

IEPM-BW Software Installation

First you will need the iepm-bw source code. Typically this is obtained from SLAC by an email request to cottrell@slac.stanford.edu. He will tar up the entire v3src directory, below are the commands he will probably use:

```
>cd $bandsrc
>tar -cvf v3src .tar
>gzip -c v3src.tar /tmp/v3src.tar.gz
>ls -l /tmp/v3src.tar.gz
-rw-r--r-- 1 cottrell sf 125632972 May 17 12:34 /tmp/v3src.tar.gz
>rm v3src.tarcp /tmp/v3
>mv /tmp/v3src.tar.gz ./
>ls -l v3src.tar.gz
-rw-r--r-- 1 cottrell sf 125632972 May 17 12:34 v3src.tar.gz
>cd /afs/slac/public/users/cottrell
>cp $bandsrc/v3src.tar.gz ./
```

This requires a lot of disk space (e.g. v3src.tar is ~ 180MBytes). It creates a file \$bandsrc/v3src.tar.gz which is probably too big to email so it is made available by anonymous ftp. To access it use:

```
>ftp ftp.slac.stanford.edu
Connected to ftp.slac.stanford.edu (134.79.18.30).
220-=====
220-By using this system you expressly consent to the terms and
...220 FTP server ready.
Name (ftp.slac.stanford.edu:cottrell): anonymous331 Anonymous login ok, send your complete email address as
your password.
Password:
230-=====
230-
230-Stanford Linear Accelerator Center Anonymous FTP Server
230-
230-=====...
ftp> binary
200 Type set to I
ftp>cd users/cottrell
ftp> ls
227 Entering Passive Mode (134,79,18,30,188,42).
150 Opening ASCII mode data connection for file list
dr-xr-xr-x 2 ftp ftp 4096 May 17 19:45 .
dr-xr-xr-x 2 ftp ftp 4096 May 14 18:21 ..
-r--r--r-- 1 ftp ftp 335 Oct 5 2001 identity.pub
-r--r--r-- 1 ftp ftp 304 Feb 9 1996 pgp.publickey
-r--r--r-- 1 ftp ftp 125632972 May 17 19:45 v3src.tar.gz
226 Transfer complete.ftp> get v3src.tar.gz
local: v3src.tar.gz remote: v3src.tar.gz
227 Entering Passive Mode (134,79,18,30,188,44).
150 Opening BINARY mode data connection for v3src.tar.gz (125632972 bytes)
226 Transfer complete.
125632972 bytes received in 28.4 secs (4.3e+03 Kbytes/sec)
ftp>quit
>
```

You will need to unzip and detar the file using: tar -xzvf v3src.tar.gz

Log onto the monitoring host node under the 'iepm' account.

Now configure the 'config' directory in v3src. The following files may need configuration:

1. The 'config' directory contains a sample .cshrc. Modify this to match the node being installed and copy it to /home/iepm/.cshrc. This will defined where java is located, and two environment variables "\$bandsrc" which points to the v3src directory and "\$banddata" which points to the directory where the data and reports are stored. Note that there is a link from /var/www/html to this directory.
2. cleanup-list - should be configured correctly. If there are processes which are known to hang, they should go in this file. 'bw-cleanup' uses this file to clean processes known to hang (now or in the past). If the process with the name in this list exists longer than the number of minutes indicated on its line, it will be killed.
An example is:

```
# cleanup process list
# Connie Logg 5/18/06 cal@slac.stanford.edu
    post-test,120
    gnuplot,5
    triganal,120
    runperiod,120
    pathload_rcv,3
    pathchirp_rcv,3
    /bin/ping,3
    /bin/owping,3
    /bin/iperf,3
    /bin/tlaytcp,3
    /bin/bw-iperf-client,3
```

3. `owampd.conf.template`, `owampd.limits`, and `owampd.keys` are configuration files for `owamp`. `owampd.limits` and `owampd.keys` should be ok. Look at `owampd.conf.template`. `datadir` and `vardir` are defined to be `/home/iepm/owamp/data` and `/home/iepm/owamp/run` respectively. If this is ok (recommended default), save `owampd.conf.template` as `owampd.conf`. Then create the directories:

```
mkdir /home/iepm/owamp
    mkdir /home/iepm/owamp/data
    mkdir /home/iepm/owamp/run
```

4. `servers.alive` may need to be configured. This is the file that has the information for starting the servers. It is used by `keep-servers-alive` to start, and if necessary, restart the servers. For a standard monitoring host, this file should be:

```
bw-iperf-server,bin,-s -p 5000 -w 20M
thrulayd,bin,
pathload_snd,bin, -q -i
map-updated,,
pathchirp_snd,bin,
owampd,bin, -c /home/iepm/v3src/config -Z >& /tmp/owampd.log &
```

The first field is the name of the script. The second field is the directory in `$iepmSrcDir` where the script resides. The third is a list of parameters to start it with.

1. Make copies of `/etc/my.cnf` and `/etc/iepm.cnf` in the config directory. They are used to provide configuration information to the CGI scripts.

```
cp /etc/my.cnf /home/iepm/v3src/config
cp /etc/iepm.cnf /home/iepm/v3src.config/iepm.cnf.<aliasname>
```

2. Install JAVA, if required. If it must be installed, the recommended installation directory is `/home/iepm`. To install it, copy the 'JDK...bin' in `home/iepm/iepmtools` to `/home/iepm` and execute it.
3. Configure Geoplot. <http://www.slac.stanford.edu/comp/net/bw-html/v3plm.html#geoplot>
4. Now assuming that database tables are loaded, run the various reports for them. `report-nodes` should be run first. If `MONHOST` is not set up correctly, none of the reports will run. You must fix `MONHOST` first.
5. Other reports to run are:

```
report-monhost
report-nodegroups
report-nodespecs
report-plotspecs
report-table-structure
report-toolspecs
```

6. Once all the reports run, you are ready to try the probes. 'schedule-load' will force the probes to be scheduled and run. Look in `$mysqldb/data` and check the data files that are output from the probes running. If they look ok, you can execute the various data loading scripts called by `load-datad`. These include:

```
load-ping-data
load-trace-data
load-iperf-data
load-tlayctp-data
load-trace-data
load-pathchirp-data
load-pathload-data
```

If all of the above tests work, and the data base is loaded with all probes, nodes, plotspecs, etc. then you can load the crontab. Crontab files are located in `v3src/crontabs`. You should use the one with name `crontab.iepm`.

```
Crontab -u username crontab.iepm
```

`crontab -l` will give you the listing of cronjobs for the logged in account.

This should start the system up. If there are problems, be sure to check the `/home/iepm/mysql/logs` directory for the output from the cronjobs.