
**B. New CPSBN Equipment Installation Procedure**

1. Install the new CPSBN1 slide rail kit directly below the blank panel under the Xyplex. Insert the alignment pins in the front and rear mounting plates into the 12<sup>th</sup> hole (approximately 5.5-inches) from the top of the vertical mounting rail (using 2 people may facilitate installation). Secure the slide rails to the vertical rail by inserting screws in top and bottom holes of the slide rail mounting plates.

**Figure 1**

2. Install the new CPSBN2 slide rail kit directly below the VIR Switch Panel chassis. Insert the alignment pins in the front and rear mounting plates into the 31<sup>st</sup> hole (approximately 18-inches) from the top of the vertical mounting rail. Secure the slide rails to the vertical rail, as above.

3. Fully extend the CPSBN2 slide rails insuring that they securely latch in the extended position.
4. Using 2 people, lift the new CPSBN2 and, beginning with the rear-most slots, slide the shoulder nuts (on the side of the CP chassis) into the rails slots.

**Figure 2**

5. After all the shoulder nuts are in their appropriate slots and the CPSBN is sitting on the mounting rails (figure 1), push rearward on the unit to latch it into the rails.
6. Release the rail lock mechanisms using the green levers on the outer sides of the slide rails (figure 2), slide the CPSBN chassis fully into the rack and secure it with the fasteners on the lower corners of the front panel.
7. Repeat Steps 3 through 6 for CPSBN1.

This completes the new CPSBN equipment installation procedure.

### C. High-Speed LAN Equipment Installation Procedure

1. From the back of the DS1 rack, release the power strips from their retaining clips and carefully move them aside for access to the HUB mounting screws. These power strips will not be replaced.

**NOTE:** Inform the operations staff that even numbered X-terminals and color graphics printer will be taken off the LAN.

2. Disconnect the LAN cables, monitor and control (M&C) cable from the 12-Port Hub2 (HUB2).
3. Gain access to the power cable by removing the rack panel from the front of the DS1 rack (figure 3). Remove the power cord from HUB2.
4. While one person supports HUB2, remove HUB2 from the rack and set it aside.
5. Install the mounting brackets on both sides of the new 10/100 Switch 2 (figure 4).
6. Before sliding the new 10/100 Switch2 (marked as HSL/SW2 S/D) into the rack, plug the power cord into the front of the unit.
7. Install the 10/100 Switch 2 in the space vacated by HUB2 and secure it with rack screws from the old HUB2 in the 31<sup>st</sup> and 33<sup>rd</sup> hole from the top of the rear vertical mounting rails. Use the rack screws from the old HUB2.

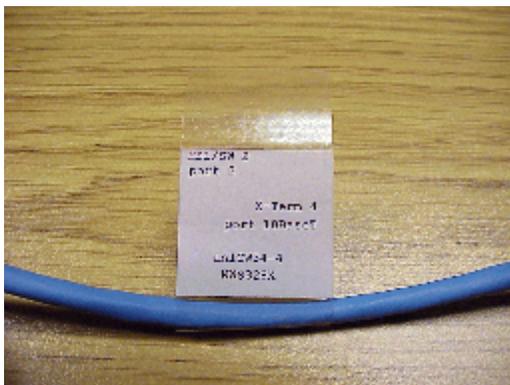


**Figure 3**



**Figure 4**

8. Remove the LAN cables from Port 15 on LSW1 and LSW2 and set them aside with the 12-Port Hub.
9. Connect the LAN cables, M&C cable and power cord removed from HUB2 to their designated port on 10/100 Switch2.
10. Re-label the LAN cables removed from HUB2 with the appropriate labels (provided with installation kit) to reflect the new 10/100 Switch designator (more labels are provided than are required). Follow the procedure detailed below:
  - a. Place the label on the cable so that cable intersects the label's white and clear part (figure 5).
  - b. Fold the clear part up (figure 6) and fold the remaining clear part down over the label's white part (figure 7).

**Figure 5****Figure 6****Figure 7**

11. Patch LSW2 out of the FDDI ring by quickly removing DS2A and plugging LSW2A into DS2A. Leave the DS2A plug dangling.
12. From the front of the DS1 rack, unplug the power cord from LSW2.
13. From the back of the DS1 rack, remove the blank cover plate from LSW2 (figure 8).
14. Put on the ESD strap and install a Waveswitch 100Base-TX module in the open slot in LSW2 using the procedure packaged with the module. If access to the open slot is difficult, remove the LAN cables.



**Figure 8**

15. Verify that the Spanning Tree Protocol has been enabled on the ProCurve 2524 Switch as follows (password for logging in is `ttrstb1`):
  - a. Set the Xyplex communication's port for Serial (2)/Serial (1), and the Xyplex console is set for EM100 mode by pressing `<user system>` key, `<F8>`, `<F5>`, tab to Datacom/Ext Dev press `<F2>` to toggle Serial (2)/Serial (1) tab to Term Mode, press `<F2>` to toggle EM100 and press `<F1>` to save configuration.
  - b. Press the `<user system>` key, enter user name (if necessary), press 1 to select console connections, press 3 to select LAN Hubs.
  - c. Connect the console to Hub4 and press `<Enter>` twice to return a prompt.
  - d. At the `Hub4-<site>#` prompt, type `show spanning-tree` then press `<Enter>`.
  - e. The top line should read: `STP Enabled : Yes`. If Spanning Tree is not enabled, contact the NCF for assistance.

**NOTE:** Spanning Tree must be enabled for the switch to function properly on the AWIPS LAN.

- f. Press `<ctrl-c>` to return to the `Hub4-<site>#` prompt then type `lo`, press `<Enter>` and answer `yes` to the Do you want to log out question.
14. Patch LSW2 back into the FDDI ring by quickly removing it from the DS2A socket and plugging it back into LSW2A, then return the dangling connector to DS2A.

15. Install the LA1AW45 cable (NWS5114) between the newly installed 100Base-TX port on LSW2 and port 24 on 10/100 Switch2.

**NOTE:** Notify the operations staff to log back in to the even number X-terminals and that the odd number X-terminals and text printer will be taken off the LAN.

16. Move up to LAN Switch 1 (LSW1) and patch it out of the FDDI ring by quickly removing DS1A and plugging LSW1A into DS1A. Leave the DS1A plug dangling.
17. Disconnect the LAN cables, M&C cable and power cord from 12-Port Hub1 (HUB1).
18. While one person supports HUB1, remove HUB1 from the rack and set it aside.
19. Install the mounting brackets on both sides of the new 10/100 Switch 1 as shown in figure 11.
20. Install the 10/100 Switch1 in the space vacated by HUB1 and secure it with rack screws in the 13<sup>th</sup> and 15<sup>th</sup> hole from the top of the rear vertical mounting rails. Use the rack screws from the old HUB1.
21. Remove the LAN cables from Port 14 on LSW1 and LSW2 and set them aside with the 12-Port Hub.
22. Connect the LAN cables, M&C cable and power cord removed from HUB1 to the corresponding port on 10/100 Switch1.
23. Re-label the LAN cables removed from HUB1 with the appropriate labels (provided with installation kit) to reflect the new 10/100 Switch designator (more labels are provided than are required). Follow the labeling procedure outlined in section C step 10a and 10b.
24. From the front of the DS1 rack, unplug the power cord from LSW1.
25. From the back of DS1 rack, remove the blank cover plate from LSW1 (figure 15).
26. Put on the ESD strap and install a Waveswitch 100Base-TX module in the open slot in LSW1 using the procedure packaged with the module. If access to the open slot is difficult, remove the LAN cables.
27. From the front of the DS1 rack, restore power to LSW1 and replace the rack panel.

28. Verify that the Spanning Tree Protocol has been enabled on the ProCurve 2524 Switch.
  - a. Verify the Xyplex communication's port is set for Serial (2)/Serial (1), and the Xyplex console is set for EM100 mode by pressing **<user system>** key, **<F8>**, **<F5>**, tab to Datacom/Ext Dev press **<F2>** to toggle Serial (2)/Serial (1) tab to Term Mode, press **<F2>** to toggle EM100 and press **<F1>** to save configuration.
  - b. Connect the console to Hub3 and press **<Enter>** twice to return a prompt.
  - c. At the Hub3-<site># prompt, type **show spanning-tree** then press **<Enter>**.
  - d. The top line should read: STP Enabled : Yes. If Spanning Tree is not enabled, contact the NCF for assistance.

**NOTE:** Spanning Tree must be enabled for the switch to function properly on the AWIPS LAN

- e. Press **<ctrl-c>** to return to the Hub3-<site># prompt then type **lo**, press **<Enter>** and answer **yes** to the Do you want to log out question.
29. Patch LSW1 back into the FDDI ring by quickly removing it from the DS1A socket and plugging it back into LSW1A, then return the dangling connector to DS1A
30. Install the LA1AW44 (NWS5114) cable between the newly installed 100Base-TX port on LSW1 and port 24 on 10/100 Switch1.

**NOTE:** Notify the operations staff to log back in to the odd numbered X-terminals.

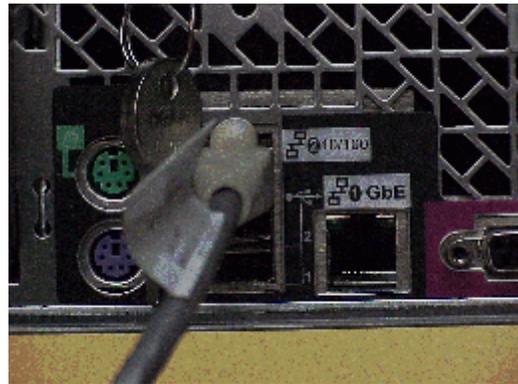
31. Replace the power strips removed in step C1 back into their retaining clips.

This completes the high-speed LAN equipment installation procedure.

**D. CPSBN to High-Speed LAN and AWIPS Cabling Procedure**

**NOTE:** Reference exhibit 1 on page 16 when completing steps 3 through 12.

1. Connect the LA1CW8 cable (NWS5115) between port 2 of 4-port Hub1 and the 10/100 LAN interface port on CPSBN1 (figure 9).
2. Connect the LA1CW7 cable (NWS5115) between port 2 of **4-Port Hub2** and the 10/100 LAN interface port on CPSBN2.
3. On the back of both new CPSBNs remove the strain relief bracket (figure 10).
4. Connect the 'PTI' cable (wire numbers SB1AW3, 4, 5 & 8) to CPSBN2's PTI interface card (figure 11).
5. Connect the 'PTI' cable (wire numbers SB1AW1, 2, 6 & 7) to CPSBN1's PTI interface card.
6. Install the strain relief bracket (included with the slide-rail kit) over the 'Y' cables on both CPSBNs (figure 12).
7. Switch SwPnl1 Switch Module 1 to the B position.



**Figure 9**



**Figure 10**

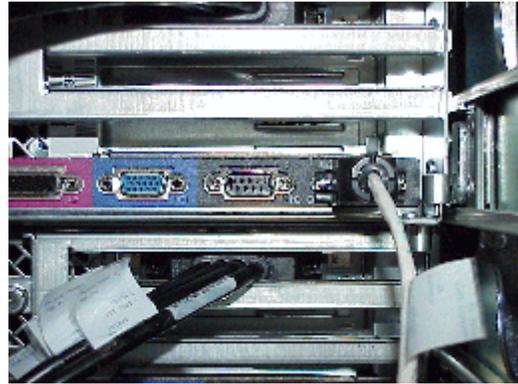


**Figure 11**



**Figure 12**

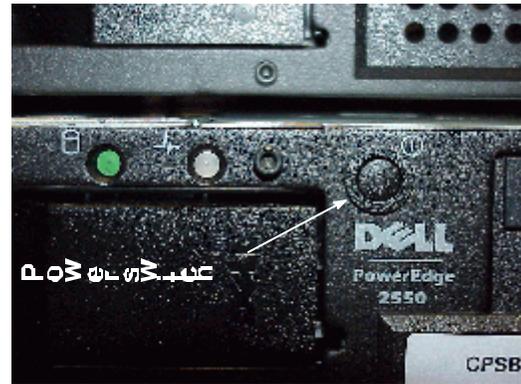
8. Turn off the old CPSBN1.
9. Remove the CPSBN data cables from the Eqpt A1, A2, B3 and B4 ports on SwPnl1 and pull them out of the rack.
10. Disconnect the M&C cable (DB9), wire number LA1CW9, from the old CPSBN1's console port and connect it to the Serial1 port on the new CPSBN1 (figure 13).
11. Disconnect the Demod cable (DB9), wire number LA1CWx, from the old CPSBN1's Demod port and connect it to the Serial 2 port on the new CPSBN1.
12. Disconnect the 10Base2 LAN cable from the old CPSBN1. Leave this cable, 'T-Connector' and Terminator intact.
13. Disconnect the power cord from the old CPSBN1 and connect it to the new CPSBN1.
14. Connect the PTI Port 1 cable (SB1AW1) to VIR1 Eqpt A1.
15. Connect the PTI Port 2 cable (SB1AW2) to VIR1 Eqpt A2.
16. Connect the PTI Port 3 cable (SB1AW6) to VIR1 Eqpt B3.
17. Connect the PTI Port 4 cable (SB1AW7) to VIR1 Eqpt B4.
18. Establish a console connection via the xyplex console.
  - a. Verify the Xyplex communication's port is set for Serial (2)/Serial (1), and the Xyplex console is set for EM100 mode by pressing **<user system>** key, **<F8>**, **<F5>**, tab to Datacom/Ext Dev press **<F2>** to toggle Serial (2)/Serial (1) tab to Term Mode, press **<F2>** to toggle EM100 and press **<F1>** to save configuration.
  - b. From the menu, select 1 NRS Com Processors, press **<Enter>**, select 1 SBP Downlink 1, press **<Enter>**.



**Figure 13**

**NOTE:** The boot process takes approximately 5 minutes. No user intervention is required.

19. Power up CPSBN1 via the CPs front panel power switch (figure 14) and observe the boot process on the xyplex console.
20. Verify that LEDs on the front panel are green.
21. Switch SwPnl1 Switch Module 1 back to the A position and switch SwPnl1 Switch Module 3 and 4 to the B position.
22. Turn off the old CPSBN2.
23. Remove the CPSBN data cables from the Eqpt A3, A4, B1 and B2 ports on SwPnl1 and pull them out of the rack.
24. Disconnect the M&C cable (DB9), wire number LA1CW10, from the old CPSBN2's console port and connect it to the Serial1 port on the new CPSBN2.
25. Disconnect the Demod cable (DB9), wire number LA1CWx, from the old CPSBN2's Demod port and connect it to the Serial 2 port on the new CPSBN2.
26. Disconnect the 10Base2 LAN cable from the old CPSBN2. Leave this cable, 'T-Connector' and Terminator intact.
27. Disconnect the power cord from the old CPSBN2 and connect it to the new CPSBN2.
28. Connect the PTI Port 1 cable (SB1AW3) to VIR1 Eqpt A3.
29. Connect the PTI Port 2 cable (SB1AW4) to VIR1 Eqpt A4.
30. Connect the PTI Port 3 cable (SB1AW5) to VIR1 Eqpt B1.
31. Connect the PTI Port 4 cable (SB1AW8) to VIR1 Eqpt B2.
32. Establish a console connection via the xyplex console. Repeat 19a and b. For step 19b, select 2 NRS Com Processor.
33. Power on CPSBN2 (figure 14) and observe the boot process on the xyplex console.
34. Verify that LEDs on the front panel are green.
35. Switch SwPnl1 Switch Module 3 and 4 back to the A position.
36. Verify that NWSTG data are being received on Link 0 of CPSBN1.

**Figure 14**

37. Verify that Goes W data and Non Goes Imagery data are being received on Link 0 and Link 1, respectively, of CPSBN2.
  - a. Open one Telnet session and log in to the CPSBN1 as **root**.
  - b. Start a log file by typing:

```
tail -f /data/co/logs/Products/cpsbn1-<sid>/sbn_proc0/mcProduct.log
```
  - c. Observe the data acquisition for GOES over the NWSTG.
  - d. Open a second Telnet session, log in to ds1 as user **fxa**, and type

```
logs; tail -f Sat*
```
  - e. Observe the satellite data acquisition and processing from the NWSTG.
  - f. If no problems are observed, stop the log files, and exit the Telnet sessions.

This completes the CPSBN to high-speed LAN and AWIPS cabling procedure.

#### E. CPSBN Installation Completion Procedure

1. Verify the CPs display the proper time. To change the time, perform the following:
  - a. Ensure the workstation's terminal emulation is set to vt100. If it is not, in a telnet window type:

```
linux export TERM = vt100
```
  - b. The log in to the CPs as **root** using the password **linuxcp!**
  - c. Type the following commands:

```
cd /awips/data  
linuxconf
```
  - d. Once the Linux configuration utility appears, arrow down to the date and time option and hit **<Enter>**.
  - e. Arrow down to Hour and/or Minute and change the time.
  - f. Press the **<Tab>** key to **Accept** at the bottom of the screen and hit **<Enter>**.

- g. Press **<Tab>** to `Quit` at the bottom of the screen and hit **<Enter>**.
  - h. Type `date` to confirm the change.
2. Back in the equipment room, disconnect and completely remove the LAN, data cables, and power cords from the old CPSBN1 and CPSBN2.
  3. Remove the old CPSBNs and set them aside.
  4. Unplug the remaining devices from the old power strips and plug them into any of the remaining receptacles of one of the new power strips. Completely remove the old power strips.
  5. "Dress" the CPSBN1 and CPSBN2 cables and power cords in a manner that will allow full and unrestricted extension of the chassis on the slide rails and allow access to the CPSBNs internal components (figure 20 and 21).
  6. Install the 7-inch blank panel in the space vacated by the old CPSBN2 chassis.
  7. Inform the NCF that the CP installation is complete.
  8. To verify if CPSBN2 is functioning properly, perform a failover using the procedures in section F.

This completes the CPSBN installation procedure.

## F. CPSBN2 Failover Procedure

To proceed with the failover, disable the GOES data acquisition on CPSBN2. The NCF will note the alarm and call the site. If after 5 minutes the NCF does not call, the site should call the NCF. Once in contact with the NCF, the site should request the NCF perform a failover. Perform the procedure below to disable the GOES data acquisition on CPSBN2.

1. Click right mouse button and select `telnet`. Log in to DS1 as `root` then log in to CPSBN2.
2. Shut down CPSBN2 by typing:  

```
shutdown -h now
```
3. Start a log file by typing:  

```
tail -f /data/co/logs/Products/cpsbn1-<sid>/sbn_procl/mcProduct.log
```

4. Observe the data acquisition for GOES over the NWSTG CP.
5. Open a second Telnet session, log in to ds1 as user `fxa`, and type  
`logs; tail -f Sat*`
6. Once in contact with the NCF, request a failover be performed.
7. Verify CPSBN1 is functioning properly and the data are acquired by DS1.
8. If satisfied with CPSBN1's performance, request the NCF to swap back the CPSBN2.

This completes the CP failover procedure.

### **G. Enabling Linux Monitoring Procedure**

In order for the NCF to monitor the new Linux devices through ITO, perform the following steps.

1. Log in to each CP as user `root` and type:  
`/sbin/chkconfig --level 2345 snmpd on`  
`/etc/init.d/snmpd start`
2. Ask the NCF to ftp an updated ITO script to a directory on as1 and as2.
3. Contact the NCF em server administrator to update information concerning Linux devices within the em server at the NCF

This completes enabling Linux monitoring procedure.

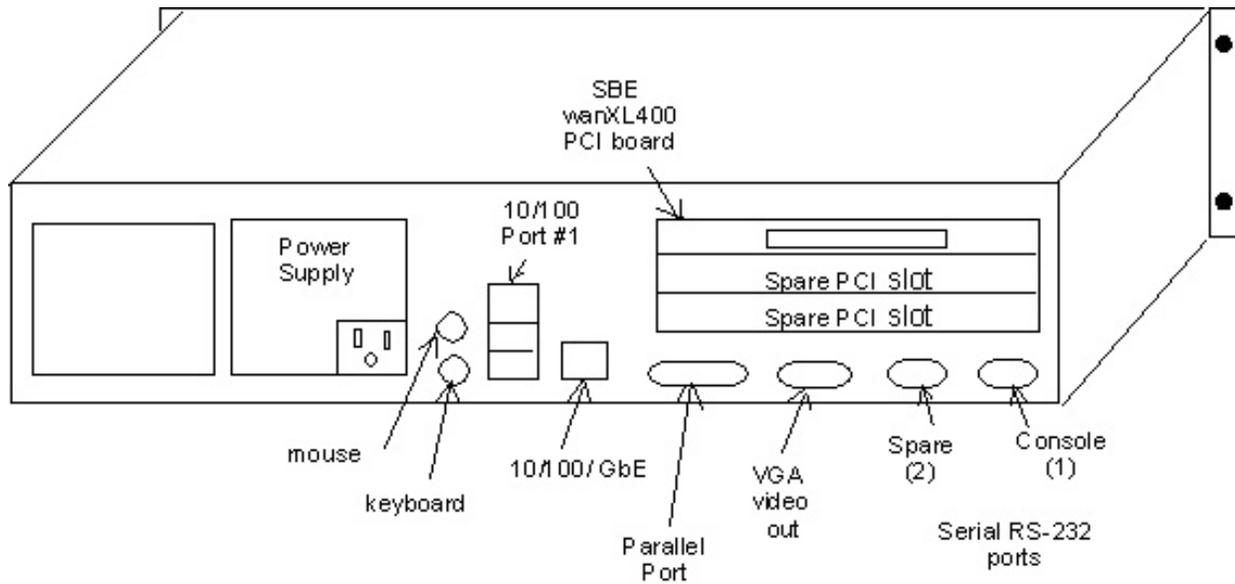


EXHIBIT 1 Linux SBN CP Rear View

**REPORTING MODIFICATION**

Report the completed modification on a WS Form A-26, Maintenance Record, according to the instructions in Engineering Handbook 4 (EHB-4), Engineering Management Reporting System (EMRS), Part 2, and Appendix I. A sample WS Form A-26 is attached. As an additional guide, use the information in the table below.

<b>Block #</b>	<b>Block Type</b>	<b>Information</b>
5	Description	Install two Linux CPs and high speed Local Area Network (LAN) equipment I.A.W. AWIPS Modification Note 6
7	Equipment Code	AWIPS
8	Serial Number	001
15	Comments	Serial number LINUX CP 1: _____ Serial number LINUX CP 2: _____
17a	Mod. No.	6

Has not been signed

Mark Paese  
Acting Chief, Maintenance, Logistics, and Acquisition Division

Attachment A - Affected Site List  
Attachment B - WS Form A-26 Sample

**Attachment A**

<b>Site</b>	<b>SID</b>	<b>Region</b>
WFO Honolulu, HI	HFO	Pacific
PRHQ Honolulu, HI	PBP	Pacific

Attachment B

WS FORM A-26 (4/94)		WS FORM A-26 (4/94)				U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL WEATHER SERVICE				Document Number <b>G 49978</b>	
<b>ENGINEERING MANAGEMENT REPORTING SYSTEM MAINTENANCE RECORD</b>											
<b>General Information</b>		1. Open Date <b>4 / 30 / 02</b>	Time <b>0900</b>	2. Initials <b>JMM</b>	3. Response Priority (check one) <input type="radio"/> Immediate <input type="radio"/> Routine <input checked="" type="radio"/> Not Applicable			4. Close Date <b>4 / 30 / 02</b>	Time <b>1400</b>		
5. Description <b>Set up and installation of two AWIPS Linux Communication Processors (CPs) and waveswitch 1216 High Speed LAN upgrade.</b>											
<b>Equipment Information</b>		6. Station ID <b>BOX</b>	7. Equipment Code <b>AWIPS</b>	8. Serial Number <b>001</b>		9. TM <b>M</b>	10. AT <b>M</b>	11. How Mal. <b>999</b>			
1 2. <b>EQUIPMENT OPERATIONAL STATUS TIMES</b>		a. Fully Operational <input type="text"/>	b. Logistics Delay <input type="text"/>	Partly Operational	c. All Other <input type="text"/>	d. Logistics Delay <input type="text"/>	Not Operational	e. All Other <input type="text"/>			
<b>13. Parts Failure Information</b>										<b>14. Work Load Information</b>	
Block #	a. ASN	b. NSN	c. TM	d. AT	e. How Mal.	f. Qty.	g. Maint. Hrs.	Type	Staff Hrs.		
1								a. Routine			
2								b. Non-routine			
3								c. Travel			
4								d. Misc.	<b>5:00</b>		
5								e. Overtime			
<b>Miscellaneous Information</b>		15. Maintenance Comments <b>Installed AWIPS Linux CP and upgraded Waveswitch 1216 LAN equipment I.A.W. AWIPS Mod Note 4.</b>								16. Initials <b>JMM</b>	
17. <b>SPECIAL PURPOSE REPORTING</b>		a. Mod. No. <b>4</b>	b. Mod./Act./Deact.Date <b>4/30/02</b>	c.		d.		e.			
18. <b>CONFIGURATION MGMT. REPORTING (use as directed)</b>		ASN		Vendor Part Number (New Part)		Serial Number (Old Part)		Serial Number (New Part)			