CODE B9r1.27 SOLARIS INSTALLATION INSTRUCTIONS

NWS & PUBLIC EDITIONS

Setting up SUN Recommended Patches for Solaris 8 & Installing Software Packages (1 of 2)

(This part of the instructions is to be done ONCE on a Blade machine; before the first installation of RPG or CODE software. If you have done these instructions before on the Blade machine that you are installing CODE on, proceed to page 3 "Creating a New (Pristine) Account").

Checking Operating System

```
code8v1:code8v1/      107 > uname -a
SunOS Dev2 5.8 Generic_108528-17 sun4u
sparc SUNW,Sun-Blade-100
code8v1:code8v1/      108 >
```

1. From the CDE Login page, enter your **Username** and **Password** to log into **ANY** account on your SUN machine.
2. You are expected to have SUN Solaris 8 & required Solaris packages. (See e.g. on the left). Type:
   su (login as root with root password)
   uname -a
3. If you have SunOS 5.8, **go to step #7** to continue. If you do not, the recommended Solaris patches should be applied prior to compiling the ORPG software. The original Solaris 8 distribution included several bugs preventing use with CODE. Any set of recommended patches subsequent to July 2002 should be sufficient. If you need the Solaris 8 patches, a collection of recommended patches for Solaris 8 is updated frequently and available from the Sun Microsystems patch access web page.
4. Obtain the recommended patch archive, **8_Recommended.zip** and place it in your home directory. Use the console and go to the home directory to make sure the file has been downloaded. Type:
   cd; ls -al
5. Move the file to the **/opt** directory and unzip the recommended Solaris 8 patches. Type:
   mv 8_Recommended.zip /opt
   cd /opt; ls -al
   unzip 8_Recommended.zip
6. Install the patch cluster and save the output. Verify that the output file ONLY has Error code 2 (patch already installed) or Error code 8 (path not needed). Type:
   cd 8_Recommended
   ./install_cluster > install_8_Recommended.out
   (answer **y** when prompted)
7. **Steps #7-#11 are used for setting up a mount for the Fortran compiler. The SUN Fortran compiler is not supported on Solaris 8, so we recommend using the compiler on a Solaris 7 machine.** You can also check the **install_prep/system_requirements.html** file under the Volume 1 guide for more information. Create directories for the Fortran nfs mount points. Type:
   cd /opt; ls -al
   mkdir SUNWspro
   mkdir SUNWste
8. Find the HOSTNAME of your computer. Type:
   env | grep SESSION_SVR
9. Edit the vfstab file to add the host name of the computer with the Fortran compiler **<host_name>** and the directory of the nfs mount points to place the Fortran temporary files. Type:
   vi /etc/vfstab (open the vfstab file in the vi editor)
   In the vi Editor add these lines to the end of the file:
   <host_name>:/opt/SUNWspro - /opt/SUNWspro nfs - yes rw
   <host_name>:/opt/SUNWste - /opt/SUNWste nfs - yes rw
   Save the **/etc/vfstab** file and exit vi **:wq!**
10. Mount the directories and verify that directories are mounted by typing:
    mountall
11. Verify that the current machine can see the target directories on the **<host_name>** machine and that the directories contain files by typing:
    cd /opt/SUNWspro; ls -al
    cd /opt/SUNWste; ls -al

Setting up SUN Recommended Patches for Solaris 8 & Installing Software Packages (2 of 2)

(This part of the instructions is to be done ONCE on a Blade machine; before the first installation of RPG or CODE software. If you have done these instructions before on the Blade machine that you are installing CODE on, proceed to page 3 "Creating a New (Pristine) Account").

12. Prior to running the ORPG, the shared memory segment size for Solaris 8 kernel must be increased to 50 MB. Type:
    `vi /etc/system` (open the system file in the vi editor)
    In the vi Editor, add these lines to the end of the file:
    ```
    forceload: sys/shmsys
    set shmsys:shminfo_shmmax = 50331648
    ```
    Save the **/etc/system** file and exit vi `:wq!`
13. In the inittab file, change both occurrences of msglog to console by typing:
    `vi /etc/inittab` (open the inittab file in the vi editor)
    In the vi Editor change **/dev/msglog** to **/dev/console**:
    ```
    p3:s1234:powerfail:/usr/sbin/shutdown -y -i5 -g0
      >/dev/msglog 2 <>/dev/msglog
    ```
    Save the **/etc/inittab** file and exit vi `:wq!`
14. **The following list of software packages are third party packages, not part of the Solaris distribution**. These are a list of the software package versions, names, and directories where they should be installed on your machine:

Package Version	<pkg_name>	Package Directory
GCC 3.4.2	SMCgcc342	/usr/local
GNU make 3.79.1	SMCmake	/usr/local
GNU binuitls 2.11.2	SMCbinut	/usr/local
libiconv 1.8	SMCiconv	/usr/local
ZLIB 1.1.4	SMCzlib	/usr/local
PNG 1.2.0	SMClibpng	/usr/local

    Note: GCC version is changed to 3.4.2 from 2.95.3 in RPG Build 9. And package SMCiconv is added in Build 9. If you have installed CODE B8 on your Solaris, You only need to remove the old GCC and install the new GCC 3.4.2 and package SMCiconv.
15. Verify that you have the necessary software packages listed above on your computer by typing:
    `pkginfo -l <pkg_name>` (repeat for each package listed above>
16. If you are missing some or all of the packages listed above, install them from the CODE B9r1.27 CD. Obtain the "**WSR-88D CODE B9r1.27 (Solaris/Linux) NWS or Public Edition June 2007**" CD and copy the package files from `guide => v1_setup_code1_21 => files_support_sol` to the home directory (you can choose to copy to another directory).
17. Use the console and go to the home directory (or directory where you copied the files) to make sure the file(s) have been downloaded by typing:
    `cd; ls -al`
18. Unzip all the software package filenames **<pkg_filename>** by typing:
    `gunzip *sparc_.gz`
19. If another version of GCC (use `gcc -v` to check the version) has been installed, it should be removed before installing GCC 3.4.2.
    `Pkgrm SMCgcc`
    Install the package from the downloaded file **<pkg_filename>** and choose all defaults. Pkgadd will create directories as needed. Type:
    `pkgadd -d <pkg_filename>`
20. Reboot your machine to initiate all changes by typing:
    ```
    init 0
    boot
    ```

Creating a New Account (Pristine Account)

Summary of Commands

```
Sun Microsystems Inc.   SunOS 5.8       Generic
Patch   October 2001
code8v1:/code/code8v1:  65>su
Password:
# Oct 24 11:22:06 Dev2 su: 'su root' succeeded
for code8v1 on /dev/pts/2

# useradd -d /code/nws9r127 -m -g staff -s
/bin/csh -c "B9r1.27 Pristine Account"
nws9r127
6 blocks
# passwd nws9r127
New password:
Re-enter new password:
passwd (SYSTEM): passwd successfully
changed for nws9r127
# cd /code
# mkdir /code/nws9r127_data
# chown nws9r127:staff
/code/nws9r127_data
# ls -al
# exit
code8v1:/code/code8v1:  66>
```

1. From the CDE Login page, enter your **Username and Password** to log into **ANY** account on your SUN machine.
2. Open a terminal and type:
   su (login as root with root password)
3. Determine your new user account name, home directory, home path, group name, orpg directory, etc. then write them down. **Whenever you see a command with < > brackets around it, refer to the table below.** Here are some suggested examples:

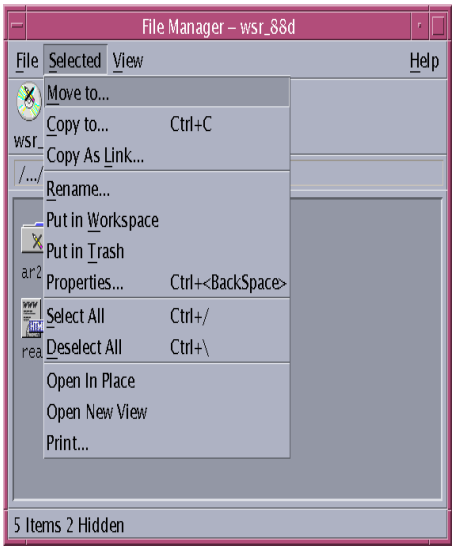
COMMANDS	EXAMPLES	ADD YOUR NAMES
<user9r1_27>	=> nws9r127	=> _____
<home_dir>	=> /code/nws9r127	=> _____
<parent_dir>	=> /code or /export/home	=> _____
<group_name>	=> staff or rpg	=> _____
<data_dir>	=> /code/nws9r127_data	=> _____
<ip_address>	=> 192.168.##.###	=> _____

4. Check to see if the group you have exists.
   grep <group_name> /etc/group
   (If it exists, **go to step #5**; if it does not exist, add a new group).
   groupadd <group_name>
5. Create a new account by using the useradd command. In your terminal type:
   useradd -d <home_dir> -m -g <group_name> -s /bin/csh –c "UserFirstName UserLastName" <user9r1_27>
   (See e.g. on the left).
6. Create a password for the user and write it down somewhere. Type:
   passwd <user9r1_27>
   Enter new password when prompted twice.
7. Create account data directory **<data_dir>**. Your data directory can be placed in any directory that you wish. Note that the name of the directory should be **<user9r1_27>_data**. Type:
   cd <parent_dir>
   mkdir <data_dir>
8. Change ownership and group name of account data directory. Type:
   chown <user9r1_27>:<group_name> <data_dir>
   ls -al
9. Logout from root. Type:
   exit
10. Close all windows by typing:
    exit
11. Click on the **Exit icon** on the panel to logout of the account you are in.

CODE B9r1.27 SOLARIS INSTALLATION INSTRUCTIONS

Installing RPG & CODE Software

CD File Manager Window



1. From the CDE Login page, enter your **Username and Password** to login using your new **<user9r1_27>** account and password.
2. Obtain the "**WSR-88D CODE B9r1.27 (Solaris/Linux) NWS or Public Edition June 2007**" CD and insert it into the CD reader. Wait for the window titled **File Manager – wsr_88d** to open. (See e.g. on the left).
3. **If you have the NWS Edition**, single click on folder **code_b9r1_27** to highlight it. From the menu bar, click on **Selected => Copy to**.
   If you have the Public Edition, single click on folder **pub_code_b9r1_27** to highlight it. From the menu bar, click on **Selected => Copy to**.
4. A **File manager – Copy Object** window appears. Delete the directory name in **Destination folder** and type **~** or **<home_dir>** to put the folder in the home directory. Click ***OK***.
5. After the folder has finished downloading, click **File => Eject** then remove the CD from the CD drive.
6. Use the console and go to the home directory to make sure the folder has been downloaded by typing:
   ```
   cd; ls -al
   ```
7. Copy the RPG source file to your home directory, by typing:
   If you have the NWS Edition
   ```
   cd code_b9r1_27/guide/v1_setup_code1_21/files_orpg_sw
   cp -p rpg_b9r1_27_nws_src_tar.gz ~
   ```
   If you have the Public Edition
   ```
   cd pub_code_b9r1_27/guide/v1_setup_code1_21/
   cd files_orpg_sw
   cp -p rpg_b9r1_27_pub_src_tar.gz ~
   ```
8. Copy the CODE configuration file to your home directory. Type
   ```
   cd ../orpg_install/config_files
   cp –p code_config_b9r1_27.tar ~
   ```
9. Uncompress and untar the RPG source file by typing:
   ```
   cd; ls
   ```
   If you have the NWS Edition
   ```
   gunzip rpg_b9r1_27_nws_src_tar.gz
   tar xvf rpg_b9r1_27_nws_src_tar
   ```
   If you have the Public Edition
   ```
   gunzip rpg_b9r1_27_pub_src_tar.gz
   tar xvf rpg_b9r1_27_pub_src_tar
   ```
10. Untar the CODE configuration file by typing:
    ```
    tar xvf code_config_b9r1_27.tar
    ```
11. Go to the env directory and run the env script. Type:
    ```
    cd code_config_b9r1_27/env;  ls
    ./inst_env_config
    ```
    (answer **y** when prompted)
12. Open **orpg_env_cshrc** from your **$HOME** directory with the editor of your choice. Modify the **setenv ORPGDIR** line to point to your **<data_dir>**. If multiple installed ORPG might be run at the same time on the same workstation, you should also modify the **RMTPORT** variable so that it differs by at least **2** from other accounts'. Save the file **orpg_env_cshrc** and exit.
13. Create a backup of the file and if asked, answer y to overwrite. Type:
    ```
    cd
    cp orpg_env_cshrc orpg_env_cshrc.B9
    ```
14. Remove all tar files and close all windows by typing:
    ```
    rm *tar
    ```
    (answer **y** when prompted)
    ```
    exit
    ```
15. Click on the **Exit icon** on the panel, to logout of the account you are in.

Modifying orpg_env_cshrc

```
### changed for CODE workstation ###
### THIS IS THE ONLY ELEMENT OF
THE ENVIRONMENT
### THAT WE SET DIFFERENTLY IN
EACH ACCOUNT
setenv ORPGDIR /code/nws9r127_data

# in order to simultaneously run multiple
instances of the ORPG on a
# single platform, RMTPORT must differ by
at least 2 in each account
setenv RMTPORT 50024
```

Compiling & Configuring the RPG

Verifying Environment Variables

```
nws9r127:nws9r127/  105 > env | grep -e
HOME -e ORPGDIR
OPENWINHOME=/usr/openwin
HOME=/code/nws9r127
ORPGDIR=/code/nws9r127_data
nws9r127:nws9r127/  106 >
```

Normal Errors for make_rpg

```
nws9r127:/code/nws9r127:  79>grep -e 'Error [1-
9]' make_rpg.out
make[4]: *** [slrs_spk/eject_ar3] Error 1
make[3]: *** [all] Error 2
make[2]: *** [all] Error 2
make[4]: *** [slrs_spk/prod_cmpr] Error 1
make[3]: *** [all] Error 2
make[4]: *** [slrs_spk/prod_decompress] Error 1
make[3]: *** [all] Error 2
make[4]: *** [slrs_spk/mrpg_control_gui] Error 1
make[3]: *** [all] Error 2
make[4]: *** [slrs_spk/eject_ar3] Error 1
make[3]: *** [install] Error 2
make[2]: *** [install] Error 2
make[4]: *** [slrs_spk/prod_cmpr] Error 1
make[3]: *** [install] Error 2
make[4]: *** [slrs_spk/prod_decompress] Error 1
make[3]: *** [install] Error 2
make[4]: *** [slrs_spk/mrpg_control_gui] Error 1
make[3]: *** [install] Error 2
nws9r127:/code/nws9r127:  80>
```

Modify the .rssd.conf file

```
# RPG Development Workstations
Client: 192.168.##.###

# Pathnames
#             [$ORPGDIR]
Path: ORPGDIR

# NEW B9
Path: HOME/save_logs
```

1. From the CDE Login page, enter your **Username and Password** to login using your new **<user9r1_27>** account and password.
2. Open a terminal console and verify your environment variables. Make sure your $HOME and $ORPGDIR directories are set to the correct paths. Type:
   `env | grep –e HOME -e ORPGDIR`
3. To conduct a quick test compile of a portion of the source code and check for errors, type:
   `cd; ls`
   `test_make_cpc100 $HOME >& test_make_cpc100.out`
   This compilation took about 5 minutes to execute on a SUNBlade 100 machine. After compilation has finished, check for errors. If there are errors, check the **orpg_install/test_compile_output.html** file under the Volume 1 guide. Type:
   `grep –e 'Error [1-9]' test_make_cpc100.out`
4. To compile the RPG and check for errors, type:
   `make_rpg $HOME >& make_rpg.out`
   This compilation took about 45 minutes to execute on a SUNBlade 100 machine. After compilation has finished, check for errors. The normal errors are listed in the left. For more details about the compiling errors, check the **orpg_install/compile_output.html** file under the Volume 1 guide. Type:
   `grep –e 'Error [1-9]' make_rpg.out`
5. Install the ORPG configuration files by typing:
   `cd ~/code_config_b9r1_27/orpg; ls`
   `./inst_orpg_config` (answer **y** when prompted)
6. Open **.rssd.conf** from your **$HOME** directory with the editor of your choice. Modify the **client** variable to be the **<ip_address>** of your machine. Save the file **.rssd.conf** and exit.
7. Create a backup of the file, by typing:
   `cd`
   `cp .rssd.conf .rssd.conf.B9` (if asked, answer y to overwrite)
8. **If you have the Public Edition of CODE, continue to step #10. If you have the NWS Edition,** open the **task_tables** file from your **$HOME/cfg** directory with the editor of your choice. Uncomment 3 task names in Operational_processes. Remove **#** from in front of **`data_qual, hiresvil and hireseet`**. Save the file **task_tables** and exit.
9. Create a backup of the **task_tables** file, by typing:
   `cp task_tables task_tables.B9` (if asked, answer **y** to overwrite)
10. Click on the **Exit icon** on the panel, to logout of the account you are in.

Testing the RPG & Installing CODE Software (1 of 2)

Testing the RPG: Steps 1-9

Using the HCI & play_a2 Tools

```
nws9r127:nws9r127:  41>hci &
[1] 7278
Nws9r127:nws9r127:  42>play_a2
Playback...
Playing file:
/code/nws9r127/data/ar2data/KMLB_1993:03:1
3:09:26:21.ar2.bz2
Volume date [yyyy-mm-dd] 1993-03-13
Volume time [hh:mm:ss]: 09:26:21
```

Option 1 – Install CODE software: Steps 10-18

- **Sample Algorithms**
- **CVT 4.1.1**
- **CVG 8.3**

1. From the CDE Login page, enter your **Username and Password** to login using your new **<user9r1_27>** account and password.
2. Open a terminal for testing the RPG. If errors, check the file: **code_b9r1_27/guide/v1_setup_code1_21/running_orpg/orpg_launch_prob.html**. Type:
   ```
   mrpg -p -v startup
   ```
3. To check for running tasks type:
   ```
   rpg_ps
   ```
4. To make sure the human computer interface will run, type:
   ```
   hci &
   ```
5. Ingest default Archive II data into the HCI by typing:
   ```
   play_a2
   ```
   When you are confident that data is being ingested into the HCI properly, press **Ctrl C** to end play_a2 then close the HCI. (See e.g. on left).
6. Check CVT version, **Version 4.0.1**. *Type*:
   ```
   cvt version
   ```
7. Launch CVG by typing:
   ```
   cvg
   ```
8. The title on the CVG window should show CODEview Graphics **8.1** Release. Close the CVG window by clicking System => Exit.
9. If everything works as expected, your CODE installation is complete. You can shutdown and cleanup the RPG by typing:
   ```
   mrpg shutdown;  mrpg cleanup
   ```
   Remove all tar files:
   ```
   rm ~/src/*tar
   ```
   If you do not want to install the below options, you are done.
10. Obtain the CODE software archive files from guide/v1_setup_code1_21/files_code_sw and save them in ~/src:
    ```
    cp -p code_alg_1_16.tar ~/src
    cp -p util_update_code_b9_1.tar.gz ~/src
    ```
11. To configure the CODE sample algorithms and copy the snippets, type:
    ```
    cd ~/src; ls
    tar xvf code_alg_1_16.tar
    cd cpc305
    ./install_sample_alg
    ```
12. To rebuild the binary configuration files to show the new Adaptation Data, type:
    ```
    mrpg -p -v startup
    rpg_ps | grep -e sample1_dig -e sample3_t2
    ```
13. Shutdown and cleanup the RPG by typing:
    ```
    mrpg shutdown;  mrpg cleanup
    rm ~/src/*tar
    ```
14. To install newest CVG and CVT, type:
    ```
    cd ~/src; ls
    gunzip util_update_code_b9_1.tar.gz
    tar xvf util_update_code_b9_1.tar
    cd util_update_code_b9_1; ls
    make clean
    make libinstall
    make all
    make install
    ```
15. For each console that is opened, type:
    ```
    rehash
    ```
16. Launch CVT to show the latest version, **Version 4.1.1**. *Type*:
    ```
    cvt version
    ```
17. Launch CVG by typing:
    ```
    cvg
    ```
18. The title on the CVG window should show CODEview Graphics **8.3** Release. Close the CVG window by clicking System => Exit.

Testing the RPG & Installing CODE Software (2 of 2)

Option 2 – Install level II data: Steps 19-27

19. A suggested location to install all of the desired CODE Archive II data sets is **/opt/code/data/ar2data**. Your local procedures might establish a different location. Check for the ar2data directory by typing:
    ```
    cd /opt/code/data/ar2data
    ```
    `su` (login as root with root password)
    If the directory has been created already, **go to next step**. (This directory might be different on your machine). If the directory has not been created, create the directories. Type:
    ```
    cd /opt; mkdir code
    cd code; mkdir data
    cd data; mkdir ar2data
    cd ar2data;
    ```
20. To install archive II data sets, obtain the "**WSR-88D CODE B9r1.27 (Linux/Solaris) NWS or Public Edition June 2007"** CD, copy the desired data sets in ar2data directory to /opt/code/data/ar2data.
    `exit` (to logout as root)
21. Check the **.cshrc** file to see if AR2_DIR has been set already. Type:
    ```
    more ~/.cshrc | grep AR2_DIR
    ```
    If the $AR2_DIR has not been set to /opt/…. directory, open `.cshrc` from your `$HOME` directory with the editor of your choice. Modify the `setenv AR2_DIR` line to point to `/opt/code/data/ar2data`. (See e.g. on left). Save the file **.cshrc** and exit the editor that you used.
22. Create a backup of the file, by typing:
    ```
    cp .cshrc .cshrc.B9
    ```
23. For each console that is opened, type:
    ```
    source .cshrc
    ```
24. Start the ORPG for testing Archive II data. If errors, check the file: **code_b9r1_27/guide/v1_setup_code1_21/running_orpg/orpg_launch_prob.html**. Type:
    ```
    mrpg –p –v startup
    ```
25. To start the human computer interface, type:
    ```
    hci &
    ```
26. Ingest default Archive II data into the HCI by typing:
    ```
    play_a2 –d f_load
    ```
    (If you downloaded another directory from the CD, replace f_load with the name of the downloaded directory). When you are confident that data is being ingested into the HCI properly, press **Ctrl C** to end play_a2 then close the HCI.
27. Shutdown and cleanup the RPG by typing:
    ```
    mrpg shutdown; mrpg cleanup
    ```

Modifying the .cshrc File

setenv AR2_DIR **/opt/code/data/ar2data**

Option 3 – Clone an account: Steps 28-31

28. To create a clone of this account, copy file from guide/v1_setup_code1_21/files_code_sw:
    ```
    cp -p clone_home_dir.tar ~
    ```
29. Extract the script:
    ```
    cd
    tar xvf clone_home_dir.tar
    ls
    ```
    (Look for the **clone_home_dir** script)
30. Create the archive file of the home directory. Type:
    ```
    cd
    ./clone_home_dir <user9r1_27>
    ls
    ```
    (Look for the **<user9r1_27>_clone.tar** file)
31. If you will be cloning accounts, go to section "**Creating New Clone Account(s)**".
32. Installation is done.

Creating New Clone Account(s)

Summary of Commands

```
nws9r127:/code/nws9r127:  65>su
Password:
# Oct 24 11:22:06 Dev2 su: 'su root' succeeded
for nws9r127 on /dev/pts/2

# useradd -d /code/hug9r127 -m -g staff -s
/bin/csh -c "Varetta Huggins" hug9r127
6 blocks
# passwd hug9r127
New password:
Re-enter new password:
passwd (SYSTEM): passwd successfully
changed for hug9r127
# cd /code
# mkdir /code/hug9r127_data
# chown hug9r127:staff
/code/hug9r127_data
# exit
nws9r127:/code/nws9r127:  66>
```

1. Open a terminal and type:
   su (to login as root and type your root password)
2. Determine your new user account name, home directory, home path, group name, orpg directory, etc. then write them down. **Whenever you see a command with < > brackets around it, refer to the table below.** Here are some suggested examples:

COMMANDS	EXAMPLES	ADD YOUR NAMES
<clone_user9r1_27>	=> hug9r127	=> _____
<user9r1_27>	=> nws9r127	=> _____
<home_dir>	=> /code/hug9r127	=> _____
<parent_dir>	=> /code or /export/code	=> _____
<group_name>	=> staff or rpg	=> _____
<data_dir>	=> /code/hug9r127_data	=> _____
<ip_address>	=> 192.168.##.###	=> _____

3. Create a new account by using the useradd command. In your console terminal type:
   useradd -d <home_dir> -m -g <group_name> -s /bin/csh -c "UserFirstName UserLastName" <clone_user9r1_27>
   (See e.g. on the left).
4. Create a password for the user and write it down somewhere. Type:
   passwd <clone_user9r1_27>
   Enter new password when prompted twice.
5. Create account data directory. Type:
   cd <parent_dir>; ls -al
   mkdir <data_dir>
6. Change ownership of account data directory. Type:
   chown <clone_user9r1_27>:<group_name> <data_dir>
   ls -al
7. If this is the last cloned account you are creating, **go to step #8**, else **go to step #2** to create another cloned account.
8. Logout from root. Type:
   exit
9. Close all windows by typing:
   exit
10. Click on the **Exit icon** on the panel, to logout of the account you are in.

Installing RPG & CODE Software in Clone Account(s)

Modifying orpg_env_cshrc

```
### changed for CODE workstation ###
### THIS IS THE ONLY ELEMENT OF
THE ENVIRONMENT
### THAT WE SET DIFFERENTLY IN
EACH ACCOUNT
setenv ORPGDIR /code/hug9r127_data

# in order to simultaneously run multiple
instances of the ORPG on a
# single platform, RMTPORT must differ by
at least 2 in each account
setenv RMTPORT 50054
```

Modify the .rssd.conf file

```
# RPG Development Workstations
Client: 192.168.##.###

# Pathnames
#             [$ORPGDIR]
Path: ORPGDIR

# NEW B9
Path: HOME/save_logs
```

Modifying .cshrc

```
### AR2_DIR sets the default location of
Archive II disk files to be used
setenv AR2_DIR /opt/code/data/ar2data
```

1. From the CDE Login page, enter your **Username and Password** to login using your new **<clone_user9r1_27>** account and password.
2. Copy the archive file from the first B9r1.27 account to your new cloned account and extract. Extract the archive file of your home directory after. **Refer to last page step #2** for directory and user names**.** Type:
   ```
   cd
   cp /<parent_dir>/<user9r1_27>/<user9r1_27>_clone.tar .
   tar xvf <user9r1_27>_clone.tar
   ls
   ```
3. Open **orpg_env_cshrc** from your **$HOME** directory with the editor of your choice. Modify the **setenv ORPGDIR** line to point to your **<data_dir>**. If multiple installed ORPG might be run at the same time on the same workstation, you should also modify the **RMTPORT** variable so that it differs by at least **2** from other accounts'. Save the file **orpg_env_cshrc** and exit.
4. Create a backup of the file and if asked, answer y to overwrite. Type:
   ```
   cd
   cp orpg_env_cshrc orpg_env_cshrc.B9
   ```
5. Open **.rssd.conf** from your **$HOME** directory with the editor of your choice. Modify the **client** variable to be the **<ip_address>** of your machine. Save the file **.rssd.conf** and exit.
6. Create a backup of the file, by typing:
   ```
   cd
   cp .rssd.conf .rssd.conf.B9
   ```
   (if asked, answer **y** to overwrite)
7. Check the **.cshrc** file to see if AR2_DIR has been set already. Type:
   ```
   more ~/.cshrc | grep AR2_DIR
   ```
   If the variable has been set to a /opt directory, **continue to step #9**. If the AR2_DIR has not been set to a /opt directory, open **.cshrc** from your **$HOME** directory with the editor of your choice. Modify the **setenv AR2_DIR** line to point to **/opt/code/data/ar2data**. (See e.g. on left). Save the file **.cshrc** and exit.
8. Create a backup of the file, by typing:
   ```
   cd
   cp .cshrc .cshrc.B9
   ```
   (if asked, answer **y** to overwrite)
9. Remove files that have been used with the **<user9r1_27>** account. Type:
   ```
   rm –rf .dt .TTauthority .Xauthority
   rm –rf .cvg8.0
   rm *tar
   ```
   (this might not be there)
10. Click on the **Exit** icon on the panel, to logout of the account you are in.
11. **Repeat steps 1 to 10 for each new account.**

Testing RPG Installation in Clone Account(s)

Using the play_a2 Tool

```
hug9r127:/code/hug9r127:  5>hci &
[1] 6538
hug9r127:/code/hug9r127:  6>play_a2
Playback...
Playing file:
/code/hug9r127/data/ar2data/KMLB_1993:0
3:13:09:26:21.ar2.bz2
Volume date [yyyy-mm-dd] 1993-03-13
Volume time [hh:mm:ss]: 09:26:21

^Chug9r127:/code/hug9r127:  7>
```

1. From the CDE Login page, enter your **Username and Password** to log into your new **<clone_user9r1_27>** account on your SUN machine.
2. Open a terminal and verify your environment variables. Make sure your $AR2_DIR, $HOME and $ORPGDIR directories are set to the correct paths. Type:
   `env | grep –e AR2_DIR -e HOME –e ORPGDIR`
3. Start testing the RPG. If errors, check the **running_orpg/orpg_launch_prob.html** file under the Volume 1 guide. Type:
   `mrpg -p –v startup`
4. To check for running tasks type:
   `rpg_ps`
5. To make sure the human computer interface will run, type:
   `hci &`
6. Ingest default Archive II data into the HCI by typing:
   `play_a2`
   When you are confident that data is being ingested into the HCI properly, press **Ctrl C** to end play_a2 then close the HCI. (See e.g. on left).
7. Shutdown and cleanup the RPG by typing:
   `mrpg shutdown; mrpg cleanup`
8. Close all windows by typing:
   `exit`
9. Click on the **Exit icon** on the panel, to logout of the account you are in.
10. This is **THE END**. You have successfully installed the RPG and CODE software. **Repeat steps #1 to #9** for each cloned account.