

## APPENDIX Z - VIP BACKUP AND RECOVERY PROCEDURES

INDEX	Page
<b>General Information</b>	<b>Z-2</b>
<b>Procedure 1 – Remote shutdown of the VIP</b>	<b>Z-5</b>
<b>Procedure 2 – Configuration of Local Settings</b>	<b>Z-6</b>
<b>Procedure 3 – Creation and Distribution of SSH Keys</b>	<b>Z-10</b>
<b>Procedure 4 – Remote SFTP Set Up Completion</b>	<b>Z-16</b>
<b>Procedure 5 – Backing Up Pre-Processor Substitution Dictionary</b>	<b>Z-19</b>
<b>Procedure 6 – Backing Up Local Dictionary</b>	<b>Z-21</b>
<b>Procedure 7 – Recovering Pre-Processor Substitution Dictionary</b>	<b>Z-23</b>
<b>Procedure 8 – Recovering Local Dictionary</b>	<b>Z-25</b>
<b>OLD VIP RECOVERY PROCEDURE: USED ONLY IF A PRE-CONFIGURED DRIVE IS NOT AVAILABLE FROM NRC</b>	<b>Z-27</b>

## General Information

This document contains the backup and recovery procedures for the NWR CRS VIP. These procedures are used by all CRS sites to ensure adequate backup of critical VIP system software, application software, and other critical files. Procedures for the recovery of these same data are also included.

There are three critical pieces of software contained in the VIP:

1. **Red Hat Linux Version 7.3** - This is the operating system. The VIP cannot be booted if it is not installed. Effective with VIP Version 3.2, the Red Hat Operating System (OS) must be updated to include the latest security patches. These patches must be loaded from the VIP "yum" server as part of the OS restore procedure.
2. **Speechify Version 2.1.5 (developed by Speechworks)** - This is the text-to-speech engine that generates the improved voice. This version of the Speech Engine includes the following three voices:
  - Tom - Male English voice (Version 2.1)
  - Donna - Female English voice (Version 2.1)
  - Javier - Male Spanish voice (Version 2.1)
3. **VIP Version 4.0** - This is "wrapper" software that serves as the interface between CRS and Speechify and also contains the user interface. Effective with VIP Version 3.2, the wrapper software will be updated from the previous version using the rpm and retrieving the software from the VIP "yum" server as part of the recovery procedure from a VIP software failure. This consists entirely of downloading the software updates from a server. VIP application failures will no longer require re-loading the entire hard drive image.

The documentation package each site received from NWS Headquarters (WSH) in September 2004 contains the following media:

**Six (6) Operating System CDs** - These contain the VIP disk image including the operating system and the Speechify software. These are labeled *VIP OS Restore #1 - #6* CDs. These CDs also include the VIP Version 3.1 software; therefore, no separate set of application software CDs are necessary. Since that time, updates have been added electronically by retrieving files from headquarters in Silver Spring, MD.

The recovery philosophy of VIP has been changed as of 2009 to minimize downtime in the field. Since it takes in excess of 5 hours to deliver and setup the VIP software, it is generally recommended that in the event of either drive failure due to a hardware problem, or software failure due to operating system or application failure, that the drive be replaced with a new drive from NRC which will now come preloaded with all operating system and application software and will require only local customization and set up.

Each WFO should keep the original VIP disk image CDs just in case a new pre-loaded drive is temporarily unavailable. The original instructions for reloading the operating system and

application software via the disk image CDs are included at the end of this Appendix in case they are needed.

The VIP contains two sets of dictionaries that need to be backed up to diskette:

1. **Substitution Dictionaries** - These contain the site specific substitution entries used by the pre-processor to modify the input text. Effective with VIP Version 4.0, each voice (Tom, Donna, and for those sites with a Spanish license, Javier) has its own separate dictionary that must be backed up. Therefore, there are 2 or 3 substitution dictionaries that must be backed up.
2. **Local Dictionaries** - These contain the site specific pronunciations necessary to properly voice text information. Effective with VIP Version 4.0, each voice (Tom, Donna, and for those sites with a Spanish license, Javier) has its own separate dictionary that must be backed up. Therefore, there are 2 or 3 local dictionaries that must be backed up.

*NOTE:*

These dictionaries should be saved to diskette whenever they are altered.

The following scenarios describe typical operational occurrences and the appropriate backup or recovery procedure(s) that need to be performed:

## RECOVERY FROM TYPICAL OPERATIONAL OCCURRENCES

### Scenario 1 – Hard Drive Failure

In this scenario, the VIP cannot be booted or is unresponsive to user commands.

First try to shutdown the VIP remotely and restart following “Procedure 1 – VIP Remote Shutdown”. If this fails to resolve the problem, order and install a pre-loaded VIP drive from NRC. **Perform Procedures 2, 3, 4 (optional), 7 and 8** to configure local settings and dictionaries.

### Scenario 2 - VIP Operating System or VIP Application Software Failure

In this scenario, either the operating system will not boot or the VIP and/or Speechify software will not execute.

First try to shutdown the VIP remotely and restart following “Procedure 1 – VIP Remote Shutdown”. If this fails to resolve the problem, order and install a pre-loaded VIP drive from NRC. **Perform Procedures 2, 3, 4 (optional), 7 and 8** to configure local settings and dictionaries.

If no pre-loaded drive is available, you may use the old recovery method and reload the operating system from the disk image CDs, configure the site specific information, load the OS

security patches, install the Secure shell (SSH) authorization keys, load in the VIP wrapper updates, and restore all the Substitution and Local Dictionaries from their respective diskettes. See "Procedure for full VIP drive recovery via disk image CDs" at the back of the appendix.

### **Scenario 3 – Pre-Processor Substitution Dictionary Modification**

In this scenario, changes have been made to the Substitution Dictionary for one or more of the voices. The new dictionary(ies) need(s) to be saved to diskette(s). **Perform "Procedure 5 – Backup Pre-Processor Substitution Dictionary"**.

### **Scenario 4 - Local Dictionary Modification**

In this scenario, changes have been made to the Local Dictionary for one or more of the voices. The new dictionary(ies) need(s) to be saved to diskette(s). **Perform "Procedure 6 – Backup Local Dictionary"**.

### **Scenario 5 – Pre-Processor Substitution Dictionary Destruction or Corruption**

In this scenario, the Substitution Dictionary for one or more voices has been destroyed or corrupted. Recover the backup dictionary(ies) from diskette(s). **Perform "Procedure 7 – Recovering Pre-Processor Substitution Dictionary"**.

### **Scenario 6 - Local Dictionary Destruction or Corruption**

In this scenario, the Local Dictionary for one or more voices has been destroyed or corrupted. Recover the backup dictionary(ies) from the diskette(s). **Perform "Procedure 8 – Recovering Local Dictionary"**.

### Z-1 Procedure 1 - Shutdown VIP Remotely

1. From the CRS Main menu, click **Maintenance**, then click **UNIX** shell. A UNIX shell window displays.
1. Type **su - crs**, enter the correct CRS *password*, then press **Enter**.
2. In the shell window, type **ssh vip**, then press **Enter**.
3. If no logon prompt displays in two minutes, and the VIP was unresponsive from its local console, the VIP is hung and a power-down is the only alternative.
4. Type **su -**, enter the correct VIP root *password*, then press **Enter**.
5. Type **/sbin/shutdown -h now** then press **Enter**. The VIP automatically shuts down and powers down. The KVM switch should be in the proper position to observe the VIP shutdown from the shared monitor. If the VIP does not begin to shut down in two minutes, this procedure has failed, and a power-down is the only alternative.
6. **Power-up** the VIP when ready to restart.

## Z-2 PROCEDURE 2 - Configuration of Local Settings

1. At the VIP login screen, type **root**, then press **Enter**.  
Type new disk's root password, **nws2004**, then press **Enter**.
2. Click the **KDE Gear** icon in the lower left corner of the screen.
3. Click **System**.
4. Click **Network Configuration**.
5. In the *Network Configurator* window, click the **Active eth0 device**.
6. Click **Edit**.
7. Change the **IP address** value to match the VIP entry in the OMP */etc/hosts* file. For example, the entry at the WSH test bed site is 165.92.20.121.  
Ensure the Netmask is **255.255.0.0**.
8. Click **OK**.
9. Click **Apply**.
10. Click **Deactivate**.
11. Click **Activate**.
12. Click **Close**.
13. Click the **KDE Gear** icon in the lower left area of the screen.
14. Click **Editors**.
15. Click **KEDit**.
16. Click **File**.
17. Click **Open**.
18. In the *Location* box, type **/etc/hosts**
19. Click **OK**. If there is a duplicate set of IP addresses, delete the **second set**.
20. Change the **entries** to match those for **VIP**, **OMP** and **5MP** in the OMP */etc/hosts* file. For example, the OMP entry at the NWSHQ test bed site is 165.92.20.111.
21. Click **File**, then select **Save**.
22. Click **File**, then select **Quit**.
23. Click the **shell** icon (lower left area of the screen) to open a shell window.

24. To verify the `/etc/hosts` file, type **ping OMP**, press **Enter**, type **ping 5MP**, then press **Enter**.
27. Click **Save** and then select **X** to exit the editor.
28. **Type `passwd -x -1 crs`. This deactivates password aging on the VIP.**

**NOTE:** If you do not need to configure the remote SFTP function, skip step 30.

30. Type **chmod 666 /etc/hosts**, then press **Enter** to allow you to configure the VIP for remote audio SFTP transmission.
31. Set the CRS user password to match the CRS password on your MPs:  
Type **passwd crs**, then press **Enter**  
  
Set the CRS password to match the one used on your MPs.
32. Set the ROOT password to match the root password on your MPs:  
Type **passwd root**, then press **Enter**  
  
Set the ROOT password to match the one used on your MPs.
33. End the root login session by clicking the **KDE Gear** icon in the lower left area of the screen.
34. Click **Logout**. The *End Session* for root window appears.
35. Click **OK** and the *VIP Login* window displays.
36. From the VIP Login window, login as **crs**.  
Double-click the **Voice Improvement Processor Application** icon on the desktop. The *VIPv4.0 Setup Wizard Welcome* window displays.

**NOTE:** The Setup Wizard will only appear the first time the user logs in with the CRS user password. If the setup wizard does not appear this information may be edited/entered using the Systems Settings window available from the main VIP menu.

37. Click **Next**. The *VIPv4.0 Setup Wizard: Step 1* window displays.

**NOTE:** Parts of the VIP system contain licensed software. You must read and accept the Speechify licensing agreement. Since not all sites will use the .mp3 ftp capability, acquisition of this license is the responsibility of the site. Information is provided in the agreement about the acquisition of this optional and inexpensive license. ALL SITES must accept the Speechify licensing agreement to continue with the setup.

38. Click the **box** next to the statement: *I understand the above disclaimer.*, then click **Next**. The *VIPv4.0 Setup Wizard: Step 2* window displays. Click **Next**.
39. Type the **installer's name** in the *Name of installer* box.
40. Select your **site name** from the scrollable list of sites.

**NOTE:** Only the following operational sites are licensed to use the Spanish Male (Javier) VIP voice. The VIP software does not allow any other sites to use the Spanish VIP voice. The following are Spanish VIP sites:

LOX - Los Angeles, CA	MTR - Monterey, CA	CAE - Columbia, SC
STO - Sacramento, CA	SGX - San Diego, CA	EWX - Austin, TX
LWX - Washington, D.C.	BRO - Brownsville, TX	MFL - Miami, FL
PDT - Pendleton, OR	EPZ - El Paso, CA	SJU - San Juan, PR
CRP - Corpus Christi, TX	RAH - Raleigh, NC	VEF - Las Vegas, NV
ABQ - Albuquerque, NM		

Sites that are not in the above list CAN NOT use the VIP Spanish voice.

41. Click **Next** and the *VIPv4.0 Setup Wizard: Step 3* window displays.
42. Type the **IP addresses** for both the CRS **OMP** and **5MP**, then enter the CRS user "crs".
43. If the VIP audio SFTP function is to be used, the **LS1 IP** address must be entered. This step is optional.
44. Click **Next** and the *VIPv4.0 Setup Wizard: Step 4* window displays. This window allows the setting of the rate and volume of the Tom voice.
45. Use the slider bar to adjust the **default 0 rate** and **volume** of the Tom voice. To assist in setting these values, two buttons are available to play and stop playing text in the window.
46. Click **Next** and the *VIPv4.0 Setup Wizard: Step 5* window displays. This window allows the setting of the rate and volume of the Donna voice.
47. Use the slider bar to adjust the **default 0 rate** and **volume** of the Donna voice. To assist in setting these values, two buttons are available to play and stop playing text in the window.

**NOTE:** The *VIPv4.0 Setup Wizard: Step 6* window only displays for those sites licensed to use the Spanish voice. The remaining sites can skip setting Javier voice.

48. Click **Next** and the *VIPv4.0 Setup Wizard: Step 6* window displays. This window allows the setting of the rate and volume of the Javier voice.
49. Use the slider bar to adjust the **default 0 rate** and **volume** of the Javier voice. To assist in setting these values, two buttons are available to play and stop playing text in the window.
50. Click **Next** and the *VIPv4.0 Setup Wizard: Step 7* window displays. This window allows you to optionally configure the VIP for remote Audio SFTP transmission.

**NOTE:** Remote SFTP may be used to populate web servers by providing audio for selected messages processed by VIP. Audio uploads are either 16khz, 16-bit multimedia wav files, or mp3 files.

51. Type the **full path to the desired Upload Directory on the Idad** for .wav file or .mp3 files, then select **ON** for .wav and/or mp3 files to activate this function.
52. Click **Next** and the *VIPv4.0 Setup Wizard: Finished* window displays.
53. This completes the VIP setup, click **Finish**. The main *VIP* menu displays.
54. Click the **Konsole** icon (fourth from the lower left in the display).
55. Type `su - root`, then press Enter. When prompted, enter the root password, then press Enter.

**NOTE:** If you did **not** configure the remote SFTP function, skip step 56.

56. Type `chmod 644 /etc/hosts`, then press Enter to change the permissions back.

**Z-3 Procedure 3 - Installation of SSH Keys (assumes AWIPS is using SFTP)****RUN SET UP SCRIPTS ON VIP THEN 5MP THEN 0MP AS FOLLOWS:**

1. If not already logged in as crs on the **VIP**, login as **crs**.
2. Click the **Konsole** icon (fourth from the lower left in the display) to display a UNIX shell window.
3. Type **su -** then press **Enter**. When prompted, type in the appropriate root **password**, then press **Enter**.
4. Type **/var/vipupdates/script/sshinstallv.sh**, then press **Enter**. A number of text messages generate as the keys are created. Respond to these messages, and then resume with the next step.
5. Type **fixkeysv.sh**, then press **Enter**. This starts the fixkey script.

The following message displays:

```
Ready for Step #3 of fixkeysv.sh procedure running on system VIP.  
This procedure sets up ssh configuration/key files in CRS/VIP.  
If you did not want to run fixkeysv.sh use the CNTL-C key to exit.  
First - did you complete Step #2 with the floppy on the 5mp  
computer?  
At Step #3 place the keyfile diskette in the VIP floppy drive and  
press ENTER:
```

**NOTE:** When you see this display the VIP is set up to start the copying of the keys. Stop working within the VIP shell window and proceed with steps 6-13 to perform set up on 0MP and 5MP.

6. Press both **CTRL + CTRL** keys together to move the video display, mouse, and keyboard to reference 5MP.

**NOTE:** The operator will open two UNIX shells. One is used to run the fixkey script on 0MP. The other will remote shell to 5MP to run the fixkey script there.

7. On the CRS Main Menu, click the **Maintenance** menu, and then click **UNIX shell** to open a UNIX shell. Repeat this to open a second UNIX shell.
8. Position the two shells so one is in the top half of the window and the second is in the bottom half.
9. Click the bottom **UNIX shell** and enter the following commands at the prompt:  
**rsh 5mp** then press **Enter**. This will remote shell to 5MP.  
**su -** then press **Enter**. When prompted, enter the root **password**, then press **Enter**.
10. Type **/etc/config/fixkeys.sh**, then press **Enter**. This starts the fixkey script.

The following message displays:

```
Ready for Step #2 of fixkeys.sh procedure running on system 5MP.  
This procedure sets up ssh configuration/key files in CRS/VIP.  
If you did not want to run fixkeys.sh use the DELETE key to exit.  
First - did you complete Step #1 with the floppy on the Omp computer?  
At Step #2 place the keyfile diskette in the 5MP floppy drive and  
press ENTER:
```

**NOTE:** When you see this display, the 5MP is set up to start the copying of the keys. Stop work in 5mp shell and go to next step to do the setup for OMP.

11. Leave the 5MP UNIX shell by clicking anywhere in the OMP **UNIX Shell** window (upper). This selects the OMP window.
12. Type **su -** then press **Enter**. When prompted, type in the appropriate root **password**, then press **Enter**.
13. Type **/etc/config/fixkeys.sh**, then press **Enter**. This starts the fixkey script.

The following message displays:

```
Step #1 of fixkeys.sh procedure running on system OMP.  
This procedure sets up ssh configuration/key files in CRS/VIP. If you  
did not want to run fixkeys.sh use the DELETE key to exit.
```

**NOTE:** All three processors are now set up to start the copying of the keys. Any problems and/or operator errors in the following steps will cause the installation to be aborted.

## USE SCRIPTS TO CREATE AND DISTRIBUTE THE SSH KEYS ON 0MP, 5MP AND VIP AS FOLLOWS:

14. Insert a blank diskette (will be referred to as the **keyfile diskette**) in the **0MP** diskette drive and press **Enter** in the 0mp shell session to start the fixkey script. After receiving a warning pertaining to missing AWIPS keyfiles, press **Enter** to continue the fixkey process. The following message displays:

```
Step #1 in progress.
Deleting any awips.pub files not on the floppy already in /crs/.ssh.
WARNING: The AWIPS keyfile not found, You will have no AWIPS SFTP.
This is only proper if your AWIPS has not yet implemented ssh.
When AWIPS has ssh and a keyfile this procedure must be rerun.
At that time the files should be on the keyfile floppy as awips#.pub
- for example awips1.pub. Multiple files each with a single public
key are allowed - the floppy may have awips1.pub and awips2.pub.
Please see your CRS/VIP Software Installation Procedure for further
information.
Remaining CRS/VIP key installation without AWIPS will proceed if you
press ENTER. Otherwise use DELETE/CNTL-C to stop fixkeys procedure
all boxes and start again with a corrected floppy.
```

```
CRS fixkeys.sh 0MP Step #1 - awips pub file/s found, moved to
/crs/.ssh
Step #1 completed - now move the keyfile diskette to the
5mp computer floppy drive for Step #2.
When ready for Step #4 after 5mp and vip steps,
At Step #4 replace the keyfile diskette in the 0MP floppy drive and
Press ENTER:
```

15. Remove the **keyfile diskette** from the 0MP diskette drive and insert it into the **5MP** diskette drive.
16. Leave the 0MP UNIX shell by clicking the 5MP **UNIX** shell, and then press **Enter** to start the fixkey script on 5mp. After receiving a warning pertaining to missing AWIPS keyfiles, press **Enter** to continue the fixkey process. These messages display:

```
Step #2 in progress.
Deleting any awips.pub files not on the floppy already in /crs/.ssh.
WARNING: The AWIPS keyfile not found, You will have no AWIPS SFTP.
This is only proper if your AWIPS has not yet implemented ssh.
When AWIPS has ssh and a keyfile this procedure must be rerun.
At that time the files should be on the keyfile floppy as awips#.pub
- for example awips1.pub. Multiple files each with a single public
key are allowed - the floppy may have awips1.pub and awips2.pub.
Please see your CRS/VIP Software Installation Procedure for further
information.
```

Remaining CRS/VIP key installation without AWIPS will proceed if you press **ENTER**. Otherwise use **DELETE/CNTL-C** to stop fixkeys procedure all boxes and start again with a corrected floppy.

```
CRS fixkeys.sh 5MP Step #2 - awips pub file/s found, moved to
/crs/.ssh .
Step #2 completed - now move the keyfile diskette to the vip computer
floppy drive for Step #3.
When ready for Step #5 after the vip Step #3,
At Step #5 replace the keyfile diskette in the 5MP floppy drive and
press ENTER.
```

17. Remove the **keyfile** diskette from the 5MP diskette drive and insert it into the **VIP** diskette drive.
18. Press both **CTRL + CTRL** keys together to return the video display, mouse, and keyboard to the VIP, and then press **Enter** to perform the fixkey script on the VIP. The following message displays:

```
Step #3 in progress
CRS VIP   fixkeysv.sh - 0mp pub file found.
CRS VIP   fixkeysv.sh - 5mp pub file found.
CRS VIP   fixkeysv.sh - 0mphostrsa.pub file found.
CRS VIP   fixkeysv.sh - 5mphostrsa.pub file found.
Fixing    /home/crs/.ssh/authorized_keys for 0mp and 5mp.
Fixing    /etc/ssh/ssh_known_hosts with OMP 5MP host info.
0mp host rsa pub key:   /home/crs/.ssh/fprnt.VIP
5mp host rsa pub key:   /home/crs/.ssh/fprnt.VIP
Stopping sshd
Starting sshd
Step #3 complete.  VIP ssh key configuration done.
Remove floppy and take to 0mp for Step #4.
End fixkeysv.sh script Step III done, fingerprint report in
/home/crs/.ssh/fprnt.VIP.
```

19. Press both **CTRL + CTRL** keys together to return the video display, mouse, and keyboard to the MP.
20. Click the 0MP **UNIX** shell and move the **keyfile** diskette to the 0MP diskette drive.
21. Press **Enter** to perform the next part of the fixkey script. The following message displays:

```
Step #4 in progress.
CRS OMP fixkeys.sh - vip.pub file found.
CRS OMP fiskeys.sh - viphostrsa.pub file found.
Configuring AWIPS/CRS/VIP keydata on OMP.
Fixing    /crs/.ssh/authorized_keys for awips and vip.
Fixing    /usr/local/etc/ssh_known_hosts with vip host info.
OMP fingerprint report in /crs/.ssh/fprnt.OMP.
After Step #4 on 0mp move floppy to 5mp for Step #5
Step #4 complete.  OMP ssh key configuration done.
```

22. Click the 5MP **UNIX** shell, and move the **keyfile** diskette to the 5MP diskette drive.
23. Press **Enter** to perform the next part of the fixkey script. The following message displays:

```
Step #5 in progress.
CRS 5MP fixkeys.sh - vip.pub file found.
CRS 5MP fiskeys.sh - viphostrsa.pub file found.
Configuring AWIPS/CRS/VIP keydata on 5MP.
Fixing /crs/.ssh/authorized_keys for awips and vip.
Fixing /usr/local/etc/ssh_known_hosts with vip host info.
5MP fingerprint report in /crs/.ssh/fprnt.5MP.
Last step.
Step #5 complete. 5MP ssh key configuration done.
```

24. Verify that all the key files have been saved on the keyfile diskette by typing the following:

**mdir a:>>temp.txt** then press **Enter**

**cat temp.txt** then press **Enter**

The following files should display (with different date/time stamps):

```
Directory for A:/
0mp          pub      597    06-16-2004   9:04    0mp.pub
0MPHOS~1 PUB          218    06-16-2004   9:04    0mphostrsa.pub
stp1                0      06-16-2004   9:04    stp1
vip              pub      602    06-16-2004   9:14    vip.pub
5mp              pub      597    06-16-2004   9:14    5mp.pub
5MPHOS~1 PUB          218    06-16-2004   9:14    5mphostrsa.pub
stp2                0      06-16-2004   9:14    stp2
VIPHOS~1 PUB          223    06-16-2004   9:15    viphostrsa.pub
stp3                0      06-16-2004   9:15    stp3
fprnt      VIP          861    06-16-2004   9:15    fprnt.VIP
fprnt      OMP          667    06-16-2004   9:19    fprnt.OMP
stp4                0      06-16-2004   9:19    stp4
stp0                65     06-16-2004   9:20    stp0
fprnt      5MP          666    06-16-2004   9:20    fprnt.5MP
stp5                0      06-16-2004   9:20    stp5
```

25. Remove **keyfile** diskette, and **label, date,** and **initial** it. Store it in a locked, safe place according to the DOC password security policy.
26. Type the following commands to close the 5MP UNIX shell:
  - exit** then press **Enter**                      To exit root user.
  - exit** then press **Enter**                      To exit 5MP.
  - exit** then press **Enter**                      To close shell.
27. Click the 0MP **UNIX shell** and enter the following commands to close it:
  - exit** then press **Enter**                      To exit root user.

- exit** then press **Enter** To close shell.
28. Press both **CTRL + CTRL** keys together to return the video display, mouse, and keyboard to the VIP.
29. Type the following commands to close the VIP *UNIX shell*:  
**exit** then press **Enter** To exit root user.  
**exit** then press **Enter** To close shell.
30. After performing the above process, you should be able to ssh from OMP to the VIP and back and from 5MP and the VIP and back as the CRS user WITHOUT entering a password. Follow this procedure to test:
31. Open a Unix shell on 0mp and log in as the user CRS. Type:  
**ssh vip**  
It will ask you to confirm on the first connection – say yes  
It should put you on the VIP  
**ssh 0mp**  
It will ask you to confirm on the first connection – say yes  
It will put you on the 0mp  
**Exit** (it will take you back to VIP)  
**Exit** (it will take you back to 0mp (CRS))  
**Exit** (it will take you back to 0mp (Admin))  
**Exit** (will close the shell session)  
(number of “exit” instructions will vary based on initial user – just exit until shell closes)
32. Open a Unix shell on 5mp and log in as the user CRS. Type:  
**ssh VIP**  
It will ask you to confirm on the first connection – say yes  
It should put you on the VIP  
**ssh 5mp**  
It will ask you to confirm on the first connection – say yes  
It will put you on the 5mp  
**Exit** (it will take you back to VIP)  
**Exit** (it will take you back to 5mp (CRS))  
**Exit** (it will take you back to 5mp (Admin))  
**Exit** (will close the shell session)  
(number of “exit” instructions will vary based on initial user – just exit until shell closes)

**NOTE:**

To ensure proper SFTP file transfer from AWIPS to CRS, sites must have their AWIPS key information appended to the CRS MPs. NCF has scripts to accomplish this task.  
**Please call NCF to run the scripts that complete this task.**

## Z-4 Procedure 4 – Remote SFTP Set Up Completion

*NOTE:*

1. If you do not use the Remote SFTP capability, do not perform this section
2. Remote SFTP users must perform the following steps to define specific Message Types that will be used to route messages to the LDAD server. Only those Message Types defined in the Remote SFTP Product Filter will be passed to the LDAD Server.
3. All the VIP Remote FTP users must convert to a standard configuration supported by CRS B10/VIPB3.1. The VIP B3.1 requires sites to dump the VIP messages to the LDAD Server (LS1), and then either push them out to the external system or have the external system retrieve them from LS1. This section provides step-by-step instructions to accomplish this. However, it will be each site's responsibility to move the messages from LS1 to the external system.
4. It is assumed that the initial setup via the Remote SFTP Setup Wizard has already been done (included in Procedure 2 – Configuration of Local Settings page Z-6).

Users of the VIP Remote SFTP (formerly Remote SFTP) capability must copy the **vip.pub** key on the keyfile diskette from the previous steps to the LS1.

The operator should coordinate this step with the LS1 System Administrator.

1. If it doesn't already exist, create **crs** user account on the LS1.
2. Log on the LS1 as **crs**.
3. Verify the **/home.crs/.ssh** directory exists with protection of **700**.
4. If the directory does not exist, create one with the following instructions:  
**mkdir /home/crs/.ssh**  
**chmod 700 /home/crs/.ssh**
5. Verify the **authorized\_keys** file exists on **/home/crs/.ssh**.
6. If the **authorized\_keys** file exists, remove it with the following instructions:  
**rm /home/crs/.ssh/authorized\_keys**
7. Create new **authorized\_keys** file by copying the **vip.pub** file from the keyfile diskette to **/home/crs/.ssh/authorized\_keys** on LS1.
8. Create an entry for the LDAD server in the VIP routing table by doing the following as user ROOT on the VIP:  
Click the **KDE Gear**  
Click **System**  
Click **Network Configuration**  
Select **Active etho device**

Click **Edit**

Click **route** tab and click on **add**

Fill out the **Address**, **Subnet Mask**, and **Gateway IP Address** boxes. The **Address** is the LS1 IP Address. The **Subnet Mask** is 255.255.255.255. The **Gateway IP Address** is the site's Gateway IP Address.

Click on **OK** twice, **Apply**, and **Close**.

- Restart the network by doing the following at the VIP:
  - Click on the Konsole icon (fourth from the lower left in the display).
  - Type **su -** and when prompted, enter the root password.
  - Type **service network restart**. The system will return several network interface messages.
  - Type **exit** to exit the root user.
  - Type **bye** then type **exit** to close the shell.

**Logons and transfers into VIP from outside of CRS are not authorized to be added to the VIP computer. Likewise, outside generated public keys are NOT to be added to the VIP computer.**

### Setting Up the Remote SFTP Product Filter

- On the *VIP Main* menu, click **File** to display the menu and select **Remote Product Filter**. The *VIP Product Filter Dialog* displays. Users must add all Message Types (*AFOS Product Identifier found in the CRS Weather Message header*) needed for routing to the LDAD server.
- Enter the **Message Type** into the *Message Name* text box. Then click **Add** to move the Message Type to the *Remote SFTP Message List*. Repeat this step for all Message Types desired.
- When all Message Types which should be sent to the ldad have been added, click **OK** to save the list, and then click **Exit** to exit the dialog.
- Verify the host key (on LDAD)

Create a Linux shell window as user CRS and type **sftp xxx.xxx.xxx.xxx** where **xxx.xxx.xxx.xxx** is the LS1 IP address.

#### Example:

**sftp 165.92.20.121** where 165.92.20.121 is the IP address for the NWS Headquarter Alpha CRS system

The operator is asked "Are you sure you want to continue connections (Yes/no)".

The operator should answer **yes**. This adds the LS1 address to the `known_hosts` file on the VIP.

Type **bye** and then press **Enter**

Type **sftp gw-cccc** and then press **Enter** where *gw-cccc* is the IP alias address of LS1.

**Example:**

`sftp gw-KRNL` where *gw-KRNL* is the IP alias for LS1 at Roanoke, Virginia.

The operator is asked,

"Are you sure you want to continue connections (Yes/no)."

The operator should answer **yes**. This adds the LS1 alias address to the `known_hosts` file on the VIP.

Type **bye**, press **Enter**, and then type **exit** to close the *Linux shell*.

## Z-5 Procedure 5 - Backup Pre-Processor Substitution Dictionaries

1. Place a blank formatted diskette in the VIP drive.
2. From the main VIP menu, click **Pre-Processor**. The Pre-Processor “*Substitution Dictionary*” Manager displays.
3. Click **Options**, then click **English Male Substitution Dictionary <Tom>**.
4. Click **Options**, then click **Save Current Substitution Dictionary To Floppy Disk**. A dialog box displays asking: *Save the “Tom Substitution” dictionary to floppy disk?*
5. Click **Yes**. A successful transfer of the dictionary causes a dialog box to display the following message:

File Transfer Successful! File saved on floppy as: “tom-sub.dic.”

6. Click **OK**.
7. Remove the **tom-sub.dic** diskette from the drive, label it as **tom-sub.dic**, and keep it in a safe place. Use it to restore the English Male Substitution Dictionary

*NOTE:* 1. The operator has no choice in the name of the backup file; it will always be *tom-sub.dic*.

8. Place a **blank formatted diskette** in the drive.
9. Click **Options**, then click **English Female Substitution Dictionary <Donna>**.
10. Click **Options**, then click **Save Current Substitution Dictionary To Floppy Disk**. A dialog box displays asking: *Save the “Donna Substitution” dictionary to floppy disk?*
11. Click **Yes**. A successful transfer of the dictionary causes a dialog box to display the following message:  
File Transfer Successful! File saved on floppy as: “mara-sub.dic.”
12. Click **OK**.
13. Remove the **mara-sub.dic** diskette from the drive, label it as **mara-sub.dic**, and keep it in a safe place. Use it to restore the English Female Substitution Dictionary.

*NOTE:* 2. The operator has no choice in the name of the backup file; it will always be *mara-sub.dic*.

14. If the site does not have a Spanish license, skip to step 21.

15. Place a blank formatted diskette in the drive.
16. Click **Options**, then click **Spanish Male Substitution Dictionary <Javier>**.
17. Click **Options**, then click **Save Current Substitution Dictionary To Floppy Disk**. A dialog box displays asking:  
Save the "Javier Substitution" dictionary to floppy disk?
18. Click **Yes**. A successful transfer of the dictionary causes a dialog box to display the following message:  
File Transfer Successful! File saved on floppy as: "javier-sub.dic."
19. Click **OK**.
20. Remove the **javier-sub.dic** diskette from the drive, label it as **javier-sub.dic**, and keep it in a safe place. Use it to restore the Spanish Male Substitution Dictionary.

*NOTE:* 3. The operator has no choice in the name of the backup file; it will always be *javier-sub.dic*.

21. Click the black **x** to exit from the Pre-Processor "Substitution Dictionary" Manager window.

**Z-6 Procedure 6 - Backup Local Dictionaries**

1. Place a blank formatted diskette in the drive.
2. From the main VIP menu, click **Dict Manager**. This displays the *Local Dictionary Manager*.
3. Click **Options**, then click **English Male Dictionary <Tom>**.
4. Click **Options**, then click **Save Current Dictionary To Floppy Disk**. A dialog box displays asking:  
Save the "Tom" dictionary to floppy disk?
5. Click **Yes**. A successful transfer of the dictionary causes a dialog box to display the following message:  
File Transfer Successful! File saved on floppy as: "tom-root.dic."
6. Click **OK**.
7. Remove the **tom-root.dic** diskette from the drive, label it as **tom-root.dic**, and keep it in a safe place. Use it to restore the English Male Local Dictionary.

<p><i>NOTE:</i> 1. The operator has no choice in the name of the backup file; it will always be <i>tom-root.dic</i>.</p>
--

- 7.
8. Place a blank formatted diskette in the drive.
9. Click **Options**, then click **English Female Dictionary <Donna>**.
10. Click **Options**, then click **Save Current Dictionary To Floppy Disk**. A dialog box displays asking:  
Save the "Donna" dictionary to floppy disk?
11. Click **Yes**. A successful transfer of the dictionary causes a dialog box to display the following message:  
File Transfer Successful! File saved on floppy as: "mara-root.dic."
12. Click **OK**.
13. Remove the **mara-root.dic** diskette from the drive, label it as **mara-root.dic**, and keep it in a safe place. Use it to restore the English Female Local Dictionary.

*NOTE:* 2. The operator has no choice in the name of the backup file; it will always be *mara-root.dic*.

- 13.
14. If the site does not have a Spanish license, skip to step 21.
15. Place a **blank formatted diskette** in the drive.
16. Click **Options**, then click **Spanish Male Dictionary <Javier>**.
17. Click **Options**, then click **Save Current Dictionary To Floppy Disk**. A dialog box displays asking:  
  
Save the "Javier" dictionary to floppy disk?
18. Click **Yes**. A successful transfer of the dictionary causes a dialog box to display the following message:  
  
File Transfer Successful! File saved on floppy as: "javier-root.dic."
19. Click **OK**.
20. Remove the **javier-root.dic** diskette from the drive, label it as **javier-root.dic**, and keep it in a safe place. Use it to restore the Spanish Male Local Dictionary.

*NOTE:* 3. The operator has no choice in the name of the backup file; it will always be *javier-root.dic*.

21. Click the black **x** to exit from the Pre-Processor "Dictionary" Manager window.

**Z-7 Procedure 7 - Recover Pre-Processor Substitution Dictionaries**

1. Place the diskette labeled **tom-sub.dic** in the drive.
2. From the main *VIP* menu, click **Pre-Processor**. The *Pre-Processor "Substitution Dictionary" Manager* displays.
3. Click **Options**, then click **English Male Substitution Dictionary <Tom>**.
4. Click **Options**, then click **Restore Current Substitution Dictionary From Floppy Disk**. A dialog box displays asking:  
Retrieve the "Tom Substitution" dictionary from floppy disk?
5. Click **Yes**. A successful transfer of the dictionary causes a dialog box to display the following message:  
File upload complete for "tom-sub.dic."
6. Click **OK**.
7. Remove the **tom-sub.dic** diskette from the drive and keep it in a safe place. Use it to restore the English Male Substitution Dictionary.
8. Place the diskette labeled **mara-sub.dic** in the drive.
9. Click **Options**, then click **English Female Substitution Dictionary <Donna>**.
10. Click **Options**, then click **Restore Current Substitution Dictionary From Floppy Disk**. A dialog box displays asking:  
Retrieve the "Donna Substitution" dictionary from floppy disk?
11. Click **Yes**. A successful transfer of the dictionary causes a dialog box to display the following message:  
File upload complete for "mara-sub.dic."
12. Click **OK**.
13. Remove the **mara-sub.dic** diskette from the drive and keep it in a safe place. Use it to restore the English Female Substitution Dictionary.
14. If the site does not have a Spanish license, skip to step 21.
15. Place the diskette labeled **javier-sub.dic** in the drive.
16. Click **Options**, then click **Spanish Male Substitution Dictionary <Javier>**.
17. Click **Options**, then click **Restore Current Substitution Dictionary From Floppy Disk**. A dialog box displays asking:  
Retrieve the "Javier Substitution" dictionary from floppy disk?
18. Click **Yes**. A successful transfer of the dictionary causes a dialog box to display the following message:

File upload complete for "javier-sub.dic."

19. Click **OK**.
20. Remove the **javier-sub.dic** diskette from the drive and keep it in a safe place. Use it to restore the *Spanish Male Substitution Dictionary*.
21. Click the black **x** to exit from the Pre-Processor "Substitution Dictionary" Manager window.

## Z-8 Procedure 8 - Recover Local Dictionaries

1. Place the diskette labeled **tom-root.dic** in the drive.
2. From the main *VIP* menu, click **Dict Manager**. This displays the *Local Dictionary Manager*.
3. Click **Options**, then click **English Male Dictionary <Tom>**.
4. Click **Options**, then click **Restore Current Dictionary From Floppy Disk**. A dialog box displays asking:  

```
Retrieve the "Tom" dictionary from floppy disk?
```
5. Click **Yes**. A successful transfer of the dictionary causes a dialog box to display the following message:  

```
File upload complete for "tom-root.dic."
```
6. Click **OK**.
7. Remove the **tom-root.dic** diskette from the drive and keep it in a safe place. Use it to restore the English Male Local Dictionary.
8. Place the diskette labeled **mara-root.dic** in the drive.
9. Click **Options**, then click **English Female Dictionary <Donna>**.
10. Click **Options**, then click **Restore Current Dictionary From Floppy Disk**. A dialog box displays asking:  

```
Retrieve the "Donna" dictionary from floppy disk?
```
11. Click **Yes**. A successful transfer of the dictionary causes a dialog box to display the following message:  

```
File upload complete for "mara-root.dic."
```
12. Click **OK**.
13. Remove the **mara-root.dic** diskette from the drive and keep it in a safe place. Use it to restore the English Female Local Dictionary.
14. If you do not have a Spanish license, skip to step 21.
15. Place the diskette labeled **javier-root.dic** in the drive.
16. Click **Options**, then click **Spanish Male Dictionary <Javier>**.
17. Click **Options**, then click **Restore Current Dictionary From Floppy Disk**. A dialog box displays asking: *Retrieve the "Javier" dictionary from floppy disk?*

18. Click **Yes**. A successful transfer of the dictionary causes a dialog box to display the following message:

File upload complete for "javier-root.dic."

19. Click **OK**.
20. Remove the **javier-sub.dic** diskette from the drive and keep it in a safe place. Use it to restore the *Spanish Male Local Dictionary*.
21. Click the black **x** to exit from the *Local Dictionary Manager* window.

## OLD VIP RECOVERY PROCEDURE – ONLY NEEDED IN THE RARE INSTANCE THAT A PRE-CONFIGURED VIP DISK IS NOT AVAILABLE FROM THE NRC.

Recover Operating System, VIP Application, Download and Install Security Updates and Establish Site Specific Configuration by using original VIP Restore CD disk image from 2004.

*NOTE:*

1. This procedure will take approximately 5 hours and 30 minutes to complete.
2. The hard drive image includes both the OS and the VIP Build 4.0 application. To restore the hard drive image, use the *VIP OS Restore the new VIP OS Restore* CDs numbered 1 through 6. The old *VIP OS Restore* diskettes numbered 1 through 3 are no longer necessary. *VIP OS Restore* diskette #4 will remain as the bootable diskette used if the VIP is unable to boot from the hard drive. Upon successful restoration of the hard drive image, store the new *VIP OS Restore* CDs in a safe place. Dispose of the old *VIP OS Restore* CDs and the old *VIP OS Restore* diskettes #1 through #3. Continue to store *VIP OS Restore* diskette #4 in a safe place.
3. Steps 1 through 22 restore the hard drive image.
4. The OS security patches will be downloaded from the VIP "yum" server.

1. Press the **Power** button on the VIP computer to power-up the computer.
2. When the *F2 = Setup* message displays in the upper right corner of the screen, press the **F2** function key to display the computer basic input/output settings (BIOS).
3. Insert the **VIP OS Restore #1** CD into the CD drive, then close it. Make sure no disk is in the A: drive.
4. Use the down arrow key to move the blue selection bar to the **Boot Sequence** and press **Enter** to display the boot sequence.
5. Ensure the *IDE CD-ROM Device* is enabled (indicated by a check mark to the left of the device name) and listed before the *Hard-Disk-Drive C:*. If both these conditions are satisfied, press **Esc** twice and immediately skip to perform step Select to prevent a prompt time-out (5-6 seconds). Otherwise, continue with the following steps.
6. Use the down arrow key to move the blue selection bar to the **IDE CD-ROM Device**.
7. If the CD device is enabled (check mark), skip to step If the . Otherwise, change disabled (no check mark) to **enabled** (check mark) by pressing the space bar once.
8. If the *IDE CD-ROM Device* is listed before the *Hard-Disk-Drive C:*, skip to step Press . Otherwise, move the *IDE CD-ROM Device* to before the *Hard-Disk-Drive C:* by using the **minus** key.

9. Press **Esc** twice to display a dialogue box asking if the changes should be saved.
10. Select **Save Changes and Exit**, then press **Enter**.
11. The VIP starts booting from the CD. A black text screen appears. Type the following at the prompt:

```
boot: nuke noresize
```

12. Press **Enter**. A black text screen appears with the following:

```
Please specify an alternate tape device or hit [ENTER] to boot from  
CD/floppies.
```

13. Press **Enter** to boot off the CD. The *Mondo Rescue* application starts displaying a blue text screen with the message at the top *WELCOME TO MONDO RESCUE*. A *Caution* box displays with the warning:

```
Be advised. I am about to ERASE your hard disks.
```

It contains a countdown timer bar.

14. Allow the countdown timer to expire and wipe clean and restore your existing VIP hard drive. The restore process proceeds through several screens of formatting and restoring data. The first CD takes about 15 minutes to complete. During this time, the screen may become blank and black. To safely restore the screen, press the **right arrow** key.

The *Alert* prompt box displays the text phrase:

```
Please insert CD #2 and press Enter.
```

15. If the CD drive does not automatically open, press **Eject** to open the CD drive, then replace CD #1 with the one titled **VIP OS Restore #2 CD**.

16. Push the tray button, then press **Enter**. After the second CD loads, the *Alert* prompt box displays the text phrase:

```
Please insert CD #3 and press Enter.
```

17. Repeat steps 15 and 16 for CDs 4 through 6 with each CD taking about 10 minutes to complete. CD #6 takes about 3 minutes. While the process is running, the screen displays messages, *Restoring from archives* and *Reassembling large files*, each with a progress bar.

At the conclusion of the procedure, the following finished prompt in white text appears and the blue screen is pushed up by the black screen:

```
To reboot press CTRL-ALT-DEL together
```

18. Remove the last CD, close the CD drawer, then simultaneously press **CTRL + ALT + DEL**.

*NOTE:* 5. Sometimes the VIP will fail after the disk image has been restored. When the VIP starts booting, a “kernel panic” occurs. If this happens, a simple and fast procedure exists to correct the problem.

19. The Red Hat Linux 7.3 Operating System begins to boot. If the VIP stops booting with a “kernel panic” error, use the procedure in steps 20 through 24 to recover. Otherwise skip to step 25.
20. Place the **VIP OS Restore #1 CD** in the VIP CD tray, then power-down and power-up the VIP.

*NOTE:* 6. Be prepared to **quickly** enter the next command at the *boot:* prompt.

21. Type **expert**, then press **Enter**. The rescue image begins booting and will stop with the following message:

```
Please specify an alternate tape device,  
or hit <Enter> to boot from the CD/floppies
```

22. Press **Enter** again. The CD finishes booting. The VIP displays a black text screen with the following message:

```
Please wait  
sh: can't access tty; job control turned off  
#
```

23. At the pound sign prompt, type **post-nuke**, then press **Enter**. The procedure takes about 2 seconds to run. When completed, the script reports that the post-nuke finished after displaying the partition table information.
24. Press **Eject** to open the CD drive, remove the CD, then press **CTRL + ALT + DEL** together to reboot the VIP.

*NOTE:* 7. If the Welcome to Kudzu screen appears, be prepared to quickly press the space bar.

25. The Red Hat Linux 7.3 Operating System will begin to boot. Prior to the login screen, a blue screen with a Welcome to Kudzu message may display. This is a timed screen, so do not delay. Immediately press the **space bar** to proceed. Both, one, or neither of the following two scenarios (described in steps a and b) may occur.
  - a. The *Hardware Removed* screen displays with the text: The following video adapter has been removed.... If this screen is not displayed, skip to step The Red Hat Linux 7.3 Operating System will begin to boot. Prior to the login screen,

- a blue screen with the Hardware Removed/Changed screen displays with the text . Otherwise, your response will remove the hardware: Using the left and right arrow keys, select the **Remove Configuration** button and press **Enter**. A *Hardware Added* screen may display for the nVidia video adapter. If this screen is not displayed, proceed to step 26. Otherwise, the response will configure the video card: Using the left and right arrow keys, select **Configure**, then press **Enter**.
- b. The Hardware Removed/Changed screen displays with the text *The mouse has changed*. If this screen is not displayed, proceed to step 26. Otherwise, the response will keep the current configuration: Using the left and right arrow keys, select **Keep current configuration**, then press **Enter**.
26. If the CRS user password on the disk image has expired, the system displays the following:
- ```
You are required to change your password immediately (password
aged).
Changing password for crs.
(Current) UNIX password: nws2004, then press Enter.
New UNIX password: Takes4ver, then press Enter.
Retype new UNIX password: Takes4ver, then press Enter.
```
27. The system continues booting. If a GUI Linux login screen appears, skip to step 30. If a GUI Linux login screen does not appear and instead a text login prompt appears, continue with steps 28 and 29.
28. At the login prompt, type **root**, enter the root password, **nws2004** when prompted, then press **Enter**.
29. Type **/sbin/shutdown -r now**, then press **Enter** to shutdown the VIP and reboot. The system continues booting, and a GUI Linux login screen appears.

*NOTE:* 8. Steps At the VIP login screen, type through Click configure the VIP network address.

30. At the VIP login screen, type **root**, then press **Enter**.
31. Type root password, **nws2004**, then press **Enter**.
32. Click the **KDE Gear** icon in the lower left corner of the screen.
33. Click **System**.
34. Click **Network Configuration**.
35. In the *Network Configurator* window, click the **Active eth0 device**.
36. Click **Edit**.

37. Change the **IP address** and **default Gateway** value to match the VIP entry in the OMP `/etc/hosts` file. For example, the entry at the WSH test bed site is 165.92.20.121. Ensure the Netmask is **255.255.0.0**.
38. Click **OK**.
39. Click **Apply**.
40. Click **Deactivate**.
41. Click **Activate**.
42. Click **Close**.

*NOTE:* 9. Steps Click the through Create a root user password by following the rules described in Note Observe the following rules when defining good passwords:.. configure the site-specific IP addresses in the VIP hosts file and change VIP passwords.

43. Click the **KDE Gear** icon in the lower left area of the screen.
44. Click **Editors**.
45. Click **KEDit**.
46. Click **File**.
47. Click **Open**.
48. In the *Location* box, type `/etc/hosts`
49. Click **OK**. If there is a duplicate set of IP addresses, delete the **second set**.
50. Change the **entries** to match those for **VIP**, **OMP** and **5MP** in the OMP `/etc/hosts` file. For example, the OMP entry at the NWSHQ test bed site is 165.92.20.111.
51. Click **File**, then select **Save**.
52. Click **File**, then select **Quit**.
53. Click the **shell** icon (lower left area of the screen) to open a shell window.
54. To verify the `/etc/hosts` file, type **ping OMP**, press **Enter**, type **ping 5MP**, then press **Enter**.
55. Type `/usr/bin/kedit /etc/login.defs` to display the contents of the `/etc/login.defs` in the kedit editor.
56. Change the `PASS_MAX_DAYS` to **99999**.
57. Click **Save** and then select **X** to exit the editor.
58. Type **passwd -x -1 crs**. This deactivates password aging on the VIP.

59. To verify the `/etc/hosts` file, type **ping 0MP**, press **Enter**; type **ping 5MP**, and then press **Enter**

*NOTE:* 10. If you do not need to configure the remote SFTP function, skip step Type .

59.

60. Type **chmod 666 /etc/hosts**, then press **Enter** to allow you to configure the VIP for remote audio SFTP transmission.

*NOTE:* 11. Observe the following rules when defining good passwords:

1. Password must have at least eight non-blank characters.
2. Password must contain at least one lower case alphabetic character.
3. Password must contain at least one upper case alphabetic character.
4. Password must contain at least one number.
5. Six of the characters may occur only once in the password.
6. Password must be changed at least every 90 days.
7. Password must not be used in the last 8 password changes.
8. Password cannot contain default passwords or words in dictionary.
9. NO special characters are allowed.

61. Create a CRS user password by following the rules described in Note Observe the following rules when defining good passwords:
  - a. Type **su - crs**, press **Enter**, then when prompted, enter the CRS password either, **nws2004** or **Takes4ver**, depending on whether the disk image password in step If the CRS user password on the disk image has expired, the system displays the following: expired. If the command hangs and no prompt is returned, open a shell terminal by clicking the Konsole icon (fourth from the lower left in the display) and entering the commands in steps Type and Type . Otherwise skip to step Type.
  - b. Type **killall stty -s 9**, then press **Enter** to allow the command in step a to complete successfully.
  - c. Type **exit**, then press **Enter** to close the shell terminal.
  - d. Type **passwd**, then press **Enter** and follow the instructions to enter the same CRS user password used for OMP.
  - e. Type **exit**, then press **Enter** to exit the CRS user.
62. Create a root user password by following the rules described in Note Observe the following rules when defining good passwords:. Type **passwd root** and follow the prompts to enter the same root password used for OMP.
63. End the root login session by clicking the **KDE Gear** icon in the lower left area of the screen.
64. Click **Logout**. The *End Session* for root window appears.
65. Click **OK** and the *VIP Login* window displays.

**NOTE:**

12. Steps From the VIP Login window, login as through Use the slider bar to adjust the use the VIP Setup Wizard to enter installation and site information, CRS network information, voice settings, and if necessary, audio SFTP configuration.

66. From the VIP Login window, login as **crs** with the password set in step Create a CRS user password by following the rules described in Note Observe the following rules when defining good passwords:.. Double-click the **Voice Improvement Processor Application** icon on the desktop. The *VIPv4.0 Setup Wizard Welcome* window displays.

**NOTE:**

13. The Setup Wizard will only appear the first time the user logs in with the CRS user password. Once the information in the Setup Wizard is entered, double-clicking on the VIP Application icon, will result in the display of the main VIP menu. This information may be edited using the Systems Settings window available from the main VIP menu.

67. Click **Next**. The *VIPv4.0 Setup Wizard: Step 1* window displays.

**NOTE:**

14. Parts of the VIP system contain licensed software. You must read and accept the Speechify licensing agreement. Since not all sites will use the .mp3 ftp capability, acquisition of this license is the responsibility of the site. Information is provided in the agreement about the acquisition of this optional and inexpensive license. ALL SITES must accept the Speechify licensing agreement to continue with the setup.

68. Click the **box** next to the statement: *I understand the above disclaimer.*, then click **Next**. The *VIPv4.0 Setup Wizard: Step 2* window displays. Click **Next**.

69. Type the **installer's name** in the *Name of installer* box.

70. Select your **site name** from the scrollable list of sites.

**NOTE:**

Only the following operational sites are licensed to use the Spanish Male (Javier) VIP voice. The VIP software does not allow any other sites to use the Spanish VIP voice. The following are Spanish VIP sites:

|                          |                       |                     |
|--------------------------|-----------------------|---------------------|
| LOX - Los Angeles, CA    | MTR - Monterey, CA    | CAE - Columbia, SC  |
| STO - Sacramento, CA     | SGX - San Diego, CA   | EWX - Austin, TX    |
| LWX - Washington, D.C.   | BRO - Brownsville, TX | MFL - Miami, FL     |
| PDT - Pendleton, OR      | EPZ - El Paso, CA     | SJU - San Juan, PR  |
| CRP - Corpus Christi, TX | RAH - Raleigh, NC     | VEF - Las Vegas, NV |
| ABQ - Albuquerque, NM    |                       |                     |

Sites that are not in the above list CAN NOT use the VIP Spanish voice.

71. Click **Next** and the *VIPv4.0 Setup Wizard: Step 3* window displays.

72. Type the **IP addresses** for both the CRS **OMP** and **5MP**, then enter the CRS user "crs" password **TEST**. With the change to SFTP file transfers between the Master MP, this password is no longer used and is just a dummy entry. In fact, it is removed entirely when the VIP application software updates are downloaded and installed in Procedure 3.

73. If the VIP audio SFTP function is to be used, the **LS1 IP** address must be entered. This step is optional.

74. Click **Next** and the *VIPv4.0 Setup Wizard: Step 4* window displays. This window allows the setting of the rate and volume of the Tom voice.

75. Use the slider bar to adjust the **default 0 rate** and **volume** of the Tom voice. To assist in setting these values, two buttons are available to play and stop playing text in the window.

76. Click **Next** and the *VIPv4.0 Setup Wizard: Step 5* window displays. This window allows the setting of the rate and volume of the Donna voice.
77. Use the slider bar to adjust the **default 0 rate** and **volume** of the Donna voice. To assist in setting these values, two buttons are available to play and stop playing text in the window.

*NOTE:* 16. The *VIPv4.0 Setup Wizard: Step 6* window only displays for those Spanish sites listed in Note Only 15 of 122 operational sites are licensed to use the Spanish Male (Javier) VIP vo. The remaining sites can skip steps Click and Use the slider bar to adjust the .

78. Click **Next** and the *VIPv4.0 Setup Wizard: Step 6* window displays. This window allows the setting of the rate and volume of the Javier voice.
79. Use the slider bar to adjust the **default 0 rate** and **volume** of the Javier voice. To assist in setting these values, two buttons are available to play and stop playing text in the window.
80. Click **Next** and the *VIPv4.0 Setup Wizard: Step 7* window displays. This window allows you to optionally configure the VIP for remote Audio SFTP transmission.

*NOTE:* 17. Remote SFTP may be used to populate web servers by providing audio for every message processed by VIP. Audio uploads are either 16khz, 16-bit multimedia wav files, or mp3 files. This is not a standard CRS function; it is strongly recommended that to use this feature, contact the regional AWIPS focal point for approval. Otherwise, skip step Type the .

81. Type the **LS1 IP Address** and **Upload Directory** information for .wav file or .mp3 file, then select **ON** to activate this function. The user and password are dummy entries and will be removed when the VIP application software updates are downloaded and installed in Procedure 3.
82. Click **Next** and the *VIPv4.0 Setup Wizard: Finished* window displays.
83. This completes the VIP setup, click **Finish**. The main *VIP* menu displays.
84. Click the **Konsole** icon (fourth from the lower left in the display).
85. Type **su - root**, then press **Enter**. When prompted, enter the root **password**, then press **Enter**.

*NOTE:* 18. If you did **not** configure the remote SFTP function, skip step Type .

86. Type **chmod 644 /etc/hosts**, then press **Enter** to change the permissions back.

87. Type the following to install yum and other needed utilities:

```
rpm -Uvh http://165.92.25.154:85/crs/yum-1.0.3-7.NWS.noarch.rpm
```

and then press **Enter**. The above command returns the following:

```
Retrieving http://165.92.25.154:85/crs/yum-1.0.3-7.NWS.noarch.rpm
Preparing ##### [100%]
1:yum ##### [100%]
```

*NOTE:* 19. The following instruction will install the security updates. This will take about 2 hours to complete.

88. Copy the file `/etc/yum.conf` to `/etc/yum.conf.bak` using the command,  
**`cp /etc/yum.conf /etc/yum.conf.bak`**
89. Use VI or another editor to modify the contents of the `/etc/yum.conf` file as follows:  
 Modify the beginning of each *baseurl* address entry to match the following:  
 “[http://165.92.25.154:85/Build12/crs/...](http://165.92.25.154:85/Build12/crs/)”

Example:

**[base]**

**name=Red Hat Linux \$releasever base**

**baseurl=http://165.92.25.154:85/Build12/crs/redhat/\$releasever/os/\$basearch**

**gpgcheck=0**

90. Type the following: **`yum -y update`** and then press **Enter**.
91. Copy the file `/etc/yum.conf.bak` to `/etc/yum.conf` using the command, **`cp /etc/yum.conf.bak /etc/yum.conf`**

*NOTE:*

20. The following steps will load and install the VIP application updates from the yum server.

21. This procedure will take about 5 minutes to complete.

- 91.
92. Download and install the VIP application updates by entering the following command:
- `rpm -ivh --force  
 http://165.92.25.154:85/crs/redhat/7.3/vip/i386/vip-4.0-1.i386.rpm`**
- and then press **Enter**
93. Verify the correct installation of the updates by checking the output from the rpm command executed in step 92:

```
Retrieving http://165.92.25.154:85/crs/redhat/7.3/vip/i386/vip-4.0-1.i386.rpm
Preparing... #####
[100%]
   1:vip #####
[100%]
Updating VIP.env file.....
Previous version is VIPv3.2
VIP Updated Version is VIPv4.0 - Thu 26 Apr 2007 01:38:27 PM GMT
```

```
Updating version information
/crs/vip/logs/VIPversion/TMPversion.log saved to
/crs/vip/logs/VIPversion/TMPversion.log.VIPv3.2
Previous Version Info: VIPv3.2|WAM|Mon Feb  5 16:38:52 GMT 2007|NHDA
Updated Version Info: VIPv4.0|WAM|Thu Apr 26 13:38:27 GMT 2007|NHDA
/crs/vip/logs/VIPversion/version.log saved to
/crs/vip/logs/VIPversion/version.log.VIPv3.2
Encrypting to: /crs/vip/logs/VIPversion/version.log
```

```
version.log successfully encrypted
Done...
```

```
VIP Updated Version VIPv4.0 has been installed - Thu 26 Apr 2007 01:38:27
PM GMT
```

```
Updating /etc/login.defs file.....
Adjusting aging data for user crs.
passwd: Success
Adjusting aging data for user root.
passwd: Success
Stopping sshd: [ OK ]
Starting sshd: [ OK ]
```

- NOTE:*
22. The following steps will load and install the OS security patches from the yum server.
  23. These steps will take about 30 minutes to complete.

94. Type **init 3**, and then press **Enter**. This ends the KDE desktop, and speeds up the installation. The VIP Login prompt displays. If the Login prompt does not display within a minute or two, press **Enter** to make it display.
95. Login as **root** and then type the root **password**.
96. Run the following command to implement the VIP Security Update requirement of removing unnecessary packages from the VIP system:
97. `/usr/local/SecurityUpdates/Q12007/security_updates_Q107.sh`

*NOTE:* 24. Next, the operator will remove all the rpm files to allow for sufficient disk space to store VIP wave files.

99. Type **yum clean all** and then press **Enter**. The following information returns as a result of this command:

```
Gathering package information from servers
Getting headers from: Red Hat Linux 7.3 base
Getting headers from: Fedora Legacy utilities for Red Hat Linux 7.3
Getting headers from: Red Hat Linux 7.3 updates
Getting headers from: NOAA VIP Application 7.3 vip
Finding updated packages
Downloading needed headers
Cleaning packages and old headers
```

100. Type the following command to close the *UNIX shell* window and display the *VIP Login* window:

**init 6** and then press **Enter**

The *VIP Login* window displays.

101. Login as **crs**, type the crs user **password**, and press **Enter**. The *Voice Improvement Processor (VIP) Application* icon displays in the upper left.

Double-click the VIP icon to start loading the VIP application. A window with the title, *Please Wait, Initializing VIP*, displays and tracks the progress of loading the VIP application

## Z-1.2 Procedure 2 - Installation of SSH Keys (assumes AWIPS is using SFTP)

### Explanation:

This procedure requires a blank DOS formatted 1.44 mb diskette is needed. This diskette is used to transfer keyfiles between processors in this procedure and is referred to in this document as the keyfile diskette.

When the VIP is restarted following the installation of the VIP 4.0 Build, authentication key pairs (public and private) are installed. These keys will be used for sftp transactions between the MPs and VIP.

The fixkey script is used in the following steps to copy keys to and from the keyfile diskette and the MPs and VIP. The following steps instruct the installer to open UNIX shells on the VIP, 5MP, and 0MP respectively and start the fixkey script on all three processors. After each of the three processors have been set up to start copying the keys, the fixkey script instructs the user to wait to make sure that the following five steps are performed in the proper order:

1. The diskette is placed in the 0MP diskette drive. If AWIPS public key files are present, they are copied to 0MP. If they are not present, there can be as many as nine. If they are not present, the script displays a warning message to that effect. The 0MP host and CRS user keys are copied to the diskette.
2. Step 1 is repeated for 5MP.
3. The diskette is placed in the VIP diskette drive. The 0MP and 5MP host and CRS user keys are copied to the VIP. The VIP host and CRS user keys are copied to the diskette. The VIP fingerprint report is copied to the diskette.
4. The diskette is placed in the 0MP diskette drive. The VIP host and CRS user keys are copied to 0MP. The 0MP fingerprint report is copied to the diskette.
5. Step 4 is repeated for 5MP.
4. Once the setup for the keyfiles is complete, the scripts can be started in the order described in Note 3.
5. The fingerprint report files are retained as a record of the authentication key generation. The keyfile diskette should be labeled, dated, and initialed. It should be stored in a secure manner in a locked container that is consistent with the DOC password hard copy storage requirements.

## Z-1.2

### Z-1.2.1 Installation of SSH Keys If AWIPS Has the SFTP Capability Installed

1. If not already logged in as crs on the VIP, login as **crs**.

2. Click the **Konsole** icon (fourth from the lower left in the display) to display a UNIX shell window.
3. Type **su -** then press **Enter**. When prompted, type in the appropriate root *password*, then press **Enter**.
4. Type **/var/vipupdates/script/sshinstallv.sh**, then press **Enter**. A number of text messages generate as the keys are created. Respond to these messages, then resume with the next step.
5. Type **fixkeysv.sh**, then press **Enter**. This starts the fixkey script.

The following message displays:

```
Ready for Step #3 of fixkeysv.sh procedure running on system VIP.  
This procedure sets up ssh configuration/key files in CRS/VIP.  
If you did not want to run fixkeysv.sh use the CNTL-C key to exit.  
First - did you complete Step #2 with the floppy on the 5mp computer?  
At Step #3 place the keyfile diskette in the VIP floppy drive and press  
ENTER:
```

- NOTE:**
3. The VIP is now setup to start the copying of the keys. **Make sure you do not press the Enter key to start the process until this has been done for OMP and 5MP (script steps #1 and #2 respectively).**

6. Press both **CTRL + CTRL** keys together to move the video display, mouse, and keyboard to the 5MP.

*NOTE:* 4. The operator will open two UNIX shells. One is used to run the fixkey script on 0MP. The other one will remote shell to 5MP to run the fixkey script there.

7. On the CRS Main Menu, click the **Maintenance** menu, then click **UNIX shell** to open a UNIX shell. Repeat this to open a second UNIX shell.
8. Position the two shells so one is in the top half of the window and the second is in the bottom half.
9. Click the bottom **UNIX shell** and enter the following commands at the prompt:  
**rsh 5mp** then press **Enter**. This will remote shell into 5MP.  
**su -** then press **Enter**. When prompted, enter the root *password*, then press **Enter**.
10. Type **/etc/config/fixkeys.sh**, then press **Enter**. This starts the fixkey script.

The following message displays:

```
Ready for Step #2 of fixkeys.sh procedure running on system 5MP.  
This procedure sets up ssh configuration/key files in CRS/VIP.  
If you did not want to run fixkeys.sh use the DELETE key to exit.  
First - did you complete Step #1 with the floppy on the 0mp computer?  
At Step #2 place the keyfile diskette in the 5MP floppy drive and press  
ENTER:
```

*NOTE:* 5. The 5MP is now set up to start the copying of the keys. Make sure you do not press the **Enter** key to start the process until this has been done for 0MP (script step #1).

11. Leave the 5MP UNIX shell by clicking anywhere in the OMP **UNIX Shell** window (upper). This selects the OMP window.
12. Type **su -** then press **Enter**. When prompted, type in the appropriate root *password*, then press **Enter**.
13. Type **/etc/config/fixkeys.sh**, then press **Enter**. This starts the fixkey script.

The following message displays:

```
Step #1 of fixkeys.sh procedure running on system OMP.  
This procedure sets up ssh configuration/key files in CRS/VIP. If you did  
not want to run fixkeys.sh use the DELETE key to exit.
```

If you have ANVPS keyfiles they should already be on your disc format keyfile disks, and then when you are ready for Step #1, in Step #1 place the keyfile disks in the OMP floppy drive and press ENTER

*NOTE:*

6. All three processors are now set up to start the copying of the keys. The previous warnings to not press Enter allow for an orderly and proper installation. Any problems and/or operator errors in the following steps will cause the installation to be aborted.

14. Insert the **keyfile** diskette in the **OMP** diskette drive and press **Enter** to perform the fixkey script, Section Z-1.2, Note 3, step #1. The following message displays:

```
Step #1 in progress.
Deleting any awips.pub files not on the floppy already in /crs/.ssh. CRS
fixkeys.sh OMP Step #1 - awips pub file/s found, moved to /crs/.ssh .
Step #1 completed - now move the keyfile diskette to the
5mp computer floppy drive for Step #2.
When ready for Step #4 after 5mp and vip steps,
At Step #4 replace the keyfile diskette in the OMP floppy drive and Press
ENTER:
```

15. Remove the **keyfile** diskette from the OMP diskette drive and insert it into the 5MP diskette drive.
16. Leave the OMP UNIX shell by clicking the 5MP **UNIX** shell, then press **Enter** to perform the fixkey script, Section Z-1.2, Note 3, step #2. These messages display:

```
Step #2 in progress.
Deleting any awips.pub files not on the floppy already in
/crs/.ssh. CRS fixkeys.sh 5MP Step #2 - awips pub file/s found, moved to
/crs/.ssh .
Step #2 completed - now move the keyfile diskette to the vip computer
floppy drive for Step #3.
When ready for Step #5 after the vip Step #3,
At Step #5 replace the keyfile diskette in the 5MP floppy drive and press
ENTER.
```

17. Remove the **keyfile** diskette from the 5MP diskette drive and insert it into the VIP diskette drive.
18. Press both **CTRL + CTRL** keys together to return the video display, mouse, and keyboard to the VIP, then press **Enter** to perform the fixkey script, Section Z-1.2, Note 3, step #3. The following message displays:

```
Step #3 in progress
CRS VIP fixkeysv.sh - 0mp pub file found.
CRS VIP fixkeysv.sh - 5mp pub file found.
CRS VIP fixkeysv.sh - 0mphostrsa.pub file found.
CRS VIP fixkeysv.sh - 5mphostrsa.pub file found.
Fixing /home/crs/.ssh/authorized_keys for 0mp and 5mp.
Fixing /etc/ssh/ssh_known_hosts with OMP 5MP host info.
0mp host rsa pub key: /home/crs/.ssh/fprnt.VIP
5mp host rsa pub key: /home/crs/.ssh/fprnt.VIP
Stopping sshd
Starting sshd
Step #3 complete. VIP ssh key configuration done.
Remove floppy and take to 0mp for Step #4.
End fixkeysv.sh script Step III done, fingerprint report in
/home/crs/.ssh/fprnt.VIP.
```

19. Press both **CTRL + CTRL** keys together to return the video display, mouse, and keyboard to the MP.

20. Click the 0MP **UNIX** shell and move the **keyfile** diskette to the 0MP diskette drive.
21. Press **Enter** to perform the fixkey script, Section Z-1.2, Note 3, step #4. The following message displays:

```
Step #4 in progress.
CRS 0MP fixkeys.sh - vip.pub file found.
CRS 0MP fiskeys.sh - viphostrsa.pub file found.
Configuring AWIPS/CRS/VIP keydata on 0MP.
Fixing /crs/.ssh/authorized_keys for awips and vip.
Fixing /usr/local/etc/ssh_known_hosts with vip host info.
0MP fingerprint report in /crs/.ssh/fprnt.0MP.
After Step #4 on 0mp move floppy to 5mp for Step #5
Step #4 complete. 0MP ssh key configuration done.
```

22. Click the 5MP **UNIX** shell, and move the **keyfile** diskette to the 5MP diskette drive.
23. Press **Enter** to perform the fixkey script, Section Z-1.2, Note 3, step #5. The following message displays:

```
Step #5 in progress.
CRS 5MP fixkeys.sh - vip.pub file found.
CRS 5MP fiskeys.sh - viphostrsa.pub file found.
Configuring AWIPS/CRS/VIP keydata on 5MP.
Fixing /crs/.ssh/authorized_keys for awips and vip.
Fixing /usr/local/etc/ssh_known_hosts with vip host info.
5MP fingerprint report in /crs/.ssh/fprnt.5MP.
Last step.
Step #5 complete. 5MP ssh key configuration done.
```

The error message will only occur if no AWIPS key file is found on the diskette.

24. Verify that all the key files have been saved on the keyfile diskette by typing the following:

**mkdir a: temp.txt** then press **Enter**

**cat temp.txt** then press **Enter**

The following files should display (with different date/time stamps):

```
Directory for A:/
0mp          pub      597   06-16-2004   9:04   0mp.pub
0MPHOS~1 PUB      218   06-16-2004   9:04   0mphostrsa.pub
stp1
vip          pub      602   06-16-2004   9:14   vip.pub
5mp          pub      597   06-16-2004   9:14   5mp.pub
5MPHOS~1 PUB      218   06-16-2004   9:14   5mphostrsa.pub
stp2
VIPHOS~1 PUB      223   06-16-2004   9:15   viphostrsa.pub
stp3
fprnt       VIP      861   06-16-2004   9:15   fprnt.VIP
fprnt       OMP      667   06-16-2004   9:19   fprnt.OMP
stp4
```

```

stp0          65    06-16-2004  9:20  stp0
fprnt      5MP    666    06-16-2004  9:20  fprnt.5MP
stp5          0     06-16-2004  9:20  stp5

```

In addition to the files listed above, there will be 0MP and 5MP AWIPS keyfiles.

25. Remove **keyfile** diskette, and **label**, **date**, and **initial** it. Store it in a locked, safe place according to the DOC password security policy.
26. Type the following commands to close the 5MP UNIX shell:
  - exit** then press **Enter**                      To exit root user.
  - exit** then press **Enter**                      To exit 5MP.
  - exit** then press **Enter**                      To close shell.
27. Click the 0MP **UNIX shell** and enter the following commands to close it:
  - exit** then press **Enter**                      To exit root user.
  - exit** then press **Enter**                      To close shell.
28. Press both **CTRL + CTRL** keys together to return the video display, mouse, and keyboard to the VIP.
29. Type the following commands to close the VIP *UNIX shell*:
  - exit** then press **Enter**                      To exit root user.
  - exit** then press **Enter**                      To close shell.

*NOTE:*

7. To ensure proper SFTP file transfer from AWIPS to CRS, sites must have their AWIPS System Administrator create the appropriate `known_hosts` file on AWIPS. Generally, this is accomplished by performing a manual SFTP command of a dummy file from AWIPS to both 0MP and 5MP. The appropriate AWIPS documentation should be consulted before doing this.

### Z-1.2.3 VIP Remote SFTP

*NOTE:*

**\*\*\* FOR USERS OF the VIP REMOTE SFTP ONLY \*\*\***

All the VIP Remote FTP users must convert to a standard configuration supported by CRS B10/VIPB4.0. The VIP B4.0 requires sites to dump the VIP messages to the LDAD Server (LS1), and then either push them out to the external system or have the external system retrieve them from LS1. This section provides step-by-step instructions to accomplish this. However, it will be each site's responsibility to move the messages from LS1 to the external system.

### Z-1.2.3

Users of the VIP Remote SFTP (formerly Remote SFTP) capability must copy the **vip.pub** key on the keyfile diskette from the previous steps to the LS1.

The operator should coordinate this step with the LS1 System Administrator.

1. Create **crs** user account on the LS1.
2. Logon to the LS1 as **crs**, then press **Enter**.
3. Verify the `/home.crs/.ssh` directory exists with protection of `700`.
4. If the directory does not exist, create one with the following instructions:  
**mkdir /home/crs/.ssh** then press **Enter**  
**chmod 700 /home/crs/.ssh** then press **Enter**
5. Verify the `authorized_keys` file exists on `/home/crs/.ssh`.
6. If the `authorized_keys` file exists, remove it with the following instructions:  
**rm /home/crs/.ssh/authorized\_keys**, then press **Enter**
7. Create new `authorized_keys` file by copying the `vip.pub` file from the keyfile diskette to `/home/crs/.ssh/authorized_keys` on LS1. No specific instructions for doing this are included; each site may determine the most appropriate manner to accomplish this task.
8. Create an entry for the LDAD server in the VIP routing table by doing the following at the VIP:
  - a. Click the **KDE Gear**.
  - b. Click **System**.
  - c. Click **Network Configuration**.
  - d. Select **Active etho device**.

- e. Click **Edit**.
  - f. Click **route** tab and click on **add**.
  - g. Fill out the *Address*, *Subnet Mask*, and *Gateway IP Address* boxes. The *Address* is the **LS1 IP Address**. The *Subnet Mask* is **255.255.255.255**. The *Gateway IP Address* is the site's **Gateway IP Address**.
  - h. Click **OK** twice, **Apply**, and **Close**.
9. Restart the network by doing the following at the VIP:
- a. Click the **Konsole** icon (fourth from the lower left in the display).
  - b. Type **su -** then press **Enter**. When prompted, enter the root *password*, then press **Enter**.
  - c. Type **service network restart**, then press **Enter**. The system will return several network interface messages.
  - d. Type **exit**, then press **Enter** to exit the root user.
10. Additionally, the operator must approve the remote fingerprint of the target system by doing the following at the VIP:
- a. Type **sftp xxx.xxx.xxx.xxx** where *xxx.xxx.xxx.xxx* is the LS1 IP address.  
The operator is asked:  
RSA Key fingerprint is xxxxxxxx  
Are you sure you want to continue connecting (yes/no)?  
The operator should answer **yes**. This will add the LS1 host to the *known\_hosts* file on the VIP.
  - b. Type **quit**.
  - c. Type **exit**, then press **Enter** to close the shell.
- Logons and transfers into VIP from outside of CRS are not authorized to be added to the VIP computer. Likewise, outside generated public keys are **NOT** to be added to the VIP computer.

### Z-1.3 Procedure 3 – Loading and Installing the VIP Wrapper Updates

*NOTE:*

1. The following steps will load and install the VIP application updates from the yum server.
2. This procedure will take about 5 minutes to complete.

## Z-1.3

1. On the VIP, click the Konsole icon (fourth from the lower left in the display) to display a UNIX shell window. Enter the following commands at the prompt:
2. Type **su –** and then press **Enter**.
3. When prompted, type the appropriate root password, and then press **Enter**.
4. Download and install the VIP application updates by entering the following command:

```
rpm -ivh --force
http://165.92.25.154:85/crs/redhat/7.3/vip/i386/vip-4.0-
1.i386.rpm
```

and then press **Enter**

5. Verify the correct installation of the updates by checking the output from the rpm command executed in step 4:

```
Retrieving http://165.92.25.154:85/crs/redhat/7.3/vip/i386/vip-4.0-
1.i386.rpm
Preparing... #####
[100%]
  a. 1:vip #####
     [100%]
Updating VIP.env file.....
Previous version is VIPv3.2
VIP Updated Version is VIPv4.0 - Thu 26 Apr 2007 01:38:27 PM GMT
Updating version information
/crs/vip/logs/VIPversion/TMPversion.log saved to
/crs/vip/logs/VIPversion/TMPversion.log.VIPv3.2
Previous Version Info: VIPv3.2|WAM|Mon Feb  5 16:38:52 GMT 2007|NHDA
Updated Version Info: VIPv4.0|WAM|Thu Apr 26 13:38:27 GMT 2007|NHDA
/crs/vip/logs/VIPversion/version.log saved to
/crs/vip/logs/VIPversion/version.log.VIPv3.2
Encrypting to: /crs/vip/logs/VIPversion/version.log
version.log successfully encrypted
Done...
VIP Updated Version VIPv4.0 has been installed - Thu 26 Apr 2007 01:38:27
PM GMT
```

```
Updating /etc/login.defs file.....
Adjusting aging data for user crs.
passwd: Success
Adjusting aging data for user root.
passwd: Success
Stopping sshd: [ OK ]
Starting sshd: [ OK ]
```

**NOTE:** Steps 6 - 11 verify you can Secure shell (SSH) to 0MP/5MP without password prompt.

6. Type **exit** and then press **Enter** to switch back to crs user.
7. Verify the remote server 0MP does not ask for a password by entering the following command:  
**ssh crs@0MP cat /crs/.ssh/authorized\_keys**  
  
and then press **Enter**.
8. If a password is required, you must re-run Fixkeys to re-install the SSH authorization keys following NWR CRS System Administration Manual, Appendix Z, "VIP Backup and Recovery Procedures," Procedure 2 - Installation of SSH keys, Section 1.2.2.
9. Verify the remote server 5MP does not ask for a password by entering the following command:  
**ssh crs@5MP cat /crs/.ssh/authorized\_keys**  
  
and then press **Enter**.
10. If a password is required, you must re-run Fixkeys to re-install the SSH authorization keys as described in step 9 above.
11. Type **exit** and then press **Enter** to close the shell.

## Z-1.4 Procedure 4 – Setting Up the Remote SFTP Product Filter

**NOTE:**

1. If you do not use the Remote SFTP capability, do not perform this section.
2. Remote SFTP users must perform the following steps to define specific Message Types that will be used to route messages to the LDAD server. Only those Message Types defined in the Remote SFTP Product Filter will be passed to the LDAD Server.

1. On the *VIP Main* menu, click **File** to display the menu and select **Remote Product Filter**. The *VIP Product Filter Dialog* displays. Users must add all Message Types (*AFOS Product Identifier found in the CRS Weather Message header*) needed for routing to the LDAD server.
2. Enter the **Message Type** into the *Message Name* text box. Then click **Add** to move the Message Type to the *Remote SFTP Message List*. Repeat this step for all Message Types desired.
3. When all Message Types have been added, click **OK** to save the list, and then click **Exit** to exit the dialog.
4. Verify the host key (on LDAD)
5. Create a Linux shell window and type **sftp xxx.xxx.xxx.xxx** where **xxx.xxx.xxx.xxx** is the LS1 IP address.

**Example:**

sftp 165.92.20.121 where 165.92.20.121 is the IP address for the NWS Headquarter Alpha CRS system

6. The operator is asked "Are you sure you want to continue connections (Yes/no)".
7. The operator should answer **yes**. This adds the LS1 address to the `known_hosts` file on the VIP.
8. Type **bye** and then press **Enter**
9. Type **sftp gw-cccc** and then press **Enter** where *gw-cccc* is the IP alias address of LS1.

**Example:**

sftp gw-KRNK where gw-KRNK is the IP alias for LS1 at Roanoke, Virginia.

10. The operator is asked,  
"Are you sure you want to continue connections (Yes/no)."
11. The operator should answer **yes**. This adds the LS1 alias address to the `known_hosts` file on the VIP.
12. Type **bye**, press **Enter**, and then type **exit** to close the *Linux shell*.