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1.) Software Installation Requirements

All software referenced in this section is available in the Broadsword Installers Kit for Broadsword PMO installation personnel. Information is provided for non-Broadsword PMO installation personnel where this software may be obtained. The Broadsword PMO makes every effort to ensure the validity of these sources, however, due to the rapidly changing nature of this information we cannot guarantee software is always available through these sources.

Caution: While downloading and "burning" any freeware to a CD or any other media, you **MUST** ensure your system does **NOT CHANGE** any of the original **FILENAMES** as they appeared when downloaded. You may need to **ENABLE LONG FILENAME** and **ISO COMPATIBILITY**.

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A.) Solaris 2.6

The following software requirements are specific to Broadsword systems that will be installed on the Solaris 2.6 operating system.

- **Operating Environment Installation CD, September 1999**
This CD is for used in conjunction with Solaris 2.6 CD, Software: 5/98 when installing on an Ultra 80 or systems with a processor speed over 450 MHz. As with every rule there are exceptions, check with your systems administrator or hardware personnel for additional information. You may need to purchase this item. Check with your local Sun Representative.
- **Solaris 2.6 Software: 5/98**
This is typically provided with the purchase of a Sun system. You may need to purchase this item. Check with your local Sun Representative.
- **Solaris 2.6 Recommended and Y2K patches**
These patches are required if loading Solaris 2.6 CD, Software: 5/98 and can be downloaded from Sun at:
<http://www.sun.com/bigadmin/patches/indexLnk.html>
Once there click on the Public Patch Page link. Select Solaris 2.6 from both Recommended Solaris Patch Clusters and Y2K Patch Clusters.
- **CSE-SS Version 1.4.2.1 for Solaris 2.6/2.7**
Recommended if loading Solaris 2.6 and can be requested by sending an email to CSE@rl.af.mil
- **Broadsword 3.1 Full Installation for Solaris 2.6**
Required if loading Solaris 2.6 CD, Software: 5/98. This is provided by the Broadsword PMO. If you require a copy, you can call commercial 315-330-4347 or DSN 587-4347.

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B.) Solaris 7

The following software requirements are specific to Broadsword systems that will be installed on the Solaris 7.0 operating system.

- **Solaris 7 Software: 11/99**
This is typically provided with the purchase of a Sun system. You may need to purchase this item. Check with your local Sun Rep.
- **Solaris 7 Recommended patches**
These patches are required if loading Solaris 7 CD, Software: 11/99 and can be downloaded from Sun at:
<http://www.sun.com/bigadmin/patches/indexLnk.html>
Once there click on the Public Patch Page link. Select Solaris 7 from both Recommended Solaris Patch Clusters.
- **CSE-SS Version 1.4.2.1 for Solaris 2.6/2.7**
Can be requested by sending an email to CSE@rl.af.mil
OR
- **AFDI Version 1.1 for Solaris 7**
Recommended if loading Solaris 7 and can be requested by sending an email to afdi@rl.af.mil
- **Broadsword 3.1 Full Installation for Solaris 7**
Required if loading Solaris 7 CD, Software: 11/99. This is provided by the Broadsword PMO. If you require a copy, you can call commercial 315-330-4347 or DSN 587-4347.

C.) Common to the Solaris 2.6, and Solaris 7 Operating Systems

- **Raptor GFX 2.1**
This is only required for selected servers, primarily, but not limited to Enterprise 250's and 450's. Check manufacturer's guide for details. This is typically provided with the purchase of a Sun system. You may need to purchase this item. Check with your local Sun Rep.
- **Netscape 4.76 or higher**
This can be downloaded from Netscape on the Internet at:
http://home.netscape.com/download/archive/client_archive47x.html
Once there, select the desired version and language for Solaris 2.5.1 and then click on the download link next to it. This document used *Solaris 2.5.1 – Complete Install (128-bit encryption)*
If you prefer to download if from the SIPRNet go to:
<http://help.ismc.sgov.gov/cgi-bin/software/index.pl?dir=Browser&path=pub/Browsers>
Scroll down to Netscape Communicator 4.76 for Solaris 2.5.1 and click on the Download button. Follow the instructions listed on the page.
- **Sybase Adaptive Server 11.5.1 or 11.9.2**
Required for Broadsword. Site is responsible for purchasing and licensing this software
- **Broadsword Computer Based Training (CBT) v3.1**
This is provided by the installer. If you require a copy, you can call commercial 315-330-4347 or DSN 587-4347.
- **Broadsword Documentation v3.1**
This is provided by the installer. If you require a copy, you can call commercial 315-330-4347 or DSN 587-4347.
- **Miscellaneous Software**
Miscellaneous Utilities are freeware and can be downloaded off the Internet. This software is optional and is not needed for installation of Broadsword. This may include but not limited to the following applications:

Note: The location of these applications are subject to change and is not under the control of the Broadsword Program Office.

- **Adobe 4.05**
This can be downloaded from Adobe on the Internet at:
<http://www.adobe.com/products/acrobat/alternate.html#50enu>
Scroll down to Acrobat 4.05 Reader and click on *Acrobat Reader 4.05 – English for Sun Solaris – Sparc (.tar.gz) 6.4MB*
If you prefer to download if from the SIPRNet go to:
<http://help.ismc.sgov.gov/cgi-bin/software/index.pl?dir=Solaris&path=pub/Solaris>
Scroll down to Adobe Acrobat Reader Sun Solaris SPARC Freeware Version 4.05 – (20010926) and click on the Download button. Follow the instructions listed on the page.
- **GZIP 1.3**
This can be downloaded from the Internet at:
<http://sunfreeware.com>
In the top right window frame click on the *SPARC/Solaris 6 or 7* link. In the bottom right window frame scroll down and click on *gzip-1.3*. In the center window frame click on the *gzip-1.3.tar.gz*.
If you prefer to download it from the SIPRNet go to:
<http://help.ismc.sgov.gov/cgi-bin/software/index.pl?dir=UnixSource&path=pub/UnixSource>

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Scroll down to Gzip 1.2.4 and click on the Download button. Follow the instructions listed on the page.

- **LSOF 4.45**

This can be downloaded from the Internet at:

<http://sunfreeware.com>

In the top right window frame click on the *SPARC/Solaris 6* or *7* link. In the bottom right window frame scroll down and click on *lsof-4.45-32-bit*. In the center window frame click on the *lsof-4.45.tar.gz*.

If you prefer to download it from SIPRNet go to:

<http://www.66mi.army.smil.mil/pub/software/unix/>

Scroll down and click on the hyperlink for *lsof-4.33.tar.gz*

- **MPEG Play 2.0**

This can be downloaded from the Internet at:

<http://sunfreeware.com>

In the top right window frame click on the *SPARC/Solaris 6* or *7* link. In the bottom right window frame scroll down and click on *mpeg_play-2.0*. In the center window frame click on the *mpeg_play-2.0.tar.gz*.

If you prefer to download it from SIPRNet go to:

<http://help.ismc.sgov.gov/cgi-bin/software/index.pl?dir=Applications&path=pub/UnixSource/Applications>

Scroll down to MPEG-2.3 player for Unix and click on the Download button. Follow the instructions listed on the page.

- **TCSH 6.08.00**

This can be downloaded from the Internet at:

<http://sunfreeware.com>

In the top right window frame click on the *SPARC/Solaris 6* or *7* link. In the bottom right window frame scroll down and click on *tcsh-6.08.00*. In the center window frame click on the *tcsh-6.08.tar.gz*.

If you prefer to download it from SIPRNet go to:

<http://www.66mi.army.smil.mil/pub/software/unix/>

Scroll down and click on the hyperlink for *tcsh-6.08.tar.gz*.

- **TOP 3.5**

This can be downloaded from the Internet at:

<http://sunfreeware.com>

In the top right window frame click on the *SPARC/Solaris 6* or *7* link. In the bottom right window frame scroll down and click on *top-3.5beta12*. In the center window frame click on the *top-3.5beta12.tar.gz*.

If you prefer to download it from SIPRNet go to:

<http://help.ismc.sgov.gov/cgi-bin/software/index.pl?dir=Applications&path=pub/UnixSource/Applications>

Scroll down to Top CPU Usage Display version3.5 Beta9 and click on the Download button. Follow the instructions listed on the page.

- **TRACEROUTE 1.4**

This can be downloaded from the Internet at:

<http://sunfreeware.com>

In the top right window frame click on the *SPARC/Solaris 6* or *7* link. In the bottom right window frame scroll down and click on *traceroute-1.4a5*. In the center window frame click on the *traceroute-1.4a5.tar.gz*.

If you prefer to download it from SIPRNet go to:

<http://www.66mi.army.smil.mil/pub/software/unix/>

Scroll down and click on the hyperlink for *traceroute-1.17.tar.gz*.

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- **UNZIP 5.40**

This can be downloaded from the Internet at:

<http://sunfreeware.com>

In the top right window frame click on the *SPARC/Solaris 6* or *7* link. In the bottom right window frame scroll down and click on *unzip-5.40*. In the center window frame click on the *unzip-5.40.tar.gz*.

Not currently available on the SIPRNet.

- **Xanim 2.70.6.3**

This can be downloaded from the Internet at:

<http://sunfreeware.com>

In the top right window frame click on the *SPARC/Solaris 6* or *7* link. In the bottom right window frame scroll down and click on *xanim-2.70.6.3*. In the center window frame click on the *xanim-2.70.3.tar.gz*.

If you prefer to download it from SIPRNet go to:

<http://help.ismc.sgov.gov/cgi-bin/software/index.pl?dir=Applications&path=pub/UnixSource/Applications>

Scroll down to Xanim 2.70.7.0 and click on Download button. Follow the instructions listed on the page.

- **XV 3.10**

This can be downloaded from the Internet at:

<http://sunfreeware.com>

In the top right window frame click on the *SPARC/Solaris 6* or *7* link. In the bottom right window frame scroll down and click on *xv-3.10a*. In the center window frame click on the *xv-3.10a.tar.gz*.

If you prefer to download it from SIPRNet go to:

<http://help.ismc.sgov.gov/cgi-bin/software/index.pl?dir=Applications&path=pub/UnixSource/Applications>

Scroll down to XV 3.10a Source and click on Download button. Follow the instructions listed on the page.

2.) Performing a Full System Backup to Tape

Required Media: **1 – 4 Blank Tapes**

Required Hardware: **Appropriate format tape drive**

Regular backups of the UNIX file system is one of the most neglected, but more critical system administration functions. File system backups can restore data and configurations lost due to hardware or software failures, reinstallation or upgrade failures, and even the occasion accidental deletions.

The preferred method of performing a backup is to use the **ufsdump** command that is part of the Solaris Operating System. The nature of this command allows the system administrator to perform complete or incremental backups of the entire file system or specific portions of the file system. All initial backups of a system should include the entire file system. This is referred to as a "**Level 0 Dump**"

B.) Checking for Active Users

Begin by logging into the server with a system administrator level account (cisso, cadmin, personal site approved account, etc.). Once in launch a web browser and navigate to the Broadsword login page pertaining to the system you are about to backup. When the Broadsword Login page appears, login as bswduser or any other account with Broadsword Administration access. Once you have successfully logged in click on the **Administration** menu and select **System Status**. From the System Status submenu select **Current Users**. This will bring up the **Current Users** status page. Ensure there are no users on the system prior to bringing the server down into single user mode. Doing so while a user is still on-line may result in the loss of time critical data for that user. Once you have determined there are no users on-line, click on the **Session** menu and select **Exit**.

C.) Terminating the Broadsword and Sybase Processes

Open a command shell window. To do this right click anywhere on the Desktop. This will bring up the **Desktop Menu**. From the Desktop Menu, click on the **Tools** submenu and select **Terminal**. When the terminal window appears assume root by typing:

```
su - <cr>
```

When prompted, enter the appropriate password for the root user. When the root prompt appears stop the Broadsword and Sybase processes by typing:

```
/opt/bswd3.1/scripts/stopservice <cr>
```

NOTE: This step assumes you have loaded Broadsword in the default location. If Broadsword is loaded in a different location, the "stopservice" script will be found in the scripts directory under the bswd3.1 directory.

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Assuming that the system has not been installed with a shared SYBASE dataserer (e.g., co-located with an IPL datasource), follow these steps to shut down the system:

When prompted, "**Default BSWD Shutdown? (Y.N) [Y]**", press the **[Return]** key to accept the default of yes. Next you will be prompted, "**Stop these portions of BSWD? (Y/N) [Y]**", press the **[Return]** key to accepted the default of yes. At this time all Broadsword and Sybase processes will be halted.

If the system has been installed with a shared SYBASE dataserer, (e.g., co-located on the same machine as an IPL datasource), follow these steps to shut down the system:

When prompted, "**Default BSWD Shutdown? (Y.N) [Y]**", press the 'N' key. Next you will be prompted, "**Stop the Sybase dataserer? (Y/N) [Y]**", press the 'N' key. Another prompt will be displayed, "**Stop the Broadsword background processes? (Y/N) [Y]**", press the **[Return]** key to accept the default of yes. A final prompt will be displayed - "**Stop these portions of BSWD? (Y/N) [Y]**", press the **[Return]** key to accepted the default of yes. At this time all Broadsword processes will be halted. Continue with the other system's recommended shutdown sequence.

D.) Booting into single user mode

The next task is to bring the system down to single user mode. This is done to protect the data from being changed or corrupted by users while the system administrator is trying to backup the data. To bring the system down to the single user mode type:

```
init 0 <cr>
```

This will bring the system down to the OpenBoot prompt or **OK** prompt. To boot into single user mode from the OpenBoot prompt, type:

```
boot -s <cr>
```

At this time the system will begin booting into single user mode. If you have enabled the Firmware Password during the installation of AFDI or any other application / procedure that required you to do so, then you will be prompted for this password next. Just prior to entering single user mode you will be prompted for a Maintenance or root password. You will enter the root password at this time. Once the root prompt appears verify you are in single user mode by typing:

```
who -r <cr>
```

which should indicate a "run-level" of "S" or "s".

E.) Cleaning the File System prior to backup

Before cleaning up the file system you will need to mount all file systems that will be backed up. To do this type:

```
mountall -F ufs <cr>
```

The next step is to find, identify and remove any core files on the system. To do this type:

```
find / -type f -name core -print -exec file {} \; -exec rm {} \;  
<cr>
```

To ensure the file system is clean run a file system check. To do this type:

```
fsck <cr>
```

NOTE: If prompted to remove or delete answer no. If prompted to fix, adjust or salvage answer yes.

F.) Performing a Level 0 Dump

Prepare and label your first tape as "Broadsword UFS DUMP". Make sure the tape is write enabled, then insert it into the drive.

NOTE: The number of tapes required depends on the amount of information on the server. You will need to adjust these instructions accordingly to fit your sites needs.

Next, verify the tape is useable. To do this type:

```
mt -f /dev/rmt 0 stat <cr>
```

NOTE:

- The remaining portions of these instructions assume your Broadsword Server is loaded with the recommended partition configurations found in Appendix D of the Broadsword 3.1 Installation and Maintenance Guide. If your site had a different configuration, ensure you modify these instructions according to your site's configuration prior to continuing.
- Unless otherwise noted, assume any large '0' to be a zero, as compared to a capital 'o'.

Begin backing up your file partitions starting with the root partition. To do this type:

```
ufsdump 0ubf 96 /dev/rmt/0n / <cr>
```

When the prompt returns, backup the first sybase devices partition. To do this type:

```
ufsdump 0ubf 96 /dev/rmt/0n /syb_devices_0 <cr>
```

When the prompt returns, backup the /usr partition. To do this type:

```
ufsdump 0ubf 96 /dev/rmt/0n /usr <cr>
```

When the prompt returns, backup the first security partition. To do this type:

```
ufsdump 0ubf 96 /dev/rmt/0n /security1 <cr>
```

When the prompt returns, backup the /opt partition. To do this type:

```
ufsdump 0ubf 96 /dev/rmt/0n /opt <cr>
```

At this point we will assume the tape is nearly full. That means its time to switch tapes. First you will need to rewind the tape. To do this type:

```
mt -f /dev/rmt/0 rew <cr>
```

Advance the tape to the end in order to read the number of records on the tape in the next step. To do this type:

```
mt -f /dev/rmt/0n eom <cr>
```

Verify the number of records in status match the number of partitions backed up to this point. To do this type:

```
mt -f /dev/rmt/0n stat <cr>
```

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NOTE: To this point, if you have not deviated from these instructions you should have a total of 5 records on the tape.

Once you have verified the number of records, rewind and eject the tape. To do this type:

```
mt -f /dev/rmt/0n rewoff <cr>
```

NOTE: The tape will automatically eject when it is finished rewinding.

Take the tape from the tape drive and write protect it. Verify the tape has an appropriate security classification sticker on it, then enter today's date in pencil. Prepare and label your second tape as "Broadsword UFS DUMP". Make sure the tape is write enabled, then insert it into the drive.

Next, verify the tape is useable. To do this type:

```
mt -f /dev/rmt 0 stat <cr>
```

Begin backing up your file partitions again starting with the /var partition. To do this type:

```
ufsdump 0ubf 96 /dev/rmt/0n /var <cr>
```

When the prompt returns, backup the second sybase devices partition. To do this type:

```
ufsdump 0ubf 96 /dev/rmt/0n /syb_devices_1 <cr>
```

When the prompt returns, backup the second security partition. To do this type:

```
ufsdump 0ubf 96 /dev/rmt/0n /security2 <cr>
```

When the prompt returns, backup the /h partition. To do this type:

```
ufsdump 0ubf 96 /dev/rmt/0n /h <cr>
```

NOTE: If you used a four hard drive configuration on your system as per Appendix D of the Broadsword 3.1 Installation and Maintenance Guide, then you may have additional partitions to backup. If so swap tapes again and backup any remaining partitions using previous steps as a guide line. Modify these instructions to reflect all changes.

When the prompt returns, you should be finished with your Level 0 Dump. Rewind the tape. To do this type:

```
mt -f /dev/rmt/0 rew <cr>
```

Advance the tape to the end in order to read the number of records on the tape in the next step. To do this type:

```
mt -f /dev/rmt/0n eom <cr>
```

Verify the number of records in status match the number of partitions backed up to the this point. To do this type:

```
mt -f /dev/rmt/0n stat <cr>
```

NOTE: To this point, if you have not deviated from these instructions you should have a total of 4 records on the tape.

Once you have verified then umber of records, rewind and eject the tape. To do this type:

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```
mt -f /dev/rmt/0n rewoff <cr>
```

NOTE: The tape will automatically eject when it is finished rewinding.

Take the tape from the tape drive and write protect it. Verify the tape has an appropriate security classification sticker on it, then enter today's date in pencil. Also, label the tapes used in the backup procedure as being 1 of (total number of tapes), 2 of (total number), etcetera.

G.) Bringing the Server Back On-Line

Next reboot the server and ensure it is online and functional. To do this type:

```
init 0 <cr>
```

When the OK prompt appears type:

```
boot <cr>
```

When the login screen appears, log into the server with a system administrator level account (cisso, cadmin, personal site approved account, etc.). Open a command shell window. To do this right click anywhere on the Desktop. This will bring up the **Desktop Menu**. From the Desktop Menu, click on the **Tools** submenu and select **Terminal**. When the terminal window appears assume root by typing:

```
su - <cr>
```

When prompted, enter the appropriate password for the root user. When the root prompt appears verify the Broadsword and Sybase processes are running by typing:

```
/opt/bswd3.1/scripts/whoserver <cr>
```

NOTE:

- This step assumes you have loaded Broadsword in the default location.
- Other scripts and commands from this point on may have a capital 'o' instead of the zero character without warning.

When prompted, "Enter the SA password to check SYBASE Free Space", press the **[RETURN]** key. If all the processes are running you are finished.

3.) Resizing Disk Partitions and Full Restore From Tape

Required Media: **Solaris 2.6 CD, Software: 5/98 (to repartition and restore a Solaris 2.6 system)**
Solaris 7 CD, Software: 11/99 (to repartition and restore a Solaris 7 system)
Full Backup (Level 0 Dump) Tape(s)

This section provides an example how to resize partitions on an existing Broadsword system to be consistent with the partition guidelines provided in this document and then to restore the system using a full backup from tape. Subsequent sections are to be performed while booted from CDROM.

Note: Do not proceed unless you have already performed a Full Backup on the system that will be repartitioned and restored. Please refer to the Broadsword Gatekeeper Full Backup Procedure section in this appendix for an example how to create a full backup tape.

Insert the CD into the CDROM drive and boot the system from the CDROM Drive.

```
boot cdrom<cr>
```

It may take a few minutes for the initial screen to appear.

A. Resizing Disk Partitions

Select “Utilities/Command Tool” from the main menu to start a command tool window. It is not necessary to proceed through any of the Solaris installation screens. All commands will be executed from within the Command Tool window. Use the **format** utility to resize the partitions to be consistent with the guidelines provided in this document (or site provided partition guidelines). The following suggestions are provided for use with the **format** utility.

- Initially, set all partition sizes to 0. This will make it easier to determine the starting cylinder when resizing a partition. Partitions should be contiguous, therefore, the starting cylinder for a given partition should be equal to the ending cylinder plus one (n+1) of the previous partition.
- The following Partition ID Tags are recognized: root, swap, usr, var. It is not necessary to specify a Partition ID Tag and you may use the default.
- The following Partition Permission Flags are recognized: wm (for filesystems that may be written to and mounted) and wu (for filesystems that may be written to, but not mounted). Most partitions will use the “wm” partition permission flag. The swap partitions should use the “wu” partition permission flag.
- Sizes may be specified in Blocks (b), cylinders (c), megabytes (m), or gigabytes (g). Partition guidelines in this document are specified in megabytes. Actual partition sizes may be slightly larger than specified as the format utility will round up to the next whole cylinder.
- The **/opt** and/or **/h** partitions should be created last and will use all remaining space on each respective disk. Remaining space may be calculated in cylinders with the following formula. Be sure to specify the size in cylinders if using this formula.
Remaining disk space = ((Total # cylinders – 1) – (End cylinder # of last partition allocated))
- A calculator is available by launching a new Command Tool window and issuing the **xcalc** command.
- Remember to use the **label** command within **format** on each disk drive that is resized.
- Please refer to the vendor provided documentation if you require further information.

B. Full Restore From Tape

Select “Utilities/Command Tool” from the main menu to start a command tool window. All commands will be executed from within the Command Tool window. This example will create the filesystems necessary to perform a full restore of a system with two 18-GB disk drives using the partition guidelines specified in this document.

Note: All examples use the disk partition guidelines specified in this document. Filesystem names and device number will vary if using site supplied partition guidelines.

Create the filesystems on disk 0.

```
newfs /dev/rdisk/c0t0d0s0<cr>
newfs -i 524288 -m 2 /dev/rdisk/c0t0d0s3<cr>
newfs /dev/rdisk/c0t0d0s4<cr>
newfs /dev/rdisk/c0t0d0s5<cr>
```

Create the filesystems on disk 1.

```
newfs /dev/rdisk/c0t1d0s0<cr>
newfs -i 524288 -m 2 /dev/rdisk/c0t1d0s3<cr>
newfs /dev/rdisk/c0t1d0s4<cr>
newfs /dev/rdisk/c0t1d0s5<cr>
newfs /dev/rdisk/c0t1d0s6<cr>
```

The “-i” and “-m” flags are only applicable for the filesystems that will be used by Sybase.

NOTE: Unless otherwise noted, assume any large ‘0’ to be a zero, as compared to a capital ‘o’.

Load the first full backup tape into the tape drive and rewind. This example assumes that the tape device is 0 and the root filesystem is the first volume on the tape, as is done in the previous section, *Performing A Full System Backup to Tape*.

```
mt -f /dev/rmt/0 rewind<cr>
```

Mount the root filesystem and restore from tape. The root filesystem must be restored before the other filesystems can be restored. The /a directory is a convenient mount point to use that always exists when booting from CDROM.

```
mount /dev/dsk/c0t0d0s0 /a<cr>
cd /a<cr>
ufsrestore -rf /dev/rmt/0n<cr>
```

This will restore the root (“/”) partition to the hard drive. After the tape is done loading this partition, create new mount points for the other filesystems.

```
mkdir /a/syb_devices_0<cr>
mkdir /a/syb_devices_1<cr>
mkdir /a/security1<cr>
mkdir /a/security2<cr>
mkdir /a/opt<cr>
mkdir /a/h<cr>
```

It is not necessary to create the /usr and /var mount points as they already exist.

Mount the filesystems.

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```
mount /dev/rdsk/c0t0d0s3 /a/syb_devices_0<cr>
mount /dev/rdsk/c0t0d0s1 /a/security1<cr>
mount /dev/rdsk/c0t0d0s5 /a/h<cr>
mount /dev/rdsk/c0t1d0s0 /a/var<cr>
mount /dev/rdsk/c0t1d0s3 /a/syb_devices_1<cr>
mount /dev/rdsk/c0t1d0s4 /a/usr<cr>
mount /dev/rdsk/c0t1d0s5 /a/security2<cr>
mount /dev/rdsk/c0t1d0s6 /a/opt<cr>
```

Note: Sites that use a separate /var/audit filesystem should not mount or restore that filesystem until after the /var filesystem have been restored.

Restore the filesystems. This example assumes the /, /usr, /var, /opt, /h filesystems were backed up in multiple records on a single tape. The **mt** command with the no rewind option (**n**) is used to properly position the tape at the beginning of the appropriate volume.

```
cd /a/usr<cr>
ufsrestore rf /dev/rmt/0n<cr>
cd /a/var<cr>
ufsrestore rf /dev/rmt/0n<cr>
cd /a/opt<cr>
ufsrestore rf /dev/rmt/0n<cr>
cd /a/h<cr>
ufsrestore rf /dev/rmt/0n<cr>
```

Note: The restore order is dependent on the backup order if using a backup tape with multiple volumes. Be certain the tape is positioned on the correct volume before restoring and that all necessary volumes are restored.

It is now necessary to configure the **vfstab** file to mount the new filesystems on the appropriate mount points. The following command will append filesystem and mount point information to the end of the **vfstab** file and will facilitate these modifications.

```
df -k | grep \/a >> /a/etc/vfstab<cr>
```

A sample **vfstab** file is provided below using the sample partition guidelines provided in this document.

#device	device	mount	fs	fsck	mount	mount
#to mount	to fsck	point	type	pass	at boot	options
fd	-	/dev/fd	fd	-	no	-
/proc	-	/proc	proc	-	no	-
/dev/rdsk/c0t0d0s1	-	-	swap	-	no	-
/dev/rdsk/c0t1d0s1	-	-	swap	-	no	-
/dev/rdsk/c0t0d0s0	/dev/rdsk/c0t0d0s0	/	ufs	1	no	-
/dev/rdsk/c0t1d0s4	/dev/rdsk/c0t1d0s4	/usr	ufs	1	no	-
/dev/rdsk/c0t1d0s0	/dev/rdsk/c0t1d0s0	/var	ufs	1	no	-
/dev/rdsk/c0t0d0s5	/dev/rdsk/c0t0d0s5	/h	ufs	2	no	-
/dev/rdsk/c0t1d0s6	/dev/rdsk/c0t1d0s6	/opt	ufs	2	no	-
/dev/rdsk/c0t0d0s4	/dev/rdsk/c0t0d0s4	/security1	ufs	2	no	-
/dev/rdsk/c0t1d0s5	/dev/rdsk/c0t1d0s5	/security2	ufs	2	no	-
/dev/rdsk/c0t0d0s3	/dev/rdsk/c0t0d0s3	/syb_devices_0	ufs	2	no	-
/dev/rdsk/c0t1d0s3	/dev/rdsk/c0t0d0s3	/syb_devices_1	ufs	2	no	-

Note: If local home directories were restored to a different filesystem (e.g. /h/USERS/local instead of /export/home/hostname) it will also be necessary to modify the home directories specified in the /etc/passwd file for all effected users. For sites that will use CSE-SS it is only necessary to modify the home directory in the passwd file for a single user that has the necessary privilege to run the respective User Maintenance Tool. All other effected users should then be modified and updated with the new home directory locations using the User Maintenance Tool. Remember to perform this step after performing the CSE-SS upgrade.

4.) Sample Broadsword Gatekeeper Disk Partitions

The disk partitioning provided here are samples for a Broadsword Gatekeeper. Samples are only provided using UNIX filesystems for Sybase database devices. These tables are to be used as guidelines only as actual disk partitions will be dependent on site architecture and requirements.

Note: These partition tables are optimized for installing the Gatekeeper in an AFDI environment. If installing the Gatekeeper in a CSE-SS environment instead of an AFDI environment, then swap the location of the /opt and /h partitions. For example, to install the Gatekeeper on a system with two 9 GB drives in the CSE-SS environment, the /h filesystem would be located on c0t0d0s6 and the /opt filesystem would be located on c0t1d0s5. Also, be sure to make /usr large enough (at least 1 GB) to support future operating system upgrades. This may not be possible on small disk drive configurations.

Two 9 GB Drives							
Disk 0				Disk 1			
Device	Name	Size	Comment	Device	Name	Size	Comment
c0t0d0s0	/	576		c0t1d0s0	/var	1024	
c0t0d0s1	swap	1024		c0t1d0s1	swap	2048	
c0t0d0s2	overlap	ALL		c0t1d0s2	overlap	ALL	
c0t0d0s3	/syb_devices_0	2176	Will include: <master> (128MB) <data_dev> (1024MB) <data_seg> (1024MB)	c0t1d0s3	/syb_devices_1	896	Will include: <procs> (128MB) <temp> (256MB) <log> (512MB)
c0t0d0s4	/usr	766		c0t1d0s4	/security2	512	For AFDI C2 Audits
c0t0d0s5	/security1	512	For AFDI C2 Audits	c0t1d0s5	/h	REST	
c0t0d0s6	/opt	REST	For AFDI Migration	c0t1d0s6	NOT USED		
c0t0d0s7	NOT USED			c0t1d0s7			
Two 18 GB Drives							
Disk 0				Disk 1			
Device	Name	Size	Comment	Device	Name	Size	Comment
c0t0d0s0	/	576		c0t1d0s0	/var	1024	
c0t0d0s1	swap	2048		c0t1d0s1	swap	2048	
c0t0d0s2	overlap	ALL		c0t1d0s2	overlap	ALL	
c0t0d0s3	/syb_devices_0	4222	Will include: <master> (128MB) <data_dev> (2047MB) <data_seg> (2047MB)	c0t1d0s3	/syb_devices_1	896	Will include: <procs> (128MB) <temp> (256MB) <log> (512MB)
c0t0d0s4	/usr	2048		c0t1d0s4	/security2	2048	For AFDI C2 Audits
c0t0d0s5	/security1	2048	For AFDI C2 Audits	c0t1d0s5	/h	REST	
c0t0d0s6	/opt	REST	For AFDI Migration	c0t1d0s6	NOT USED		
c0t0d0s7	NOTE USED			c0t1d0s7			
One 9 GB Drive and One 18GB Drive							
Disk 0 (9GB)				Disk 1 (18GB)			
Device	Name	Size	Comment	Device	Name	Size	Comment
c0t0d0s0	/	576		c0t1d0s0	/var	1024	
c0t0d0s1	swap	2048		c0t1d0s1	swap	2048	
c0t0d0s2	overlap	ALL		c0t1d0s2	overlap	ALL	
c0t0d0s3	/syb_devices_0	896	Will include: <procs> (128MB) <temp> (256MB) <log> (512MB)	c0t1d0s3	/syb_devices_1	4222	Will include: <master> (128MB) <data_dev>(2047MB) <data_seg> (2047MB)
c0t0d0s4	/security1	1024	For AFDI C2 Audits	c0t1d0s4	/usr	1024	
c0t0d0s5	/opt	REST	For AFDI Migration	c0t1d0s5	/security2	1024	For AFDI C2 Audits
c0t0d0s6	NOT USED			c0t1d0s6	/h	Rest	
c0t0d0s7				c0t1d0s7	NOT USED		

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Four 9 GB Drives							
Disk 0				Disk 1			
Device	Name	Size	Comment	Device	Name	Size	Comment
c0t0d0s0	/	576		c0t1d0s0	/var	REST	
c0t0d0s1	swap	1024		c0t1d0s1	swap	1024	
c0t0d0s2	overlap	ALL		c0t1d0s2	overlap	ALL	
c0t0d0s3	/syb_devices_0	2048	Will include <data_dev> (2047MB)	c0t1d0s3	/syb_devices_1	2048	Will include <data_seg>(2047MB)
c0t0d0s4	/security1	REST	For AFDI C2 Audits	c0t1d0s4	/security2	2048	For AFDI C2 Audits
c0t0d0s5	NOT USED			c0t1d0s5	NOT USED		
c0t0d0s6							
c0t0d0s7							
Disk 2				Disk 3			
c0t0d0s0	/usr	2048		c0t1d0s0	/h	REST	
c0t0d0s1	swap	1024		c0t1d0s1	swap	1024	
c0t0d0s2	overlap	ALL		c0t1d0s2	overlap	ALL	
c0t0d0s3	/syb_devices_2	128	Will include <master> (128MB)	c0t1d0s3	/syb_devices_3	896	Will include <procs> (128MB) <temp> (256MB) <log> (512MB)
c0t0d0s4	/opt	REST	For AFDI Migration	c0t1d0s4	NOT USED		
c0t0d0s5	NOT USED						
c0t0d0s6							
c0t0d0s7							
Four 18 GB Drives							
Disk 0				Disk 1			
Device	Name	Size	Comment	Device	Name	Size	Comment
c0t0d0s0	/	2048		c0t1d0s0	/var	REST	
c0t0d0s1	swap	2048		c0t1d0s1	swap	2048	
c0t0d0s2	overlap	ALL		c0t1d0s2	overlap	ALL	
c0t0d0s3	/syb_devices_0	4096	Will include <data_dev> (2047MB)	c0t1d0s3	/syb_devices_1	896	Will include <procs> (128MB) <temp> (256MB) <log> (512MB)
c0t0d0s4	/security1	REST	For AFDI C2 Audits	c0t1d0s4	/security2	2048	For AFDI C2 Audits
c0t0d0s5	NOT USED			c0t1d0s5	NOT USED		
c0t0d0s6							
c0t0d0s7							
Disk 2				Disk 3			
c0t0d0s0	/usr	2048		c0t1d0s0	/h	REST	
c0t0d0s1	swap	2048		c0t1d0s1	swap	2048	
c0t0d0s2	overlap	ALL		c0t1d0s2	overlap	ALL	
c0t0d0s3	/syb_devices_2	128	Will include <master> (128MB)	c0t1d0s3	/syb_devices_3	4096	Will include <data_seg> (2047MB)
c0t0d0s4	/opt	REST	For AFDI Migration	c0t1d0s4	NOT USED		
c0t0d0s5	NOT USED						
c0t0d0s6							
c0t0d0s7							

5.) Sample TTA Gatekeeper Disk Partitions

The following tables provide examples for partitioning disks for a TTA Gatekeeper system hosted on a Sun Ultra 80 with a variety of disk configurations. These tables are recommended guidelines only. Actual disk partitions may be dependent on the site architecture.

One 18 GB Drive			
Disk 0			
Device	Name	Size	Comment
c0t0d0s0	/	1536	
c0t0d0s1	swap	2048	
c0t0d0s2	overlap	ALL	
c0t0d0s3	/syb_devices_0	3072	Will include: <master> (128MB) <data_dev> (1024MB) <data_seg> (1024MB) <procs> (128MB) <temp> (256MB) <log> (512MB)
c0t0d0s4	/usr	1024	
c0t0d0s5	/var	2048	
c0t0d0s6	/var/audit	4096	
c0t0d0s7	/opt	REST	

Two 9 GB Drives							
Disk 0				Disk 1			
Device	Name	Size	Comment	Device	Name	Size	Comment
c0t0d0s0	/	1024		c0t1d0s0	/var	2048	
c0t0d0s1	swap	1024		c0t1d0s1	swap	2048	
c0t0d0s2	overlap	ALL		c0t1d0s2	overlap	ALL	
c0t0d0s3	/syb_devices_0	2176	Will include: <master> (128MB) <data_dev> (1024MB) <data_seg> (1024MB)	c0t1d0s3	/syb_devices_1	896	Will include: <procs> (128MB) <temp> (256MB) <log> (512MB)
c0t0d0s4	/usr	1024		c0t1d0s4	/var/audit	REST	
c0t0d0s5	/home	512		c0t1d0s5			NOT USED
c0t0d0s6	/opt	REST		c0t1d0s6			NOT USED
c0t0d0s7		NOT USED		c0t1d0s7			NOT USED

Two 18 GB Drives							
Disk 0				Disk 1			
Device	Name	Size	Comment	Device	Name	Size	Comment
c0t0d0s0	/	2048		c0t1d0s0	/var	4096	
c0t0d0s1	swap	2048		c0t1d0s1	swap	4096	
c0t0d0s2	overlap	ALL		c0t1d0s2	overlap	ALL	
c0t0d0s3	/syb_devices_0	4224	Will include: <master> (128MB) <data_dev> (2048MB) <data_seg> (2048 MB)	c0t1d0s3	/syb_devices_1	2176	Will include: <procs> (128MB) <temp> (1024 MB) <log> (1024 MB)
c0t0d0s4	/usr	2048		c0t1d0s4	/var/audit	REST	
c0t0d0s5	/home	1024		c0t1d0s5			NOT USED
c0t0d0s6	/opt	REST		c0t1d0s6			NOT USED
c0t0d0s7		NOT USED		c0t1d0s7			NOT USED

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6.) Installing the Solaris Operating System

Shutdown the system to the boot (OK) prompt if it is not already there:

- From either single or multi-user mode the system can be shutdown by logging in as root and issuing the following command:

```
init 0<cr>
```

- If you do not know the root password, the system may be halted with the following keystroke sequence:

Press **[STOP]** and **[A]** keys simultaneously

Power off the system and attach any peripherals you may need to perform the installation, such as a CDROM drive if one is not built into the system. You may have to depress the on/off button for several seconds in order for it to take effect.

Power the system back on and it should return to the boot prompt. If this system starts to boot up you will need to interrupt the boot sequence:

Press **[STOP]** and **[A]** keys simultaneously

(Only press this key combination on restart if you need to interrupt the boot sequence, and the system has just passed the memory count section of the boot process. If it has proceeded beyond the memory count for more than 15 seconds, allow the system to come up to normal multi-user level of operation, log in as an user with administrative privileges (cisco, cadmin, personal approved account, etc), change to root

```
su -<cr>
```

and issue the command

```
init 0<cr>
```

)

Once at the "OK" prompt, verify the system recognizes any new peripherals that were attached as well as the hard drives and CDROM drive since these will be essential for this portion of the installation.

```
probe-scsi-all<cr>
```

After a few moments, the devices and hard drives should be displayed to the screen.

To ensure the best results from the system during the installation of the Solaris Operating System you may want to reset the system to its factory defaults. Once this is completed, you can change a select few items to optimize it to your sites preferences. Some items you may want to adjust include the boot-device, auto-boot option, tpe-link-test option (not present on all systems), and the diag-device options. To do this type the following commands:

```
printenv  
set-defaults  
setenv boot-device disk0  
setenv auto-boot? False  
setenv tpe-link-test? false
```

(This previous command may not be present on all systems, in which case the system will respond with a Command Not Found error.)

```
setenv diag-device disk0
```

These commands are discussed more below:

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- **printenv** print a listing of the environment variables.
- **set-defaults** resets the system to the factory defaults
- **boot-device** specifies what device is used during a normal boot up. Typically, the hard drive containing the root partition.
- **auto-boot?** If set to true will automatically boot the system to normal runtime mode when power is applied to the system.
- **tpe-link-test?** If set to false will turn off the Network Interface Card (NIC) to prevent the cable problem errors during the initial installation of the system. It also prevents unwelcome users onto the system before the system is fully configured and secure. (Not present on all systems)
- **diag-device** sets the default diagnostics device for troubleshooting purposes. It's best to set this to match the boot-device for the time being.

A. Installing Solaris 2.6

(Excluding on an Ultra 80 or other system with a processor speed higher than 400 MHz)

Required Media: **Solaris 2.6 CD, Software: 5/98**

Insert the CD into the CDROM drive and boot the system from the CDROM Drive.

```
boot cdrom<cr>
```

It may take a few minutes for the initial screen to appear.

Note: Some systems will display a Graphical User Interface (GUI) to proceed with the installation. Others will be in text format only. For the remainder of the Solaris 2.6 Operating System Installation, both methods are included. For example **[CONTINUE]** means to click on the button labeled CONTINUE. **Select F2** means press the [F2] key. If you get the text version, use the arrow keys to maneuver within each window and the space bar to select items.

- The first window to appear is the "Solaris Installation" window. **Select F2 [Continue]**
- The "Program" window will appear. **Select F2 [Continue]**
- The "Identify this System" window appears. **Select F2 [Continue]**
- The "Host Name" window appears. In the text box provided, enter the name of the workstation as it is to be known on the network (see your locally developed network cut-sheet). **Select F2 [Continue]**
- The "Network Connectivity" window appears. Select **Yes** to indicate the system will be connected to the network, then **Select F2 [Continue]**
- The "IP Address" window appears. In the text box provided, enter the IP address of the workstation, then **Select F2 [Continue]**
- The "Confirm Information" window appears. **Select F2 [Continue]** if the information is correct. To change information Select **F4 [Change]**
- The "Name Service" window appears. Select **"None"** to indicate no NIS Service will be used at this time, then **Select F2 [Continue]**
- The "Confirm Information" window appears. **Select F2 [Continue]** if the information is correct. To change information Select **F4 [Change]**
- The "Subnets" window appears. **Select [Yes]** to indicate the system will be part of a subnet, then **Select F2 [Continue]**
- The "Netmasks" window appears. In the text box provided, enter the netmask the system will be using, then **Select F2 [Continue]**
- The "Time Zone" window appears. **Select [Offset from GMT]**, then **Select F2 [Continue]**. (This set the time to GMT. Set the time via your local commands policy.
- The "Offset from GMT" window appears. In the text box provided, enter **[0]**, then **Select F2 [Continue]**. If you have the GUI, then set the slide bar to **[0]**
- The "Date and Time" window appears. In the text boxes provided, enter the Zulu (GMT) date and time, then **Select F2 [Continue]**
- The "Confirm Information" window appears. **Select F2 [Continue]** if the information is correct. To change information Select **F4 [Change]**
- The "Solaris Install Software – Initial" window appears. **Select F2 [Continue]**
- The "Upgrade System?" window appears. **Select F4 [Initial]**
- The "Software" window appears.
 - For Broadsword Gatekeeper installations Select **[Entire Distribution Plus OEM Support]**, then select **F2 [Continue]**. This should be the first item in the list.
 - For TTA Gatekeeper installations select **[End User System Support]**, then select **F2 [Continue]**.
- The "Disks" window appears. Select hard drives you will be using, then **Select F2 [Continue]**
- The "Preserve Data" window appears. **Select F2 [Continue]**
- The "Automatically Layout File Systems?" window appears. **Select F4 [Manual Layout]**
- The "File System and Disk Layout" window appears.

- ❑ The "Select Disk to Customize" window appears. Select the first hard drive to layout, then **Select F4 [Customize]**

Note:

- For Broadsword Gatekeeper installations allocate the file systems according to the tables found in the **Sample Broadsword Gatekeeper Disk Partitions** portion of this document.
- For TTA Gatekeeper installations allocate the file systems according to the tables found in the **Sample TTA Gatekeeper Disk Partitions** portion of this document
- The partition devices will vary from system to system. It is very important that you document the device names and the partitions being assigned to them. e.g c0t1d0s7 is /opt one system and c0t8d0s7 is /opt on another system. This is critical during the installation of the Broadsword Software.
- DO NOT modify the Overlap partition. It must match the capacity of the drive you are partitioning.
- DO NOT USE CAPS when typing.
- Ensure you customize both drives.

- ❑ When you are finished with the layout of both drives, **Select F2 [OK]**
- ❑ The "File System and Disk Layout" window appears. The scroll list shows the layouts for all defined tasks. If an error is detected select **F4 [Customize]** to correct the data. Otherwise **Select F2 [Continue]**
- ❑ The "Mount Remote File System" window appears. **Select F2 [Continue]**
- ❑ The "Profile" window appears. The installation setup has been completed. Verify that all information in this Profile scroll list is correct. If an error is detected select **F4 [Change]**, otherwise **Select F2 [Continue]**
- ❑ The "Begin Installing Solaris" window appears. **Select [Automatic Reboot]**, then **Select F2 [Begin Installation]**

Note: Load process takes an average of 45 minutes to an hour depending upon specific system architecture.

When the Solaris 2.6 Operating System is finished installing the system will reboot and prompt you to enter a root password.

When asked to enable power Management or not type **N<cr>**

When asked to save this default answer type **Y<cr>**

After reboot, login as root.

The "Choose Desktop" window appears. Select **CDE**, then click **Continue**.

If you are on a system that requires Raptor Graphics, proceed to *Installing Raptor Graphics*; otherwise proceed to the *Installing Solaris Patches* portion of this document.

B. Installing Solaris 2.6

(Including Ultra 80 or other System with Processors higher than 400 MHz)

Required Media: **Operating Environment Installation CD, September 1999**
Solaris 2.6 CD, Software: 5/98

Insert the Operating Environment Installation CD into the CDROM drive and boot the system from the CDROM Drive.

```
boot cdrom<cr>
```

This will begin the installation process. It may take a few minutes for the initial screen to appear.

- The "Language Selection" window appears. Select Language: **1) English**
- Would you like to use this installer? **Y<cr>**
- Do you want to format /dev/dsk/c0t0d0? **Y<cr>**

Note: This device may vary from system to system. Ensure that you are familiar with your own system's device names. This item refers to the hard drive that will contain the root partition.

- Enter swap partition size: **2048<cr>**
- Is this OK? **Y<cr>**

Note: The installer program loads at this time. This takes about 10 minutes.

- The "Welcome" window appears. Select **NEXT**
- The "Host Name" window appears. In the text box provided, enter the name of the workstation as it is to be known on the network (see your locally developed network cut-sheet). Select **NEXT**
- The "Network Connectivity" window appears. Select **Yes** to indicate the system will be connected to the network, then Select **NEXT**
- The "IP Address" window appears. In the text box provided, enter the IP address of the workstation, then Select **NEXT**
- The "Netmasks" window appears. In the text box provided, enter the netmask the system will be using, then Select **NEXT**
- The "Name Service" window appears. Select "**None**" to indicate no NIS Service will be used at this time, then Select **NEXT**
- The "Time Zone" window appears. Select **[Offset from GMT]**, then Select **NEXT**. (This set the time to GMT. Set the time via your local commands policy.)
- The "Hours Offset" window appears. Select **0**, then Select **NEXT**
- The "Date and Time" window appears. In the text boxes provided, enter the Zulu (GMT) date and time, then Select **NEXT**
- The "Root Password" window appears. Enter the root password for the system, Select **NEXT**
- The "Power Management" window appears. Select **Off** and **Don't ask**, Select **NEXT**
- The "Confirm Information" window appears. Confirm the information is correct then Select **NEXT**. If the information is incorrect select **Change** and correct the information.
- A "Welcome" window appears. Select **NEXT**
- The "Select Solaris OS" window appears. Select Solaris OS: **Solaris 2.6 Hardware: 5/98** then click **NEXT**.
- The "Solaris OS Summary" window appears. Solaris OS Summary: verify **information is correct** then click **NEXT**.
- Insert Solaris 2.5.1 Hardware: 11/97 CD-ROM when prompted. Insert CD: **OK**
- The "Select Type of Installation" window appears. Select type of install: **Custom**
- The "System Locale Selection" window appears. System Locale Selection: **English US**
- The "Select Solaris Cluster Configuration" window appears.

- ❑ For Broadsword Gatekeeper installations select Solaris Cluster Configuration: **Entire Distribution Plus OEM Support**, then select **F2 [Continue]**.
- ❑ For TTA Gatekeeper installations select Solaris Cluster Configuration: **End User System Support**, then select **F2 [Continue]**.
- ❑ The "Laying Out File Systems" window appears. Layout file systems: move **all available disks to selected disks** then click **NEXT**.
- ❑ The "Layout File Systems" window appears. Highlight disk to configure and select **Modify**.

Note:

- Allocate the file systems according to the tables found in the Sample Disk Partitions portion of this document.
 - The partition devices will vary from system to system. It is very important that you document the device names and the partitions being assigned to them. e.g. c0t1d0s7 is /opt on one system and c0t8d0s7 is /opt on another system. This is critical during the installation of the Broadsword Software.
 - DO NOT modify the overlap partition. It must match the capacity of the drive you are partitioning.
 - DO NOT USE CAPS when typing.
 - Layout the last drive first. If you layout your first drive first you will not be able to select your last drive. This is a known bug with the Solaris installer.
- ❑ The "Confirm Information" window appears. Confirm the information is correct then Select **Install**. If the information is incorrect select **Change** and correct the information.
 - ❑ Installation Summary: **verify information** then click **EXIT**.
 - ❑ The "Reboot" window appears. Select **Reboot** and **Reboot Now**.
 - ❑ When the Solaris 2.6 Operating System is finished installing the system will reboot and prompt you to enter a root password.
 - ❑ When asked to enable power Management or not type **N**.
 - ❑ When asked to save this default answer type **Y**.
 - ❑ After reboot login as root.
 - ❑ The "Choose Desktop" window appears. Select **CDE**, then click **Continue**.

If you are on a system that requires Raptor Graphics, proceed to *Installing Raptor Graphics*; otherwise proceed to the *Installing Solaris Patches* portion of this document.

C. Installing Solaris 7

Required Media: **Solaris 7 Software: 11/99**

Note: For more detailed information on configuring Solaris 7 for use with AFDI refer to the AFDI UNIX ICG, Section 4.1.1.

Insert the CD into the CDROM drive and boot the system from the CDROM Drive.

```
boot cdrom<cr>
```

This will begin the installation process. It may take a few minutes for the initial screen to appear.

- The "Language and Locale" window appears. In the Languages list box highlight **English** and in the Locales list box highlight **USA (ASCII)**, then click **Continue**.
- The "Solaris Installation Program" window appears. Click **Continue**
- The "Identify this System" window appears. Click **Continue**
- The "Host Name" window appears. Enter the machine's hostname in the text box provided, then click **Continue**.
- The "Network Connectivity" window appears. Select **Yes**, then click **Continue**
- The "IP Address" window appears. Enter the machine's IP Address in the text box provided, then click **Continue**
- The "Confirm Information" window appears. Verify the information, then click **Continue**. If you see a problem, click **Change** to correct the errors.
- The "Name Service" window appears. Select **None**, then click **Continue**.
- The "Confirm Information" window appears. Verify the information, then click **Continue**. If you see a problem, click **Change** to correct the errors.
- The "Subnets" window appears. Select **Yes**, then click **Continue**.
- The "Netmask" window appears. Enter the subnet mask for this system in the text box provided, then click **Continue**.
- The "Time Zone" window appears. Select **Offset from GMT**, then click **Set**.
- The "Offset from GMT" window appears. Select **0**, then click **Continue**.
- The "Date & Time" window appears. Enter the proper date and time in the text boxes provided, then click **Continue**.
- The "Confirm Information" window appears. Verify the information, then click **Continue**. If you see a problem, click **Change** to correct the errors.
- The "Solaris Interactive Installation" window appears. Click on **Initial**
- The "Solaris Interactive Installation" window appears. Click **Continue**.
- The "Allocate Client Services?" window appears. Click **Continue**.
- The "Select Languages" window appears. Click **Continue**.
- The "Select Software" window appears. Select **Entire Distribution Plus OEM Support**, then click **Continue**.
- The "Select Disks" window appears. Highlight and add the hard drives you will be using, then click **Continue**.
- The "Preserve Data" window appears. Click **Continue**
- The "Automatically Layout File System" window appears. Click **Manual Layout**.
- The "File System & Disk Layout" window appears. Click **Customize**.
- The "Customize Disk" window appears. Enter the appropriate information in the text boxes provided, then click **OK**.

Note:

- Allocate the file systems according to the tables found in the Sample Disk Partitions portion of this document.
- The partition devices will vary from system to system. It is very important that you document the device names and the partitions being assigned to them. e.g. c0t1d0s7 is /opt on one system and c0t8d0s7 is /opt on another system. This is critical during the installation of the Broadword Software.
- DO NOT modify the overlap partition. It must match the capacity of the drive you are partitioning.
- DO NOT USE CAPS when typing.
- Do not name the partitions with in brackets (example: <master_mirror >), these are "RAW Partitions" and are used by Sybase and will be labeled later in the build procedure. Only assign the size of the partition at this time.
- Ensure you customize both drives
- Layout the last drive first. If you layout your first drive first you will not be able to select your last drive. This is a known bug with the Solaris installer.

- The "File System & Disk Layout" window appears. Click **Continue**
- The "Mount Remote File Systems" window appears. Click **Continue**
- The "Profile" window appears. Click **Begin Installation**
- The "Boot" window appears. Click **Auto Reboot**

When the Solaris 7 Operating System is finished installing the system will reboot and prompt you to enter a root password.

After the root password is set, you will be asked two questions:

- Do you want this automatic power-saving shutdown?
(If this system is used as a server, answer n) [y,n,?] Type **n**
- Do you want the system to ask about this again, when you next reboot?
(This gives you the chance to try it before deciding whether to keep it.) [y,n,?] Type **n**
- The "Choose Desktop" window appears. Select **CDE**, then click **Continue**.

After reboot login as root.

If you are on a system that requires Raptor Graphics, proceed to *Installing Raptor Graphics*; otherwise proceed to the *Installing Solaris Patches* portion of this document.

D. Upgrading to Solaris 7 from Solaris 2.6

Required Media: **Solaris 7 Software: 11/99**

Note: The example in this section will only upgrade the existing software distribution from Solaris 2.6 to Solaris 7. Also, this section does not address resizing of partitions. Please ensure that partitions are properly sized before proceeding or refer to the appropriate section in this document to resize the partitions. For more detailed information on configuring Solaris 7 for use with AFDI refer to the AFDI UNIX ICG, Section 4.1.1.

Insert the CD into the CDROM drive and boot the system from the CDROM Drive.

```
boot cdrom<cr>
```

This will begin the installation process. It may take a few minutes for the initial screen to appear.

- The "Language and Locale" window appears. In the Languages list box highlight **English** and in the Locales list box highlight **USA (ASCII)**, then click **Continue**.
- The "Solaris Installation Program" window appears. Click **Continue**
- The "Identify this System" window appears. Click **Continue**
- The "Host Name" window appears. Enter the machine's hostname in the text box provided, then click **Continue**.
- The "Network Connectivity" window appears. Select **Yes**, then click **Continue**
- The "IP Address" window appears. Enter the machine's IP Address in the text box provided, then click **Continue**
- The "Confirm Information" window appears. Verify the information, then click **Continue**. If you see a problem, click **Change** to correct the errors.
- The "Name Service" window appears. Select **None**, then click **Continue**.
- The "Confirm Information" window appears. Verify the information, then click **Continue**. If you see a problem, click **Change** to correct the errors.
- The "Subnets" window appears. Select **Yes**, then click **Continue**.
- The "Netmask" window appears. Enter the subnet mask for this system in the text box provided, then click **Continue**.
- The "Time Zone" window appears. Select **Offset from GMT**, then click **Set**.
- The "Offset from GMT" window appears. Select **0**, then click **Continue**.
- The "Date & Time" window appears. Enter the proper date and time in the text boxes provided, then click **Continue**.
- The "Confirm Information" window appears. Verify the information, then click **Continue**. If you see a problem, click **Change** to correct the errors.

Note: Pay careful attention to the next step as it is very important. Be certain to select the Upgrade option in order to upgrade from Solaris 2.6 to Solaris 7. This sample assumes that the current software distribution will only be updated and not modified.

- The "Solaris Interactive Installation" window appears. Click on **Upgrade**.
- The "Select Languages" window appears. Click **Continue**.
- The "Analyzing System" window appears and exits after completion.
- The "Customize Software" window appears. Leave the "Select To Include Solaris 64 Bit Support" toggle enabled. Click **Continue**.
- The "Profile" window appears. Verify the information in the profile window is correct. Click **Begin Upgrade**.
- The "Upgrading Solaris Software - Progress" window appears and exits after completion

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After the Solaris 7 Operating System is finished installing, reboot the system by issuing the following command in the “Solaris Install Console”.

```
reboot<cr>
```

If you are on a system that requires Raptor Graphics, proceed to *Installing Raptor Graphics*; otherwise proceed to the *Installing Solaris Patches* portion of this document.

E. Installing Raptor Graphics

Required media: **Raptor GFX Open Windows for Solaris CD**

Note: You must be user **root** to perform these steps (unless specified otherwise).

Insert the CD into the CDROM drive. You may need to eject it from the command line if it does not eject by pressing the button on the CDROM Drive. To do this type **eject cdrom** from the command prompt.

Once you have inserted the Raptor GFX Open Windows for Solaris CD into the CDROM Drive type the following command to begin the installation:

```
pkgadd -d /cdrom/cdrom0<cr>
```

- When prompted for which packages to add enter: **all<cr>**
- Enter **y** to all other questions asked during this installation process.
- When a message is displayed stating "Installation of TSIfxdrv was successful", then prompted for which packages to add again, enter **q<cr>**

Eject the CDROM from the command prompt.

```
eject cdrom<cr>
```

The installation of Raptor GFX Open Windows for Solaris is now complete. Proceed to the *Installing Solaris Patches* portion of this document.

7.) Installing Solaris Patches

A. Installing the Solaris 2.6 Recommended and Y2K Patches

Required – Either 1) the latest patch clusters from the any of the sites listed on page D-3, above
or 2) the June 15th, 2001 patch cluster set distributed to the Broadsword installation teams

Note: You must be user **root** to perform these steps (unless specified otherwise).

The following patches are contained or superceded in these files and are recommended as a minimum requirement for Broadsword.

105284-47	105615-09	106027-10	106429-02	107336-01	108804-02
105338-27	105633-60	106040-18	106437-03	107434-01	108890-01
105356-18	105642-08	106049-03	106439-09	107490-01	108893-01
105357-04	105665-04	106112-06	106448-01	107618-02	108895-01
105375-26	105667-03	106123-05	106468-05	107733-09	109266-03
105379-07	105669-11	106125-12	106495-01	107758-01	109339-02
105395-07	105693-12	106193-06	106522-04	107766-01	109388-01
105403-04	105703-27	106222-01	106569-01	107774-01	109719-01
105405-03	105720-19	106226-02	106592-04	107991-02	110990-01
105407-01	105722-07	106235-09	106625-13	108199-01	111029-01
105464-02	105741-09	106242-03	106639-06	108201-01	111039-02
105472-08	105755-10	106257-05	106648-01	107565-03	111109-01
105486-07	105780-05	106271-09	106649-01	108307-02	111236-01
105529-11	105786-14	106285-03	106650-04	108333-02	111240-01
105552-03	105792-07	106292-11	106828-01	108346-03	111560-01
105558-04	105800-07	106301-04	106834-02	108468-02	111572-01
105562-03	105837-03	106303-03	106882-02	108492-01	111664-01
105566-11	105847-11	106361-13	107298-03	108499-01	111859-01
105580-18	105990-05	106415-04	107326-02	108660-01	

Locate the files on the Broadsword server or on a network device that the Broadsword server has access to. For the rest of this, we'll assume that the patches may be found on a CD inserted into the machine, and therefore accessible in /cdrom/cdrom0 .

To install the Solaris 2.6 Recommended Patches, extract the patches from the CD to the /tmp directory. To do this you would use a command similar to the example shown below:

```
cd /tmp
uncompress /cdrom/cdrom0/5.6_Recommended.tar.Z | tar xpvf -
```

To begin installing the patch cluster type the following commands:

```
cd /tmp/2.6_Recommended<cr>
./install_cluster<cr>
```

- When prompted, "Are you ready to continue with install?" type **Y<cr>**. The Patches begin to install now. This will take approximately 45 minutes.

To install the Solaris 2.6 Y2K Patches, extract the patches from the CD to the /tmp directory. To do this you would use a command similar to the example shown below:

```
cd /tmp
uncompress /cdrom/cdrom0/5.6_Recommended.tar.Z | tar pxvf -
```

Extract the tar file and install the cluster:

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```
cd /tmp/2.6_y2000_ALL<cr>
./install_cluster<cr>
```

- When prompted, "Are you ready to continue with install?" type **Y**<cr>. The Patches begin to install now. This will take approximately 30 minutes.

Reboot the system from the command prompt.

```
init 6<cr>
```

After reboot login as root, then proceed to the appropriate section to load *Solaris Utilities*.

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B. Installing the Solaris 7 Recommended Patches

Required – Either 1) the latest patch cluster from any of the sites listed on page D-4, above
or 2) the June 15th, 2001 patch cluster set distributed to the Broadsword installation teams

Note: You must be user **root** to perform these steps (unless specified otherwise). Also, there are no Y2K patches for Solaris 7.

The following patches are contained on or superceded in this patch cluster and are recommended as a minimum requirement for Broadsword.

106300-12	107115-09	107469-08	107893-15	108721-04	109949-01
106327-11	107148-10	107475-03	107972-02	108748-02	110070-01
106541-18	107171-09	107477-04	108029-03	108750-02	110281-02
106725-02	107180-28	107544-03	108162-05	108754-01	110646-03
106793-07	107200-14	107587-01	108219-01	108756-01	110869-01
106924-08	107259-02	107636-08	108221-01	108758-01	110881-01
106925-08	107285-06	107650-08	108263-08	108760-01	111093-01
106934-04	107332-02	107654-08	108301-02	108762-01	111113-01
106938-04	107337-02	107656-07	108327-02	108764-01	111238-01
106942-17	107359-02	107684-02	108343-04	108798-02	111242-01
106950-16	107374-02	107702-09	108374-05	108815-02	111350-01
106952-03	107403-02	107709-16	108376-33	108838-03	111578-02
106960-01	107441-03	107792-02	108451-05	109203-03	111590-02
106978-12	107443-14	107794-01	108482-02	109253-04	111600-01
106980-17	107451-06	107834-03	108484-01	109404-01	111666-01
107018-03	107454-05	107841-03	108551-03	109409-04	111980-01
107022-08	107456-01	107885-08	108574-03	109709-01	112106-01
107038-02	107458-13	107887-10	108662-01	109744-01	112300-01
107081-40	107460-10				

Locate the files on the Broadsword server or on a network device that the Broadsword server has access to. For the rest of this, we'll assume that the patches may be found on a CD inserted into the machine, and therefore accessible in /cdrom/cdrom0 .

To install the Solaris 7 Recommended Patches, extract the patches from the CD to the /tmp directory. To do this you would use a command similar to the example shown below:

```
cp /cdrom/cdrom0/7_Recommended.zip /tmp
```

To extract the patches from the zip file, open the CDE, File Manager Application (Filing Cabinet Icon) and navigate to the /tmp directory. Double click on the 7_Recommended.zip file. The file unzips into the /tmp/7_Recommended directory.

Change directories to the 7_Recommended directory and install the Solaris 7 Recommended Patch Cluster. To do this type:

```
cd /tmp/7_Recommended  
./install_cluster
```

- When prompted, "Are you ready to continue with install?" type **Y<cr>**. The Patches begin to install now. This will take approximately 20 - 45 minutes depending on system resources. When the patch cluster is finished installing, reboot the system. To do this type:

```
init 6<cr>
```

After reboot login as root, then proceed to the appropriate section to load *Solaris Utilities*.

8.) Installing Solaris Utilities

Required: Either **Jumbo Travel Disc for Broadsword Installers CD**, or software packages downloaded from the sites listed above on pages D3-D5.

The following installation instructions are for utilities that are not required to run Broadsword. Note, however, that GZIP is needed to install either Netscape and/or Acrobat Reader.

Note: You must be user **root** to perform these steps (unless specified otherwise). This process assumes that the utilities will be loaded from the Jumbo Travel Disc for Broadsword Installers CD-ROM. If, instead, these packages are being loaded from the download sites, the user should follow those sites' directions for installing the software.

The instructions in this section will install the following utilities:

- GZIP 1.2.4
- LSOFF 4.45
- MPEG-Play 2.0
- TCSH 6.09.00
- TOP 3.5
- Traceroute
- UNZIP 5.4
- Xanim 2.64
- XV3.10

Insert the Jumbo Travel Disk CD into the CDROM drive. You may need to eject from the command line if it doesn't eject by pressing the button on the CDROM Drive. To do this type **eject cdrom** from the command prompt.

Create the following directories and link if they do not already exist:

```
mkdir /opt/local<cr>
mkdir /opt/local/man<cr>
mkdir /opt/local/lib<cr>
mkdir /opt/local/bin<cr>
ln -s /opt/local /usr/local<cr>
```

Extract the required Solaris utilities from the CD with the following commands:

```
cd /cdrom/cdrom0<cr>
./ExtractUtilities.sh<cr>
```

To install the Utilities perform the following:

```
cd /tmp/BroadswordUtilities<cr>
./AddPackages.sh
```

- You will be prompted, "The directory /var/sadm/f4s_pkgs does not exist. Do you want to create it now? (n/y) [y]." Enter: **Y<cr>**

The following two utilities must be loaded in order to run Broadsword more efficiently. They are Adobe Acrobat Reader 4 and Netscape Communicator 4.7 or higher. Adobe, though not necessarily required, is useful in viewing AFRL documentation provided on the Broadsword 3.1 Documentation CDROM and Netscape is required to interface with Broadsword.

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A. Installing Adobe Acrobat Reader 4

To install Adobe Acrobat Reader 4 on both Solaris 2.6 and Solaris 7 perform the following procedures:

```
cd /tmp/BroadswordUtilities/TarFiles<cr>
```

Extract (unzip) the .tar file then begin the installation process:

```
tar pxvf sunsparc-rs-405.tar<cr>  
./SSOLRS.install/INSTALL<cr>
```

- The "License Agreement Screen" will appear. Page down using the <Spacebar> key until you see a message stating " Please type "accept" to accept the terms and conditions license agreement; Type "decline" to exit. Type: **accept<cr>**
- When prompted "Enter installation directory for Acrobat 4.0:" type:

```
/opt/local/Acrobat4<cr>
```

- You will receive a message stating that the /opt/local/Acrobat4 directory does not exist. You will then be asked "Do you want to create it now?" type: **Y<cr>**. Adobe Acrobat Reader install at this time and takes about one minute to complete.

After Adobe Acrobat Read 4 is finished installing, link the Adobe Acrobat Reader 4 executable to the /usr/local/bin directory.

```
ln -s /opt/local/Acrobat4/bin/acroread /usr/local/bin<cr>
```

B. Installing Netscape Communicator 4.7X

To install Netscape Communicator 4.7X on Solaris 2.5.1, Solaris 2.6 or Solaris 7 perform the following procedures:

```
cd /tmp/BroadswordUtilities/TarFiles<cr>
```

Extract (unzip) the .tar file. This example is for Netscape 4.79 on a Solaris 2.5.1 system.

```
tar pxvf communicator-v479-us.sparc-sun-solaris2.5.1.tar<cr>
```

Begin the installation process. This example is for Netscape 4.79 on a Solaris 2.5.1 system.

```
cd communicator-v479-sparc-sun-solaris2.5.1<cr>  
./ns-install<cr>
```

- When prompted, "Directory containing the 'gzip' binary:", type **/usr/local/bin<cr>**
- When prompted, "Location for Communicator software", type **/opt/local/netscape<cr>**
- When prompted "/opt/local/netscape: No such directory. Do you wish to create it? (y/n) [y]" type **Y<cr>**

When Netscape Communicator 4.7X is finished installing, link the Netscape Communicator 4.7X executable to the /usr/local/bin directory.

```
ln -s /opt/local/netscape/netscape /usr/local/bin<cr>
```

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To use the Computer Based Training (CBT) from the Gatekeeper, it is necessary to load the Flash Shockwave Plugin. Otherwise, the proceed to the next section.

Required Media: **Broadsword Computer Based Training (CBT) v3.1**

Insert the CD into the CDROM drive.

Note: You must be user **root** to perform each of the following steps.

Once you have inserted the CBT CD-ROM, you need to extract the plugin form the CD-ROM to a temporary location. To do this type the following commands.

```
cd /tmp
/usr/local/bin/gzip -dc /cdrom/cdrom0/plugins/solaris/plugin.tgz | tar pxvf -
```

Note: This command assumes the gzip utility in located in the /usr/local/bin directory. If not you need to modify these instructions to reflect the location of the gzip utility on your system.

Verify the location of the actual plugin will be in the same location on the CD-ROM for the next version. Otherwise these instructions will not work.

Next, view the readme file to ensure you have the latest instructions and documentation on this plugin. Follow any additional instructions that may apply. To do this type the following commands:

```
cd flash_solaris
more README.TXT
```

Note: Follow any additional instructions that may apply.

Verify that after extraction of the plugin the readme file is named as it appears above, capital letters and all. Otherwise these instructions will not work.

Next, you need to copy the plugin to the Netscape Plugins directory. To do this type the following commands:

```
cp libflashplayer.so /opt/netscape/plugins
```

Note: These instructions assume you have loaded Netscape in the /opt/netscape directory. If this is not true for your system, you need to modify these instructions to reflect the path to your Netscape Plugins directory.

Verify that after extraction of the plugin the plugin file is named as it appears above. Otherwise these instructions will not work.

Next, change permissions on the Netscape directory so that to plugin can be used by any user. To do this type the following commands:

```
chown -R root:other /opt/netscape
chmod -R 775 /opt/netscape
```

Note: These instructions assume you have loaded Netscape in the /opt/netscape directory. If this is not true for your system, you need to modify these instructions to reflect the path to your Netscape directory.

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On some systems, in order to function properly, you may be required to add this plugin to the `.netscape/plugins` directory of individual users that will be launching Netscape on the actual Broadsword server. Some examples would be for `root`, `bswduser`, `cisso`, etc. If you intend to use the CBT in this manner, you may need to perform the following steps (using `root` as an example):

```
cd /.netscape
mkdir plugins
cp /opt/netscape/plugins/* /.netscape/plugins
chown -R root:other /.netscape
chmod -R 775 /.netscape
```

Note: These instructions assume you have loaded Netscape in the `/opt/netscape` directory. If this is not true for your system, you need to modify these instructions to reflect the path to your Netscape Plugins directory.

The following is an example of how to do this for the `bswduser` account.

```
cd /h/USERS/bswduser/.netscape
mkdir plugins
cp /opt/netscape/plugins/* /h/USERS/bswduser/.netscape/plugins
chown -R bswduser:bswd /h/USERS/bswduser/.netscape
chmod -R 775 /.netscape
```

Note:

- These instructions assume you have loaded Netscape in the `/opt/netscape` directory. If this is not true for your system, you need to modify these instructions to reflect the path to your Netscape Plugins directory.
- These instructions assume the `bswduser` account home directory is located at `/h/USERS/bswduser`. If this is

9.) Miscellaneous Configuration

Note: You must be user **root** to perform these steps (unless specified otherwise).

A. Automount Configuration

Determine whether the site is using automount with the Network File System (NFS) to mount home directories, application directories, etc, and if it is necessary for the Broadsword system to access any of these filesystems. If so, the automount maps (typically **auto_master** and **auto_home**) may be maintained locally (in **/etc**) or administered via NIS (or NIS+).

- For locally maintained automount maps, arrange with the site SA to transfer (e.g. FTP) the appropriate maps (from a local workstation with the desired automount configuration) to the Broadsword system. Verify that the Broadsword system is configured to use local automount maps by examining the **/etc/nsswitch.conf** file for the following entry (or modify if necessary):

```
automount: files
```

- For centrally maintained automount maps (NIS/NIS+) the Broadsword system will be able to access these maps after it is properly configured into the site's NIS/NIS+ domain. Verify that the Broadsword system is configured to use NIS/NIS+ automount maps by examining the **/etc/nsswitch.conf** file for the following entry (or modify if necessary):

```
automount: nis
```

- For sites that are not using automount, edit the **/etc/auto_home** file and append the following line to end of the file:

```
* <tab> `hostname`:/h/USERS/`hostname`/&
```

Where **`hostname`** is the actual hostname of the system without the tick marks and the fields are tab delimited.

Then edit the **/etc/auto_master** file and modify the following line:

```
/home <tab> auto_home -nobrowse
```

to read as follows:

```
/home/`hostname` <tab> auto_home -nobrowse
```

Where **`hostname`** is the actual hostname of the system without the tick marks and the fields are tab delimited.

Start the automount daemon after performing the appropriate configuration for one of the above scenarios:

```
automount<cr>
```

This command may fail the first time it is invoked with a message similar to the following:

```
`hostname` automount[##]: Mount of /h/USERS/bswdserv/bswdserv on /home/bswdserv:  
No such file or directory  
automount: /home/bswdserv: Operation not applicable
```

Re-issue the **automount** command if you receive an error message.

B. DNS Configuration

Determine whether the site is using the Domain Name Service (DNS) for hostname resolution. If so, it is usually advantageous to configure the Broadsword system to use DNS as well. To configure the Broadsword system to use DNS, edit the `/etc/nsswitch.conf` file and modify the following line:

```
hosts: files
```

To read as follows:

```
hosts: files dns
```

It will also be necessary to edit the `/etc/resolv.conf` file. This file will be empty if the system has not been previously configured to use DNS. This file can be transferred (e.g. FTP) from a local workstation with the desired DNS configuration to the Broadsword system or it can be edited by hand. In either case, it should contain a search line that includes your DNS domain name and a nameserver line that includes the IP Address of your commands DNS Server. The following is provided as a sample:

```
search      sitedomain.af.smil.mil
nameserver  128.132.50.36
```

Finally, edit the `/etc/hosts` file and modify the entry for the Broadsword server by adding the fully qualified domain name between the *hostname* and the *loghost* entries. The following example would change from:

```
128.132.50.36 bswdserv loghost
```

to the following:

```
128.132.50.36 bswdserv bswdserv.sitedomain.af.smil.mil loghost
```

- Staging Note: The Broadsword installation script assume a minimal DNS configuration (proper domain name and fully qualified domain name) to be in place. For staging purposes only (installs performed before the hardware is shipped to the site), modify the `/etc/resolv.conf` similar to the following:

```
domain      staging.rl.af.mil
nameserver  128.1.1.1
```

Modify the `/etc/hosts` similar to the following:

```
128.1.1.1 bswdserv bswdserv.staging.rl.af.mil loghost
```

C. Default Router Configuration

Determine whether the site is using a default router (sometime referred to as a default gateway). If so, it may be advantageous to configure the Broadsword system to use a default router. To configure the Broadsword system to use a default router, edit the `/etc/defaultrouter` file and enter the default router IP address. This file will be empty if a default router has not been configured. The following is provided as a sample:

```
123.123.123.1
```

This default route can be automatically activated by rebooting the system or manually activated by issuing the `route` command. The following is provided as a sample:

```
route add default 123.123.123.1 1<cr>
```

Where the IP address will be the IP address of your default router. You can verify that the route was added by issuing the following command:

```
netstat -rn<cr>
```

Destination	Gateway	Flags	Ref Use	Interface
default	123.123.123.1	UG	0 31732	

Observe that the output returned lists the IP address of your default router (under the Gateway column) as the default (under the Destination column).

D. Netmasks Configuration

Determine whether the site is using IP subnetting. If so, it will be necessary to configure the Broadsword system to use subnetting as well. The **netmasks** file contains network masks used to implement IP subnetting. The **netmasks** file may be maintained locally (in **/etc/inet**) or administered via NIS (or NIS+).

- For a locally maintained **netmasks** file, arrange with the site SA to transfer (e.g. FTP) the appropriate maps (from a local workstation with the desired netmasks configuration) to the Broadsword system. Verify that the Broadsword system is configured to use local **netmasks** file by examining the **/etc/nsswitch.conf** file for the following entry (or modify if necessary):

```
netmasks:    files
```

It will also be necessary to edit the **/etc/inet/netmasks** file. This file will be empty if the system has not been previously configured to use subnetting. This file can be transferred (e.g. FTP) from a local workstation with the desired netmasks configuration to the Broadsword system or it can be edited by hand. In either case, it should contain an entry that includes your network number and netmask. The following is provided as a sample:

```
123.123.0.0  255.255.255.0
```

- For centrally maintained **netmasks** file (NIS/NIS+), the Broadsword system will be able to access this map after it is properly configured into the site's NIS/NIS+ domain. Verify that the Broadsword system is configured to use NIS/NIS+ netmasks maps by examining the **/etc/nsswitch.conf** file for the following entry (or modify if necessary):

```
netmasks:    nis
```

Finally, reboot the server in order for these changes to take effect:

```
init 6<cr>
```

10.) Sybase Adaptive Server 11.5.1 or 11.9.2 Installation Instructions

You will be using the **Sybase Adaptive Server 11.5.1 or 11.9.2 CDROM** for this installation.

Note: You must be user **root** to perform these steps (unless specified otherwise). For existing Broadsword Gatekeepers that will continue to use Sybase 11.5.1, this section should be skipped completely.

For existing Broadsword Gatekeepers running Sybase 11.5.1 that will be upgraded to Sybase 11.9.2, rename the Sybase directory and continue with the instructions provided in this section.

```
mv /opt/SYBASE /opt/SYBASE_11.5.1
```

For new Broadsword Gatekeepers you **must** create a Sybase account (e.g. *sybase*) with primary group *sys* through the Sun admintool before loading Sybase Adaptive Server 11.5.1 (or 11.9.2) and Broadsword 3.1. To create this account using admintool, initialize admintool as follows:

```
admintool&
```

Note that, if this system already has CSE or AFDI installed those tools should be used in place of the admintool. Please see a local administrator for assistance with this if necessary.

The following parameters are provided as samples and assume that **/opt/SYBASE** is the directory where Sybase will be installed. Actual values should be consistent with site configuration and security policy.

Note: For Broadsword Gatekeepers that will be co-hosted with another application, be sure to select a descriptive Sybase directory name (e.g. **/opt/SYBASE_BSWD**) and user name (e.g. *sybbswd*) that does not conflict with any existing Sybase directories or users.

- The “Admintool: Users” window appears. From the **Edit** menu select **Add**.
- The “Admintool: Add User” window appears. Fill in the information as detailed below.
 - User Name: **sybase**
 - User ID: **1001**
 - Primary Group: **3**
(verify that this gid corresponds to group *sys* in the */etc/group* file. 3 is standard, but your system may have been modified)
 - Comment: **Sybase Administrator Account.**
 - Login Shell: **C**
 - Password: **Normal Password**
(Do not forget to assign a password consistent with site policy)
 - Password Aging: Min Change: **0**
Max Change: **90**
Warning: **14**
 - Create Home Dir: Select check mark
 - Path: **/opt/SYBASE**

Note: Unix is case sensitive. That means uppercase characters **must** be typed in uppercase and lowercase characters **must** be typed in lowercase. It **does** make a difference.

- Once you have entered all the appropriate information click **OK**.
- The “Admintool: Users” window appears. From the **File** menu select **Exit**.

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After creating the Sybase account, it is necessary to ensure the appropriate permissions for Sybase exist in the installation directory. To set these permissions type the following commands at the command prompt.

```
# chown -R sybase:sys /opt/SYBASE
# chmod -R 755 /opt/SYBASE
```

You will also need to ensure the appropriate permission for Sybase exist for those UNIX filesystems that will be used by the Sybase Data and Backup Servers and Broadsword applications. The example below assumes these partitions are based on the recommended earlier in this document. To set these permissions type the following commands at the command prompt:

```
# chown -R sybase:sys /syb_devices_0
# chown -R sybase:sys /syb_devices_1
# chmod -R 755 /syb_devices_0
# chmod -R 755 /syb_devices_1
```

The following commands will be used in addition if this is a four hard drive configuration based on the recommended partitions earlier in this document.

```
# chown -R sybase:sys /syb_devices_2
# chown -R sybase:sys /syb_devices_3
# chmod -R 755 /syb_devices_2
# chmod -R 755 /syb_devices_3
```

Next, insert the Sybase Adaptive Server 11.5.1 CDROM from the Installer Set into the CDROM drive and type the following commands to begin the Sybase installation.

```
# cd /cdrom/cdrom0
# ./sybsetup
```

- The "Sybase Menu" window appears. In the Sybase Directory text box type **/opt/SYBASE** then click on **Unload Sybase Products from CDROM or Tape**
- The "Installation Destination" window appears. Click the **Checkmark** icon to continue.
- The "Installation Source" window appears. In the text box provided type **sybimage** then click the **Checkmark** icon.
- The "Product Selection" window appears. From the list, highlight **11.5.1 Adaptive Server Enterprise** (or **11.9.2 Adaptive Server Enterprise**) then click the **Checkmark** icon to continue.
- The "Install Products?" window appears. Click the **Checkmark** icon to continue.

Note: Sybase installs at this time. This takes about 3 minutes to complete.

- The "Install sybsetup?" window appears. Click **Yes** to install additional application.

Note: Sybase installs at this time. This takes about 1 minute to complete.

- The "Success" window appears. Click on **OK**.
- The "Installation Complete" window appears. Click **Exit**.
- The "Exit?" window appears. Click **Exit**.

Again, you want to ensure that Sybase has the proper permissions for the installation of Broadsword 3.1. To set these permissions, type the following commands at the command prompt.

```
# chown -R sybase:sys /opt/SYBASE
# chmod -R 755 /opt/SYBASE
```

The last step is to reboot the server.

```
# init 6
```

After system reboot, login as root. If you intend to load CSE-SS then proceed to *Installing CSE-SS*. If you are installing AFDI, proceed to *Installing AFDI*. If you do not intend to load either proceed to the System Installation Guide for Broadsword Gatekeeper Version 3.1.

11.) Installing CSE-SS

A. Installing CSE-SS for Solaris 2.6 and Solaris 7

Media required: CSE-SS Version 1.4.2.1 for Solaris 2.6/2.7 CD

Note: You must be user **root** to perform these steps (unless specified otherwise).

The Basic Security Module (BSM) must be enabled prior to the installation of CSE-SS. Activate BSM as follows:

```
# init 1<cr>
# /etc/security/bsmconv<cr>
```

When asked "Continue with Conversion?" type **Y<cr>**

Note: BSM disables the Volume Management daemon (vold) and you will be unable to access the CDROM drive. You must manually invoke the vold daemon prior to the CSE-SS install in order to perform the CSE-SS installation. The Volume Manager can be invoked with the following command:

```
# /usr/sbin/vold & <cr>
```

Alternatively, Volume Management may be configured to start during boot by typing the following commands:

```
# cd /etc/rc2.d <cr>
# ln -s ../init.d/volmgt S74volmgt <cr>
```

BSM is now enabled on the system and it should be rebooted

```
# init 6<cr>
```

Before loading CSE-SS 1.4.2.1 and Broadsword 3.1, you **must** create a *bswd* group of 600 through the Sun admintool. To create this group, invoke admintool:

```
# admintool&<cr>
```

- The "Admintool: Users" window appears. From the **Browse** menu select **Groups**.
- The "Admintool: Groups" window appears. From the **Edit** menu select **Add**.
- The "Admintool: Add Group" window appears. Fill in the information as detailed below.

- Group Name: **bswd**
- Group ID: **600**
- Members List: **"Leave blank"**

- Once you have entered the appropriate information click **OK**.
- The "Admintool: Users" window appears. From the **File** menu select **Exit**.

Create the following home directory to be used by Broadsword accounts:

```
# mkdir /export/home/`hostname`<cr>
```

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Where `hostname` is the actual hostname of the server.

- For the Solaris 2.6 insert the **CSE-SS Version 1.4.2.1 for Solaris 2.6/2.7** CD and type the following:

```
# cd /cdrom/cdrom0/1_4_2/2_6<cr>
```

- For the Solaris 7.0 insert the **CSE-SS Version 1.4.2.1 for Solaris 2.6/2.7** CD and type the following:

```
# cd /cdrom/cdrom0/1_4_2/2_7<cr>
```

Begin the installation process:

```
# ./install.cse<cr>
```

- The "CDROM Directory" window appears. Click **OK** to continue.
- The "CSE-SS Version 1.4.2 Installation" window appears. Click the following items:
 - Base Software**
 - Print Facility**
 - Security Profile Inspector (SPI 3.2.2)**
 - SPI Documentation**
- Once you have selected these four items click **Install**.

Note: The CSE-SS software installs at this time and takes about 5 minutes to complete.

- The "CSE Installation Successful" window appears. Click **OK**
- A "Dialog Box" appears stating "Install data copied". Click **OK**
- A "Dialog Box" appears stating "Log file created". Click **OK**
- The "CSE-SS V1.4.2 Installation" window appears. Click **Setup**
- A "Text Box" appears. Click **OK**
- A "Dialog Box" appears asking to Abort or Continue. Click **Continue**
- The "CSE-SS V1.4.2 Setup" window appears. Click on the **Environment** icon
- The "CSE-SS V1.4.2 Setup – Environment" window appears. No changes are required here.
- Click on the **XDISPLAY Manager (XDM)** icon
- The "CSE-SS V1.4.2 Setup – XDISPLAY Manager (XDM)" window appears. There should be no changes required here. Click on the **Network Services** icon
- The "CSE-SS V1.4.2 Setup – Network Services" window appears. In the section labeled "Administration Type" click on **Server**.
- In the section labeled "NTP Type" click on **Server**. Click on the **Print Banners** icon
- The "CSE-SS V1.4.2 Setup – Print Banners" window appears. In the text boxes provided, fill out the appropriate information in the items marked:
 - Service Branch**
 - Organization**
 - Location**
- Click on the **Security Labels** icon
- The "CSE-SS V1.4.2 Setup – Security Labels" window appears. In the text box marked "Classifications", enter a classification level that is allowed to be processed on the system, then click on the **Add Classification** button.

Note: Repeat this step until all permitted classifications are entered for the system.

- Enter the appropriate information in the text boxes labeled:

- System High Label**
- System High Short Label**
- Click on the **Centralized Log/Audit Support Subsystem** icon
- The "CSE-SS V1.4.2 – Centralized Log/Audit Support Subsystem" window appears.
- In the text box labeled "Server Name?" enter the hostname of the server. Click on the **DNS Resolver** icon
- The "CSE-SS V1.4.2 Setup – DNS Resolver" window appears. For "Type" select **NONE**. Click on the **Verify CSE Software Configuration** icon

Note: Settings are validated at this time. Make any necessary changes, then continue.

- Click on the **Return to Main Menu** icon.
- The "CSE-SS V1.4.2 Setup" window appears.
- From the "**File**" menu, select "**Save & Execute**"

Note: Configuration changes are implemented at this time.

- Click "**Close**"
- The "CSE-SS V1.4.2 Setup- Log" window appears. Click "**Close**"
- The "CSE V1.4.2 Setup" window appears. From the File menu, select **Exit & Run Administration**
- The "Exit CSE-SS V1.4.2 Setup" window appears. Click **Yes**
- The "CSE-SS V1.4.2 Administration" window appears. Click on the **User Account** icon
- The " CSE-SS V1.4.2 Administration – User Account" window appears. Click **csso**, then enter the appropriate information in the following text boxes:

- Password**
- Verify Password**
- Path to Home Directory**
- Shell = /bin/csh**

- Then click **yes** to create user account. When the dialog box stating User Account Created appears, click **OK**.
- Click **admin**, then enter the appropriate information in the following text boxes:

- Password**
- Verify Password**
- Path to Home Directory**
- Shell = /bin/csh**

- Then click **yes** to create user account. When the dialog box stating User Account Created appears, click **OK**.
- Click **coper**, then enter the appropriate information in the following text boxes:

- Password**
- Verify Password**
- Path to Home Directory**
- Shell = /bin/csh**

- Then click **yes** to create user account. When the dialog box stating User Account Created appears, click **OK**.
- Click on the **TFM** icon.
- The "CSE-SS V1.4.2 Administration – Role (TFM Group)" window appears. Click **isso**.
- Click **Yes** to create role account now. When the dialog box stating Role isso created, click **OK**.
- Click **admin**.
- Click **Yes** to create role account now. When the dialog box stating Role admin created, click **OK**.

- Click **oper**.
- Click **Yes** to create role account now. When the dialog box stating Role oper created, click **OK**.
- Click on the **TFM Privilege** icon.
- The "CSE-SS V1.4.2 Administration – TFM Privilege" window appears. Click **Yes**.
- The "Select A Role" window appears. Highlight **isso**, then click **OK**.
- The "CSE-SS V1.4.2 Administration – TFM Privilege" window appears. Click **isso**
- Click **Yes**.
- When the "Role ISSO Updated" window appears, click **OK**.
- The "Select A Role" window appears. Highlight **admin**, then click **OK**.
- The "CSE-SS V1.4.2 Administration – TFM Privilege" window appears. Click **admin**
- Click **Yes**.
- When the "Role admin Updated" window appears, click **OK**.
- The "Select A Role" window appears. Highlight **oper**, then click **OK**.
- The "CSE-SS V1.4.2 Administration – TFM Privilege" window appears. Click **oper**
- Click **Yes**.
- When the "Role oper Updated" window appears, click **OK**.
- The "Select A Role" window appears. Click **Cancel**.
- The "CSE-SS V1.4.2 Administration – TFM Privilege" window appears. Click on the **Network Port** icon.
- The "CSE-SS V1.4.2 Administration – Network Port" window appears. Click on the **Return to Main Menu** icon.
- The "CSE-SS V1.4.2 Administration" window appears. From the "**File**" menu, select "**Exit & Run Setup**".
- A "Text Box" window appears. Click **Yes**.
- A "Text Box" window appears. Click **OK**.
- A message appears asking to Abort or Continue. Click **Continue**
- The "CSE-SS V1.4.2 Setup" window appears. From the "**File**" menu, select "**Exit**".
- The "Exit CSE-SS V1.4.2 Setup" dialog box appears. Click **Yes**.
- A "Text Box" window appears. In the text box labeled "Map Name", type the systems hostname followed by `_local`.

IE. `hostname`_local

Note: Where ``hostname`` is the actual hostname of the server. Be sure not to include the ``` marks.

- Next to "Map Type" click "**Local**", then click "**OK**"
- The "CSE-SS V1.4.2 Map Administration" window appears. Click on the **Distribution** icon
- The "CSE-SS V1.4.2 Map Administration – Distribution" window appears. Select all databases under Target Databases.
- For "Target OS", select **Solaris**, then click on the **Defaults** icon.
- The "CSE-SS V1.4.2 Map Administration – Defaults" window appears. For each of the text boxes provided enter the appropriate data as follows:
 - UserID** min **11000** max **20000**
 - Password Aging:** min **0** max **90** warning **14**
 - Home Directory Parent** /**export/home/`hostname`**
 - Login Directory Parent** /**export/home/`hostname`**
 - Shell** /**bin/csh**
- Change the following items to your command's information:
 - Office**
 - Office Phone**
 - Organization**

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- ❑ Click on the **Initial Population** icon.
- ❑ The "CSE-SS V1.4.2 Map Administration – Initial Population" window appears. Click on **local** for all entries, then click on the **Return to Main Menu** icon.
- ❑ The "CSE-SS V1.4.2 Map Administration" window appears. From the **Map** menu, select **Create**.

Note: CSE-SS populates at this time. Defaults can be changed after installing CSE-SS by modifying the `/opt/cse/etc/maps/mapdir/users` file.

- ❑ From the **Map** menu, select **Close**.
- ❑ From the **Map** menu, select **Exit**
- ❑ Select **Yes**.

Note: No reboot is required after loading this portion of CSE-SS. Do not eject the CD-ROM at this time. You will be using it to install some CSE-SS Patches.

B. Upgrading CSE-SS from Solaris 2.6 to Solaris 7

Media required: **CSE-SS Version 1.4.2.1 for Solaris 2.6/2.7 CD**

Note: You must be user **root** to perform these steps (unless specified otherwise). Login with any user account that has the appropriate privileges to run the User Administration Tool and access to a shell window. Open a new shell window and su to **root**

Insert the **CSE-SS Version 1.4.2.1 for Solaris 2.6/2.7 CD** and type the following:

```
# cd /cdrom/cdrom0/1_4_2/2_7<cr>
```

Begin the upgrade process:

```
# ./install.cse<cr>
```

- The "CDROM Directory" window appears. Click **OK** to continue.
- The "CSE-SS Version 1.4.2 Installation" window appears. Attempt to click **Base Software**.

Note: Pay careful attention to the next step as it is very important. Be certain to select the Upgrade option in order to upgrade CSE-SS 1.4.2.1 from Solaris 2.6 to Solaris 7. This sample only updates the CSE-SS binaries and does not modify the CSE-SS configuration.

- The "/opt/cse already exists!" window appears. Click **Upgrade**.
- The "CSE-SS Version 1.4.2 Installation" window appears. Note the **Install** button has changed to **Upgrade**. Click the following items:
 - Base Software**
 - Print Facility**
 - Security Profile Inspector (SPI 3.2.2)**
 - SPI Documentation**
- Once you have selected these four items click **Upgrade**.
- The "Base Software: Upgrading in /opt" window appears and exits when complete.

Note: The CSE-SS software installs at this time and takes about 5 minutes to complete.

- The "CSE Installation Successful" window appears. Click **OK**
- A "Dialog Box" appears stating "Install data copied". Click **OK**
- A "Dialog Box" appears stating "Log file created". Click **OK**
- The "CSE-SS V1.4.2 Installation" window appears. Click **Setup**
- A text box appears stating "Since the Base Software was upgraded, Setup only need to be Verified and Save & Executed at this time". Click **OK**.
- An untitled text box appears verifying configuration of NIS, system software packages, security, auditing. Click **OK**.
- A "Dialog Box" appears asking to Abort or Continue. Click **Continue**.
- The "CSE V1.4.2 Setup" window appears. From the File menu, select **Exit**.
- The "Exit CSE V1.4.2 Setup" window appears. Click **Yes**.

Now is an opportune time to update any user home directories that may have changed if the home directory filesystem(s) were modified during the operating system upgrade. Modification and update of user home directories should be accomplished through the CSE-SS User Maintenance Tool (from the ISSO palette)

Note: No reboot is required after loading this portion of CSE-SS. Do not eject the CD-ROM at this time. You will be using it to install some CSE-SS Patches.

12.) CSE-SS Patches Installation Instructions for Solaris 2.6, and Solaris 7

Required Media: CSE-SS Version 1.4.2.1 for Solaris 2.6/2.7 CD

Note: You must be user **root** to perform these steps (unless specified otherwise).

For Solaris 2.5.1 insert the CDROM entitled **CSE-SS Version 1.4.0.3 for Solaris 2.5.1:**

```
# cd /cdrom/cdrom0/patch<cr>
```

For the Solaris 2.6/7.0 insert the CDROM entitled **CSE-SS Version 1.4.2.1 for Solaris 2.6/2.7:**

```
# cd /cdrom/cdrom0/patch<cr>
```

Begin the patch installation process:

```
# ./patchcse -if<cr>
```

During this installation process you will be prompted several times to enter information.

- You will then be asked, "Do you wish to use these values?" type **Y**<cr>
- Next you will be asked, "Are these values OK?" type **Y**<cr>
- For Solaris 2.6 or Solaris 7 systems with CSE-SS 1.4.2 the CSE-SS installation is now complete. When your command prompt appears again, remove the CDROM and reboot your server:

```
# init 6<cr>
```

Once the server has rebooted, login as *cisso* and begin the Broadsword installation.

- For Solaris 2.5.1 system with CSE-SS 1.4.0.2 continue with these procedures.
- You will then be asked, "Do you want to add password aging to root?" type **N**<cr>

When your command prompt returns:

```
# cd /<cr>  
# eject cdrom<cr>
```

Insert the CSE-SS Version 1.4.0.3 for Solaris 2.5.1 cdrom dated June 1999:

```
# cd /cdrom/cdrom0<cr>  
# ./patchcse -if<cr>
```

During this installation process you will be prompted several times to enter information. By pressing <cr> you will accept all of the default settings.

- You will then be asked, "Do you wish to use these values?" type **Y**<cr>
- Next you will be asked, "Are these values OK?" type **Y**<cr>
- You will then be asked, "Do you want to add password aging to root?" type **N**<cr>

When your command prompt appears again, remove the CDROM and reboot your server:

```
# init 6<cr>
```

Once the server has rebooted, login as *cisso* and begin the Broadsword installation.

13.) AFDI 1.1 for Solaris 7 Installation Instructions

A. Installing DII COE 4.2.0.0

Required Media: **AFDI 1.1.0.1, for Solaris 7, 23 May 2001**

For additional guidelines on installing DII COE 4.2.0.0, please review the AFDI UNIX Installation and Configuration Guide, Section 4.2, Installing DII COE 4.2.0.0, page 46, located on the AFDI 1.1 CDROM.

Note: You must be user **root** to perform these steps (unless specified otherwise).

Before loading CSE-SS 1.4.2.1 and Broadsword 3.1, you **must** create a *bswd* group of 600 through the Sun admintool. To create this group, invoke admintool:

```
# admintool&<cr>
```

- The “Admintool: Users” window appears. From the **Browse** menu select **Groups**.
- The “Admintool: Groups” window appears. From the **Edit** menu select **Add**.
- The “Admintool: Add Group” window appears. Fill in the information as detailed below.
 - Group Name: **bswd**
 - Group ID: **600**
 - Members List: **“Leave blank”**
- Once you have entered the appropriate information click **OK**.
- The “Admintool: Users” window appears. From the **File** menu select **Exit**.

The following significant changes are made to the system once DII COE is installed:

- Root login to the console will be disabled.
- Services such as finger, ftp, name, rexec, rlogin, rpc.cmsd, rsh, telnet, and uucp will be disabled.

Insert the AFDI 1.1 for Solaris 7 CDROM. If autostart doesn’t spawn the CDROM File Manager you may have to start the volume manager. To start the volume manager type the following command:

```
# /etc/init.d/volmgt start
```

Once the CDROM File Manager window appears, you know the CDROM is mounted and ready for use. To begin the DII COE installation type the following commands at the command prompt:

```
# cd /cdrom/cdrom0  
# ./inst.dii
```

The “Installing DII COE Kernel 4.2.0.0” screen appears informing you the log file for this installation will be */var/adm/COE4200_install.log.<date>.<time>*

Note: *<date>* equates to the current date as in 10022001 (10 Feb, 2001)
<time> equates to the time as in 142359. (14:23:59)
e.g. */var/adm/COE4200_install.log.10022001.142359*

- When prompted, “*Does this network have a default router?*” press [**Return**] to accept the default of yes.
- When prompted, “*Enter the IP Address of you Default Router, then press [Return]:*”, Enter the IP address of the default router and then press [**Return**].
- The system will have you verify the IP address you’ve entered for the default router, then prompt you, “*Press [y] for yes or [n] for no, then press [Return]*”, press [**Return**] to accept the default of yes.

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- ❑ When prompted, “*What media type is the kernel on? Select:*”, type **3** for CDROM, then press **[Return]**.

You will then receive the following message:

Begin Installing COE 4.2.0.0

At this point DII COE begins to install. After about 3 – 5 minutes the following prompt will appear:

*Enter a password for sysadmin
New password:*

- ❑ Enter an appropriate password, then press **[Return]**.
- ❑ You will then be prompted, “*Re-enter new password:*”, re-enter the password you used, then press **[Return]**.

After setting the sysadmin password, the following prompt will appear:

*Enter a password for secman
New password:*

- ❑ Enter an appropriate password, then press **[Return]**.
- ❑ You will then be prompted, “*Re-enter new password:*”, re-enter the password you used, then press **[Return]**.

Once you have entered and verified the passwords for sysadmin and secman, the following message appears:

“Sysadmin and secman passwords have been entered.”

- ❑ After a few moments you will be prompted, “*Would you like to enable APM Authentication?*”. “*Press [y] for yes or [n] for no, then press [Return]*”, press **[Return]** to accept the default of yes.
- ❑ You will then be prompted, “*Please enter the master key (must be at least six characters):*”. Enter an appropriate password then press **[Return]**.

Note: This APM master authentication key must be used when installing segments via Segment Installer or performing transactions using APM. The master key is visible while being typed during this procedure only.

- ❑ After a few moments you will then be prompted, “*Press Enter to reboot and finish installation of DII COE Kernel v 4.2.0.0*”. Press **[Return]**.

The system reboot at this time.

Note: Depending on your systems configuration you may be required to enter your firmware password.

Once the system is finished rebooting the DII COE login screen will appear. Login as sysadmin.

Do not proceed with any other steps until the “*COE Login Processing is Complete*” window appears, then click **OK**.

B. Installing DII COE 4.2.0.0 Kernel Patch 1

Required Media: **AFDI 1.1.0.1, for Solaris 7, 23 May 2001**

For additional guidelines on installing DII COE Kernel Patch 1, please review the AFDI UNIX Installation and Configuration Guide, Section 5.1.2.1 Installing the DII COE 4.2.0.0 Kernel Patch 1, page 78, located on the AFDI 1.1 CDROM

Before installing the DII COE 4.2.0.0 Kernel Patch, you need to verify the sysadmin account is functioning properly.

- ❑ From the CDE Panel, click on the Profile Selector icon (head with a "?").
- ❑ The "Profile Selector" window appears. Select the "SA Default" profile in the "Available Profiles" panel. Click the ">> (Add)" button to add the profile to the "Selected Profiles" panel, then click the "OK" button.

Note: The SA Default profile may already be listed in the Selected Profiles panel. If it is already added, select added, select Cancel and skip the next step.

- ❑ The "Profile Selector Results" window appears. Click the "Done" button.
- ❑ Right-click on the desktop to display the "Workspace Menu". Select "Applications", then "Application Manager".
- ❑ The "Application Manager" window appears. Double-click on the "DII_APPS" icon.
- ❑ The "Application Manager DII_APPS" window appears. Double-click on the "SysAdm" icon.
- ❑ The "Application Manager - SysAdm" window appears. Icons assigned to the "SA Default" profile are displayed in the window.

Note: If you can get to this point without any problems, the sysadmin account should be functioning just fine.

- ❑ To begin installing the DII COE 4.2.0.0 Kernel Patch 1 Segment, double-click on the "Segment Installer" icon.

Note: The installer displays all segments that are currently loaded on the system. Release Notes for any installed segment can be viewed by highlighting the segment and then clicking the "Release Notes" button.

- ❑ The "Installer" window appears. Ensure the AFDI 1.1 CD is in the CDROM Drive, then click on the "Select Source" button.
- ❑ The "Select Source" window appears. Select the "CDROM" button.
- ❑ The "Select File" window appears. From the files scroll area select "coepatch.tar", then click **OK**.
- ❑ The "Installer" window appears. Select the "Read Contents" button.
- ❑ In the lower windowpane of the Segment Installer window, highlight the "DII-COE 4.2.0.0 Kernel Patch 14.2.0.0P1" segment, then click the "Install" button.
- ❑ You will be prompted for a password. **Enter the APM Authentication Key password** you set during the DII COE Installation and click **OK**.
- ❑ When prompted, click **OK** to reboot the system in order to complete the installation of the DII COE Kernel Patch.

Note: The system reboots at this time. After the system reboots, login as sysadmin.

C. Installing TCP Wrappers

Required Media: **AFDI 1.1.0.1, for Solaris 7, 23 May 2001**

For additional guidelines on installing AFDI, please review the AFDI UNIX Installation and Configuration Guide, Section 5.1.2.2 AFDI Installation Overview, page 78, located on the AFDI 1.1 CDROM

- ❑ Right-click on the desktop to display the "*Workspace Menu*". Select "**Applications**", then "**Application Manager**".
- ❑ The "*Application Manager*" window appears. Double-click on the "**DII_APPS**" icon.
- ❑ The "*Application Manager DII_APPS*" window appears. Double-click on the "**SysAdm**".
- ❑ The "*Application Manager – SysAdm*" window appears. Icons assigned to the "SA Default" profile are displayed in the window.
- ❑ To begin installing the TCP Wrappers Segment, double-click on the "**Segment Installer**" icon.

Note: The installer displays all segments that are currently loaded on the system. Release Notes for any installed segment can be viewed by highlighting the segment and then clicking the "Release Notes" button.

- ❑ The "*Installer*" window appears. Ensure the AFDI 1.1 CD is in the CDROM Drive, then click on the "**Select Source**" button.
- ❑ The "*Select Source*" window appears. Select the "**CDROM**" button.
- ❑ The "*Select File*" window appears. From the files scroll area select "**tcpwrapr.tar**", then click **OK**.
- ❑ The "*Segment Installer*" window appears. Select the "**Read Contents**" button.
- ❑ In the lower windowpane of the Segment Installer window, highlight the "**TCP Wrappers**" segment, then click the "**Install**" button.
- ❑ You will be prompted for a password. **Enter the APM Authentication Key password** you set during the DII COE Installation and click **OK**.
- ❑ A message will appear stating:

"Installation is completed. Log will be kept in the `/var/log/syslog` file. In order to modify the access restrictions, refer to the `/h/COE/Comp/TCPW/data/README.txt` file."

- ❑ Click **OK** to complete the installation of TCP Wrappers.

D. Installing AFDI 1.1.0.1 for Solaris 7

Required Media: **AFDI 1.1.0.1, for Solaris 7, 23 May 2001**

For additional guidelines on installing AFDI, please review the AFDI UNIX Installation and Configuration Guide, Section 5.2.1 Fresh Install, page 82, located on the AFDI 1.1 CDROM

Note: If you have not exited the Segment Installer window, skip the next 5 steps.

- Right-click on the desktop to display the "Workspace" menu. Select "Applications", then "Application Manager".
- The "Application Manager" window appears. Double-click on the "DII_APPS" icon.
- The "Application Manager DII_APPS" window appears. Double-click on the "SysAdm" icon.
- The "Application Manager – SysAdm" window appears. Icons assigned to the "SA Default" profile are displayed in the window.
- To begin installing the AFDI 1.1.0.1 Segment, double-click on the "Segment Installer" icon.

Note: The installer displays all segments that are currently loaded on the system. Release Notes for any installed segment can be viewed by highlighting the segment and the clicking the "Release Notes" button.

- The "Installer" window appears. Ensure the AFDI 1.1 CD is in the CDROM Drive, then click on the "Select Source" button.
- The "Select Source" window appears. Select the "CDROM" button.

Note: Although CDROM may already to selected, you MUST click on CDROM again to bring up the list of files on the CD-ROM.

- The "Select File" window appears. From the files scroll area select "sol-afdi.tar", then click **OK**.
- The "Installer" window appears. Select the "Read Contents" button.
- In the lower windowpane of the Segment Installer window, highlight the "AF DoDIIS Infrastructure" segment, then click the "Install" button.
- You will be prompted for a password. **Enter the APM Authentication Key password** you set during the DII COE Installation and click **OK**.

Note: If you did not exit the Segment Installer window, this will not appear.

- The "Pre AFDI Configuration" window appears.
- When prompted, "Do you wish to run the Automated Configuration Script?", enter **y**.
- When prompted, "Do you have an existing Pre-AFDI configuration file prepared?", enter **n**.
- When prompted, "Choose Security Mode: (enter choice):", enter **a** for command.

Note:

- When changing the security mode from "none" to "command" or "full", the administrator will be prompted for the password to be used and will be asked for verification.
- The PROM monitor MUST have a security mode of at least "command"
- If the security mode is set to "command", a password is required for all PROM commands except for the "boot" (b) and "continue" (c) commands. If the security mode is set to "full", a password is required for all PROM commands except the "continue" (c) command.

- When prompted, "Do you wish to allow non-console root logins?", enter **n**.

Note: This is a troubleshooting recommendation. Until the network services are all verified as operational, remote access as root may be required to allow troubleshooting of network configuration problems. Having root login restricted to console access provides higher security. Answer "y" to allow root remote login to the workstation being installed.

- ❑ You will receive a message stating "*The default AFDI Audit Flags are (lo,fr,pc,fd,ad)*" Then you will be prompted, "*Do you wish to use these?*", press **[Return]** to accept the default of yes.
- ❑ When you are prompted, "*Do you wish to enter any more flags?*", press **[Return]** to accept the default of no.
- ❑ When prompted, "*Do you wish to enter any naflags?*", press **[Return]** to accept the default of no.
- ❑ When prompted, "*Choose a naming service: (enter choice):*", type **c** for local.
- ❑ When prompted, "*Enter NIS/NIS+ domain name:*", type a name in. The system will not function properly if this field is left blank.

IE. broadsword.server

- ❑ When prompted, "*Choose the home directory mount type: (enter choice):*", type **a** for auto mounting.
- ❑ When prompted, "*Is this host a home directory server?*", type **y**.

Note: You must select y if the machine you are installing is a stand-alone server or if it really is the home directory server.

- ❑ When prompted, "*Enter the home directory mount point that clients of `hostname` will use [/h/USERS/global/hostname]"* press **[Return]**
- ❑ When prompted, "*Enter any additional home directory servers below. When finished, press enter on a empty line to exit home directory server:*", press **[Return]**
- ❑ You will receive the message, "*Enter in the hostname of the home directory clients for `hostname`, one per line. When finished, press enter on an empty line to exit. `hostname` home directory client:*", press **[Return]**
- ❑ When prompted, "*Is this host a Mail Hub? (Answer "y" if a "Local" machine)*", type **y**.
- ❑ You will receive a message, "*Enter the hostname of the mail clients for `hostname`, one per line. When finished, press enter on an empty line to exit. `hostname` mail client:*", press **[Return]**
- ❑ When prompted, "*Enter root mail alias destination: [cisso@mailhost]"*, press **[Return]**
- ❑ When prompted, "*Enter isso mail alias destination: [cisso@mailhost]"*, press **[Return]**
- ❑ When prompted, "*Enter admin mail alias destination: [cadmin@mailhost]"*, press **[Return]**
- ❑ When prompted, "*Enter operator mail alias destination: [coper@mailhost]"*, press **[Return]**
- ❑ When prompted, "*Do you want to configure network printer?*", type **n**
- ❑ When prompted, "*Do you want to install SPI-Net after the AFDI installation completes?*", type **y**
- ❑ You will now be given an opportunity to change and of the items you have just configured.
- ❑ You will be prompted, "*Enter the menu number of the variable you wish to change, or "q" to quit editing: [q]"*. If you do not see any problems with the information you have entered then press **[Return]** to accept the default of quit.
- ❑ When prompted, "*Do you wish to proceed with the configuration?*", type **y**
- ❑ You will be prompted, "*Set security password: Changing PROM password: New Password:*" enter the new password.

Note: BE SURE TO WRITE THIS PASSWORD DOWN IN A SECURE LOCATION WHERE MORE THAN ONE PERSON MAY ACCESS IT. IF YOU LOSE THIS PASSWORD THE SYSTEM WILL HAVE TO BE SENT BACK TO SUN TO BE RESET. THERE IS NO SYSADMIN MAGIC TO RECOVER A LOST PROM PASSWORD.

- ❑ When prompted, "*Retype new password:*" re-enter the new password from the previous step.
- ❑ An information message will appear stating, "*Press enter to continue the installation.*", press **[Return]**

The software installs at this time and takes about 2 minutes. Then the "*AFDI 1.1.0.1 Administration (Solaris)*" window appears. You are now ready to Configure AFDI. Proceed to the next section.

E. Configuring AFDI 1.1.0.1 for Solaris 7

Required Media: **AFDI 1.1.0.1, for Solaris 7, 23 May 2001**

For additional guidelines on configuring AFDI, please review the AFDI UNIX Installation and Configuration Guide, Section 5.3.1 Fresh Install, page 92, located on the AFDI 1.1 CDROM

- The "*AFDI V1.1.0.1 Administration (Solaris)*" window appears. Click on the **User Account** icon.
- The "*AFDI V1.1.0.1 Administration – User Account*" window appears. Click **cisso**, then enter the appropriate information in the following text boxes:
 - Password**
 - Verify Password**
 - Home Directory** = /h/USERS/local/cisso
 - Login Directory** = /h/USERS/local/cisso
 - Shell** = /bin/sh
- Then click **yes** to create user account. When the dialog box stating **cisso Created** appears, click **OK**.
- Click **cadmin**, then enter the appropriate information in the following text boxes:
 - Password**
 - Verify Password**
 - Home Directory** = /h/USERS/local/cadmin
 - Login Directory** = /h/USERS/local/cadmin
 - Shell** = /bin/sh
- Then click **yes** to create user account. When the dialog box stating **cadmin Created** appears, click **OK**.
- Click **coper**, then enter the appropriate information in the following text boxes:
 - Password**
 - Verify Password**
 - Home Directory** = /h/USERS/local/coper
 - Login Directory** = /h/USERS/local/coper
 - Shell** = /bin/sh
- Then click **yes** to create user account. When the dialog box stating **coper Created** appears, click **OK**.
- Click on the **Role (TFM Group)** icon.
- The "*AFDI V1.1.0.1 Administration – Role (TFM Group)*" window appears. Click **isso**.
- Click **Yes** to create role account now. When the dialog box stating **Role isso created**, click **OK**.
- Click **dadmin**.
- Click **Yes** to create role account now. When the dialog box stating **Role dadmin Created**, click **OK**.
- Click **oper**.
- Click **Yes** to create role account now. When the dialog box stating **Role oper Created**, click **OK**.
- Click on the **TFM Privilege** icon.
- The "*AFDI V1.1.0.1 Administration – TFM Privilege*" window appears then immediately afterwards the "*Select A Role*" window appears. Highlight **isso**, then click **OK**.
- The "*AFDI V1.1.0.1 Administration – TFM Privilege*" window appears. Click **ISSO**.
- Click **Yes**. When the "*Role ISSO Updated*" window appears, click **OK**.
- The "*Select A Role*" window appears. Highlight **dadmin**, then click **OK**.
- The "*AFDI V1.1.0.1 Administration – TFM Privilege*" window appears. Click **Administrator**.
- Click **Yes**. When the "*Role dadmin Updated*" window appears, click **OK**.
- The "*Select A Role*" window appears. Highlight **oper**, then click **OK**.
- The "*AFDI V1.1.0.1 Administration – TFM Privilege*" window appears. Click **Operator**.
- Click **Yes**. When the "*Role oper Updated*" window appears, click **OK**.
- The "*Select A Role*" window appears. Click **Cancel**.
- The "*AFDI V1.1.0.1 Administration*" window appears. Click on the **Network Port** icon.
- The "*AFDI V1.1.0.1 Administration – Network Port*" window appears. Click **Yes**.

- ❑ The "Service Updates" dialog appears. Click **OK**, then click on the **Return to Main Menu** icon.
- ❑ The "AFDI VI.1.0.1 Administration" window appears. From the "File" menu, select "**Exit & Run Setup**".
- ❑ A "Exit AFDI VI.1.0.1 Administration" window appears. Click **Yes**.
- ❑ A "AFDI Diagnostic Configuration" window appears. Correct any errors seen here, and then click **OK**.

Note: Consult the AFDI UNIX ICG for details on how to correct any errors that may appear.

- ❑ A message appears asking to Abort or Continue. Click **Continue**.
- ❑ The "AFDI VI.1.0.1 Setup" window appears. Click on the **Remote Development Software** icon.
- ❑ The "AFDI VI.1.0.1 Setup – Remote Development Software" window appears. No changes are required at this time. Click on the **Environment** icon.
- ❑ The "AFDI VI.1.0.1 Setup – Environment" window appears. No changes are required at this time. Click on the **XDISPLAY Manager (XDM)** icon.
- ❑ The "AFDI VI.1.0.1 Setup – XDISPLAY Manager (XDM)" window appears. There should be no changes required here. Click on the **Network Services** icon.
- ❑ The "AFDI VI.1.0.1 Setup – Network Services" window appears. In the section labeled "**AFDI Administration - Type**" click on **Server**.
- ❑ In the section labeled "**Network Time Protocol Type**" click on **Client** then enter the appropriate information for the NTP Server Name.
 - ❑ For the Internet refer to <http://tycho.usno.navy.mil/frtime.html>, select the link for "Setting your computer to USNO time", then pick the "Network Time Protocol (NTP)" link to find an appropriate time server.
 - ❑ For the SIPRNet refer to <http://www.ismc.sgov.gov>. On the main page, there is a Support section. Under this section there is a link to "Time Servers/Time Software." Follow this link, then follow the link on the next page to find the location of the time servers on SIPRNet.
 - ❑ For JWICS refer to <http://www.ic.gov>. On the main page, there is a Support section. Under this section there is a link to "Time Servers/ Time Software." Follow this link, then follow the link on the next page to find the locations of the time servers on JWICS.
- ❑ Click on the **ISD Daemon Configuration** icon.
- ❑ The "AFDI VI.1.0.1 Setup – ISD Daemon Configuration" window appears. Ensure the hostname of your machine is entered in each of the fields, and then click on the **Print Banners** icon.
- ❑ The "AFDI VI.1.0.1 Setup – Print Banners" window appears. In the text boxes provided, fill out the appropriate information in the items marked:
 - ❑ **Service Branch**
 - ❑ **Organization**
 - ❑ **Location**
- ❑ Click on the **Security Labels** icon.
- ❑ The "AFDI 1.1.0.1 Setup – Security Labels" window appears. In the text box marked "Classification", enter a classification level that is allowed to be processed on the system, then click on the "**Add Classification**" button. Be sure also to enter any applicable codewords, caveats and handling instructions that may be applicable for the security level of the machine.

Note: Repeat this step until all permitted classifications are entered for the system.

- ❑ Enter the appropriate information in the text boxes labeled:
 - ❑ **System High Label**
 - ❑ **System High Short Label**
- ❑ Click on the **Centralized Log/Audit Support Subsystem** icon.

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- The "AFDI VI.1.0.1 – Centralized Log/Audit Support Subsystem" window appears.
- In the text box labeled "**Server Name**" enter the hostname of the server. Select **Yes** for "**Enable Server Daemon**". In the text box labeled "**Archive Device**" type `/dev/null` and then click on the **DNS Resolver** icon.
- The "AFDI VI.1.0.1 Setup – DNS Resolver" window appears. For "**Type**" select **Client**. Enter in the appropriate information for the following items:
 - DNS Domain**
 - IP Address of Primary Name Server**
 - P Address of Secondary Name Server (Optional)**
 - IP Address of Secondary Name Server (Optional)**
- When you are finished entering the appropriate information click on the **Return to Main Menu** icon.
- The "AFDI VI.1.0.1 Setup" window appears. From the "**File**" menu, select "**Save & Execute**".

Note: Configuration changes are implemented at this time.

- The "AFDI VI.1.0.1 Setup- Log" window appears. Correct any errors, and then click "**Close**".
- The "AFDI VI.1.0.1 Setup" window appears. From the "**File**" menu, select "**Exit**".
- The "Exit AFDI VI.1.0.1 Setup" dialog box appears. Click **Yes**.
- A "Map Name Dialog" window appears. In the text box labeled "**Map Name**", type the systems hostname followed by `_local`.

IE. ``hostname`_local`

Note: Where ``hostname`` is used, type the actual hostname of the server vice `hostname`` and be sure NOT to include the ``` marks.

- Next to "**Map Type**" click "**Local**", then click "**OK**".
- The "AFDI VI.1.0.1 Map Administration" window appears. Click on the **Distribution** icon.
- The "AFDI VI.1.0.1 Map Administration – Distribution" window appears. Select all databases under "**Target Databases**".
- For "**Target OS**", select **Solaris**, then click on the **Defaults** icon.
- The "AFDI VI.1.0.1 Map Administration – Defaults" window appears. For each of the text boxes provided enter the appropriate data as follows:
 - UserID** min 200 max 499
 - GroupID** min 200 max 499
 - Password Aging:** min 0 max 90 warning 14
 - Login Group** bswd
 - Home Directory Parent** /h/USERS/local/`hostname`
 - Login Directory Parent** /h/USERS/local/`hostname`
 - Shell** /bin/csh
- Change the following items to your command's information:
 - Office**
 - Office Phone**
 - Organization**
- Click on the **Initial Population** icon.
- The "AFDI VI.1.0.1 Map Administration – Initial Population" window appears. Click on **local** for all entries, then click on the **Return to Main Menu** icon.
- The "AFDI VI.1.0.1 Map Administration" window appears. From the **Map** menu, select **Create**.

Note: AFDI Populates at this time.

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- ❑ The “*AFDI VI.1.0.1 Map Administration – Log*” window appears. Click **Close**.
- ❑ From the **Map** menu, select **Exit**.
- ❑ The “*Exit AFDI VI.1.0.1 Map Administration*” window appears. Click **Yes**.

The Basic AFDI functionality is now completed. To complete the AFDI Installation and Configuration Process, proceed to the next section to install and configure SPI-Net.

F. Installing SPI-NET for Solaris 7

Required Media: **AFDI 1.1.0.1, for Solaris 7, 23 May 2001**

For additional guidelines on configuring AFDI, please review the AFDI UNIX Installation and Configuration Guide, Section 5.3.5.1, page 135, located on the AFDI 1.1 CDROM

Once you have completed the AFDI configurations the installation process will continue.

- The "*SPINET Installation*" window appears.
- When prompted, "*Do you want this workstation to be a Command Host or a Remote Host?*" type **c** <cr>
- When prompted, "*You have selected Command Host. Is this Correct?*" press **[Return]** to accept the default yes.
- The "*License Agreement*" window appears.
- When prompted, "*If you accept the conditions described above, please enter yes. Otherwise enter no [y]*" press **[Return]**
- When prompted, "*Hit return to continue this installation or Enter n to exit:*" press **[Return]**
- When prompted, "*Please enter the full SPI-NET Command Host name. (ie xxx.llnl.gov)*" enter the machines fully qualified host name.

IE. earnhardt.langley.af.smil.mil

- When prompted, "*Is this correct?*" press **[Return]**
- When prompted, "*Do you wish to take the CDT snapshot now?*" press **[Return]**

Note: SPI-NET installs at this time and only takes a few moments to complete.

- The "*Installer*" window appears at this time. Click **Exit**

Reboot the server by typing **init 6** at the root prompt.

When the system finishes rebooting login as **cisso**.

In order for SPI-Net to function properly, several post-installation configurations will need to be made. The best procedures for this are found beginning on page 138 of the AFDI Unix Installation and Configuration Guide. Refer to this now to configure SPI-Net.

G. AFDI Boot Utility Fix for Solaris 7

Required Media: **None**

If you choose to use the Boot Utility provided by AFDI you will need to run the following procedures to make this possible.

This item corrects an error received when attempting to halt or reboot the system using the Boot Utility on the ISSO Panel. The solution was provided by the AFDI Help Desk for the following error:

```
Unable to reboot `hostname`  
Connection to `hostname` broken:  
RPC: Unable to receive; An event requires attention.
```

If you receive this error, perform the following steps:

Note: You must be user **root** to perform these steps (unless specified otherwise).

- ❑ At the command prompt as root verify rpc is functioning by typing:

```
rpcinfo -t `hostname` isd
```

Note: Where `hostname` equates to the actual hostname of your system. Do not include the ` marks.

- ❑ If this works you should receive a message saying that it is ready and waiting.
- ❑ Next you need to verify the isd.conf file is configured correctly.

```
cd /h/AFDI/config
```

- ❑ Then edit the isd.conf file:

```
vi isd.conf
```

Once in the file you will verify/correct the following information:

- ❑ Ensure the following entries equal your machines hostname.

```
DISK_SPACE=`hostname`  
PROCESS_MANAGEMENT=`hostname`  
BOOT_UTILITY=`hostname`  
ARCHIVE_UTILITY=`hostname`  
TERMINAL_EMULATOR=`hostname`  
USER_GRP_MAINTENANCE=`hostname`  
USER_ACCT_INFO=`hostname`=`hostname`
```

Note: Where `hostname` equates to the actual hostname of your system. Do not include the ` marks.

- ❑ Ensure the following lines are commented (#) out. They should appear as shown below:

```
#USER_IDS_RANGE=  
#GROUP_IDS_RANGE=  
#USER_IDS=  
#GROUP_IDS=
```

- ❑ Once this is completed you should be able to use the Boot Utility function.

14.) Installing the Java Runtime Environment (JRE) v 1.3.1

Prior to the installation of the TTA v1.0.2 software on the TTA platforms the Java Runtime Environment (JRE) v 1.3.1 needs be installed in order to support the configuration of the TTA system. This installation should be performed in accordance with the following steps. The time required to perform these steps is approximately 15 minutes.

- ❑ Login to the workstation as a System Administrator who has permission to “su” to **root**.
- ❑ Open a terminal window and “su” to **root** by executing the following command:

```
% su -
```

- ❑ In the terminal window, change the current working directory to the **/usr** directory by executing the following command:

```
# cd /usr
```

- ❑ In the terminal window, execute the following command to copy the self-extracting binary from the java directory located on the TTA Installation CD-ROM by executing the following command:

```
# cp <CD-ROM Mount Point>/java/j2re-1_3_1_02-solsparc.sh .
```

- ❑ Make sure that the execute permissions are set on the self-extracting binary file by executing the following command:

```
# chmod +x j2re-1_3_1_02-solsparc.sh
```

- ❑ Run the self-extracting binary by issuing the following command:

```
# ./j2re-1_3_1_02-solsparc.sh
```

A directory called **j2re1_3_1_02** will be created in the **/usr** directory.

15.) Installing the IONA Orbix 3.3.2 Software

Required: **Jumbo Travel Disc for Broadword Installers CD**

Note: You must be user **root** to perform these steps (unless specified otherwise). It is only necessary to load the IONA Orbix software if the system will interface with an IPL 3.0. It is not necessary to load the IONA Orbix software if Broadword is co-hosted on an IPL 3.0.

Insert the CD into the CDROM drive and boot the system from the CDROM Drive.

```
boot cdrom<cr>
```

It may take a few minutes for the initial screen to appear.

The location where the Orbix software is installed is dependent on the security environment of the system.

For CSE-SS environment:

Install the IONA Orbix software:

```
cp /cdrom/cdrom0/Orb.tar.gz /opt/  
cd /opt  
gunzip Orb.tar  
tar xvpf Orb.tar
```

IONA Orbix software installation is complete.

For AFDI environment:

Install the IONA Orbix software:

```
cp /cdrom/cdrom0/Orb.tar.gz /h/COTS/  
cd /h/COTS  
gunzip Orb.tar  
tar xvpf Orb.tar
```

Modify IONA Orbix environment files for use with AFDI.

Edit the /h/COTS/iona/setenvs.csh file and modify the IONA_ROOT variable as follows:

```
setenv IONA_ROOT /h/COTS/iona
```

Edit the /h/COTS/iona/setenvs.sh file and modify the IONA_ROOT variable as follows:

```
IONA_ROOT=/h/COTS/iona ; export IONA_ROOT
```

For both environments:

Obtain the IPL 3.0 site name:

```
/opt/bswd3.1/bin/GetIplIpaNames.csh
```

Note the IPL 3.0 site name for use when configuring the IPL 3.0 plugin.

16.) General Trouble-Shooting & Miscellaneous

Running Broadsword in the Verbose Mode

It is often useful to run the Gatekeeper and/or individual plugins in the verbose mode in order to isolate and resolve configuration/communication problems. Each Broadsword local backside source that is configured will have an accompanying process (daemon) that is started when Broadsword (`startserver`) is started. All remote sources use the `remote_plugin.SVR4` for communication.

Note: You must be user `root` to perform these steps (unless specified otherwise).

- To run the Gatekeeper in verbose mode:

```
# csh<cr>
# ps -ef | grep gatekeeper.SVR4<cr>
# kill PIDs<cr>
# ps -ef | grep gatekeeper.SVR4<cr>
# source /opt/bswd3.1/etc/server_env_vars<cr>
# setenv SYBASE /opt/bswd3.1/odbc<cr>
# cd /opt/bswd3.1/bin
# strings gatekeeper.SVR4|grep _DEBUG_
Several DEBUG variables will be displayed. Note all unique occurrences of these DEBUG variables and
perform a setenv for each. The next line is given as an example.
# setenv _DEBUG_ <cr>
# /opt/bswd3.1/bin/gatekeeper.SVR4<cr>
```

- To run individual plugins in verbose mode:

```
# csh<cr>
# ps -ef | grep backside_source_plugin.SVR4<cr>
# kill PIDs<cr>
# ps -ef | grep backside_source_plugin.SVR4<cr>
# source /opt/bswd3.1/etc/server_env_vars<cr>
# source /opt/bswd3.1/plugins/backside_source/env_vars<cr>
# cd /opt/bswd3.1/bin
# strings backside_source_plugin.SVR4|grep _DEBUG_
Several DEBUG variables will be displayed. Note all unique occurrences of these DEBUG variables and
perform a setenv for each. The next line is given as an example.
# setenv _DEBUG_ <cr>
# /opt/bswd3.1/bin/backside_source_plugin.SVR4<cr>
```

The backside sources can be found in the `/opt/bswd3.1/bin` directory.

- To run conan in verbose mode:

```
# csh<cr>
# ps -ef | grep conan<cr>
# kill PIDs<cr>
# ps -ef | grep conan<cr>
# source /opt/bswd3.1/etc/server_env_vars<cr>
# cd /opt/bswd3.1/bin
# strings conan|grep _DEBUG_
Several DEBUG variables will be displayed. Note all unique occurrences of these DEBUG variables and
perform a setenv for each. The next line is given as an example.
# setenv _DEBUG_ <cr>
# /opt/bswd3.1/client/bin/startconan<cr>
```

Changing the gid for the bswd Group

Broadsword requires the *bswd* group to have a unique *gid*. The BSWD PMO typically used a *gid* of 60 for the *bswd* group unless the site specifies otherwise. Occasionally, it is necessary to change the *gid* for the *bswd* group after the system has been installed to avoid a conflict with an existing site *gid*. The following procedure can be used to change the *gid* for the *bswd* group.

Edit the */etc/groups* file (or update the NIS/NIS+ map) and change the *bswd* group to *oldbswd*.

```
# cd /opt/bswd3.1<cr>
# find . -group oldbswd -print | xargs chgrp bswd<cr>
```

Changing IP address and hostname

Scripts required: **ChangeIPAddressonUltra80.sh**
ChangeHostNameonUltra80.sh

Ideally, IP address and hostname are assigned during the operating system install. However, it is sometimes necessary to change the IP address and hostname after the system has arrived at the site. To change the IP address and hostname, perform the following procedure.

Note: You must be user **root** to perform these steps (unless specified otherwise).

Bring down the Broadsword server:

```
# /opt/bswd3.1/scripts/stopsserver<cr>
```

As user *sybase*, change the IP address in the Sybase interfaces file:

```
# su - sybase<cr>
% csh<cr>
% setenv SYBASE /opt/SYBASE<cr>
% setenv DISPLAY localhost:0.0<cr>
% /usr/openwin/bin/xhost localhost<cr>
% /opt/SYBASE/bin/dsedit<cr>
```

- In the “dsedit – Select a directory service” window, select the “**Sybase interfaces file**” entry (if not already selected) from the “Select a directory service to open:” scroll area and click “**OK**”.
- In the “dsedit – Directory Service Session” window, select the “**BSWD_hostname_SVR**” entry from the “Available servers:” scroll area and click “**Modify server entry**”.
- In the “dsedit – Server Entry Editor” window, select the “**tli tcp: hostname 2503**” entry from the “Available network transports:” scroll area and click “**Modify network transport**”.
- In the “dsedit – Network Transport Editor” window, enter the new IP address in the “Host Name:” text box and click “**OK**”.
- In the “dsedit – Select a directory service” window, select the “**Sybase interfaces file**” entry (if not already selected) from the “Select a directory service to open” scroll area and click “**OK**”.
- In the “dsedit – Directory Service Session” window, select the “**SYB_BACKUP**” entry from the “Available servers:” scroll area and click “**Modify server entry**”.
- In the “dsedit – Server Entry Editor” window, select the “**tli tcp: hostname 2653**” entry from the “Available network transports:” scroll area and click “**Modify network transport**”.
- In the “dsedit – Network Transport Editor” window, enter the new IP address in the “Host Name:” text box and click “**OK**”.

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- ❑ In the “dsedit – Network Transport Editor” window, enter the new IP address in the “Host Name:” text box and click “**OK**”.
- ❑ In the “dsedit – Select a directory service” window, click “**Exit**”.
- ❑ When prompted “Are you sure you want to exit”, click “**Yes**”.

Exit from the *sybase* user account back to *root*:

```
% exit<cr>
```

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As user *root*, edit the IP address script. This script must contain the current IP address of the Broadsword server (i.e. the IP address that you want to change will be hard coded in this script). Verify that the script contains the current IP address, otherwise modify all occurrences of the IP address to reflect the current IP address. Run the change IP address script with the new IP address as the argument:

```
# cd /home/bswdserv/bswduser<cr>
# ./ChangeIPAddressonUltra80.sh 1st-octet 2nd-octet 3rd-octet 4th-
octet<cr>
```

Where the four octets of the IP address are <spacebar> delimited. For example:

```
# ./ChangeIPAddressonUltra80.sh 128 132 42 14<cr>
```

As user *root*, edit the hostname script. This script must contain the current hostname of the Broadsword server (i.e. the hostname that you want to change will be hard coded in this script). Verify that the script contains the current hostname, otherwise modify all occurrences of the hostname to reflect the current hostname. Run the change hostname script with the new hostname and fully qualified domain name as the arguments:

```
# cd /home/bswdserv/bswduser<cr>
# ./ChangeHostNameonUltra80.sh new_hostname fully_qualified_domain_name<cr>
```

For example:

```
# ./ChangeHostNameonUltra80.sh bswdservnew ird.rl.af.mil<cr>
```