

## Monitoring with MON

Written by Muhammad Kamran Azeem

Wednesday, 17 December 2008 19:01 - Last Updated Saturday, 25 December 2010 22:03

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This is an extract from an implementation I did on a heartbeat based system. Mon is an excellent monitoring and reporting tool.

It is assumed that there are two servers connected to each other over multiple heartbeat links.

MON for heartbeat monitoring:

-----

both servers:

-----

```
wget ftp://ftp.kernel.org/pub/software/admin/mon/mon-1.2.0.tar.gz
```

```
wget ftp://ftp.kernel.org/pub/software/admin/mon/mon-client-1.2.0.tar.gz
```

```
tar xzf mon-1.2.0.tar.gz
```

```
tar xzf mon-client-1.2.0.tar.gz
```

```
cd mon-client-1.2.0
```

```
perl Makefile.PL
```

```
make && make install
```

```
[root@gateway2 mon-client-1.2.0]# make && make install
```

```
Manifying blib/man3/Mon::Protocol.3pm
```

```
Manifying blib/man3/Mon::SNMP.3pm
```

```
Manifying blib/man3/Mon::Client.3pm
```

```
Manifying blib/man3/Mon::Config.3pm
```

```
Manifying blib/man3/Mon::Protocol.3pm
```

```
Manifying blib/man3/Mon::SNMP.3pm
```

```
Installing /usr/lib/perl5/site_perl/5.8.8/Mon/Protocol.pm
```

```
Installing /usr/lib/perl5/site_perl/5.8.8/Mon/SNMP.pm
```

```
Installing /usr/lib/perl5/site_perl/5.8.8/Mon/Config.pm
```

```
Installing /usr/lib/perl5/site_perl/5.8.8/Mon/Client.pm
```

```
Installing /usr/share/man/man3/Mon::SNMP.3pm
```

```
Installing /usr/share/man/man3/Mon::Config.3pm
```

```
Installing /usr/share/man/man3/Mon::Protocol.3pm
```

```
Installing /usr/share/man/man3/Mon::Client.3pm
```

```
Writing /usr/lib/perl5/site_perl/5.8.8/i386-linux-thread-multi/auto/Mon/.packlist
```

```
Appending installation info to /usr/lib/perl5/5.8.8/i386-linux-thread-multi/perllocal.pod
```

```
[root@gateway2 mon-client-1.2.0]#
```

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Mon requires that \*.ph be created from the system header files. :-

```
cd /usr/include/  
h2ph -r -l .
```

# Let's copy the entire mon distribution to /usr/local

```
mkdir /usr/local/mon/
```

```
cp -r /root/mon-1.2.0/* /usr/local/mon/
```

```
cd /usr/local/mon/etc
```

```
cp example.cf mon.cf
```

Note: You may not put blank lines inside of your watch definitions, in this config file.

```
vi /usr/local/mon/etc/mon.cf
```

```
#  
# Example "mon.cf" configuration for "mon".  
#  
# $Id: example.cf,v 1.1.1.1.4.1 2007/06/25 13:10:08 trockij Exp $  
#  
  
# Please read the mon.8 manual page!  
#  
# NOTE:  
#  
# A "watch" definition (a line which begins with the word "watch" and is  
# followed by "service" definitions) is terminated by an  
# empty line, or by a subsequent definition. You may not put blank lines  
# inside of your watch definitions.  
#  
  
#  
# global options  
#  
cfbasedir = /usr/local/mon/etc  
alertdir  = /usr/local/mon/alert.d  
mondird   = /usr/local/mon/mon.d  
maxprocs  = 20
```

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histlength = 100

randstart = 60s

#

# authentication types:

# getpwnam standard Unix passwd, NOT for shadow passwords

# shadow Unix shadow passwords (not implemented)

# userfile "mon" user file

#

authtype = getpwnam

#

# NB: hostgroup and watch entries are terminated with a blank line (or  
# end of file). Don't forget the blank lines between them or you lose.

#

#

# group definitions (hostnames or IP addresses)

#

hostgroup servers 192.168.0.251 192.168.0.252

hostgroup mailhosts 192.168.0.251 192.168.0.252

hostgroup routers 192.168.1.254 192.168.2.254 192.168.3.254

#

# For the servers in building 1, monitor ping and telnet

# BOFH is on weekend call :)

#

watch servers

service ping

description ping servers in servers group

interval 1m

monitor fping.monitor

period wd {Mon-Fri} hr {7am-10pm}

alert mail.alert kamran@wbitt.com

alert page.alert mis-pagers@domain.com

alrtevery 1h

period NOALERTEVERY: wd {Mon-Fri} hr {7am-10pm}

alert mail.alert kamran@wbitt.com

alert page.alert mis-pagers@domain.com

period wd {Sat-Sun}

alert mail.alert kamran@wbitt.com

alert page.alert bofh@domain.com

watch mailhosts

service fping

period wd {Mon-Fri} hr {7am-10pm}

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```
alert mail.alert kamran@wbitt.com
alert page.alert mis-pagers@domain.com
alertevery 1h
service smtp
interval 1m
monitor smtp.monitor
period wd {Mon-Fri} hr {7am-10pm}
alertevery 1h
alertafter 2 30m
alert page.alert mis-pagers@domain.com
```

```
#
# If the routers aren't pingable, send a page using
# a phone line and the IXO protocol, which doesn't
# rely on the network. Failure of a router is pretty serious,
# so check every two minutes.
#
# Send out one page every 45 minutes, but log the failure
# to a file every time.
#
watch routers
service ping
description routers which connect bd1 and bd2
interval 1m
monitor fping.monitor
period wd {Sun-Sat}
alert qpage.alert mis-pagers
alertevery 45m
period LOGFILE: wd {Sun-Sat}
alert file.alert -d /usr/lib/mon/log.d routers.log
[root@gateway2 etc]#
```

Few monitors in C language. Others are not. If you want to use them:-

```
cd /usr/local/mon/mon.d/
```

```
vi Makefile
```

```
...
MONPATH=/usr/local/mon
```

```
...
```

```
# make
```

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```
gcc -o rpc.monitor -O2 -Wall -g rpc.monitor.c
gcc -o dialin.monitor.wrap -O2 -Wall -g
-DREAL_DIALIN_MONITOR="/usr/local/mon/mon.d/dialin.monitor"
dialin.monitor.wrap.c
```

```
# make install
install -d /usr/lib/mon/mon.d
install rpc.monitor /usr/lib/mon/mon.d/
install -g uucp -m 02555 dialin.monitor.wrap /usr/lib/mon/mon.d/
```

Copy the rest of the monitors directly to to /usr/lib/mon/mon.d/

```
cp *.monitor /usr/lib/mon/mon.d/
```

-Add the following lines to /etc/services:

```
mon      2583/tcp      # MON
mon      2583/udp      # MON traps
```

```
cp /usr/local/mon/etc/S99mon /etc/init.d/mon
```

```
vi /etc/init.d/mon
```

```
#!/bin/sh
#
# start/stop the mon server
#
# You probably want to set the path to include
# nothing but local filesystems.
#
# chkconfig: 2345 99 10
# description: mon system monitoring daemon
# processname: mon
# config: /usr/local/mon/etc/mon.cf
# pidfile: /var/run/mon.pid
#
PATH=/usr/local/mon:/bin:/usr/bin:/sbin:/usr/sbin
export PATH

MON="/usr/local/mon/mon"
CONFIGFILE="/usr/local/mon/etc/mon.cf"
```

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```
# Source function library.
./etc/rc.d/init.d/functions

# See how we were called.
case "$1" in
start)
echo -n "Starting mon daemon: "
daemon $MON -f -l -c $CONFIGFILE
echo
touch /var/lock/subsys/mon
;;
stop)
echo -n "Stopping mon daemon: "
killproc mon
echo
rm -f /var/lock/subsys/mon
;;
status)
status mon
;;
restart)
killall -HUP mon
;;
*)
echo "Usage: mon {start|stop|status|restart}"
exit 1
esac
```

exit 0

```
chmod +x /etc/init.d/mon
```

```
perl -MCPAN -e "install Time::HiRes"
```

```
perl -MCPAN -e "install Time::Period"
```

```
mkdir /usr/local/mon/log.d/
```

```
chkconfig --level 35 mon on
```

```
service mon start
```

ERROR:

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Starting mon daemon: Can't locate Time/Period.pm in @INC

```
perl -MCPAN -e "install Time::HiRes"  
perl -MCPAN -e "install Time::Period"
```

```
service mon start
```

```
# ps aux | grep "mon"  
dbus  1928 0.0 0.3 2720 864 ?    Ss  Feb26  0:00 dbus-daemon --system  
root  11879 0.0 2.2 10360 5732 ?    S   12:32  0:00 /usr/bin/perl /usr/local/mon/mon -f -l  
-c /usr/local/mon/etc/mon.cf  
root  12163 0.0 0.0  0  0 ?    Z   12:39  0:00 [mon]  
root  12199 0.0 0.2  3892  656 pts/0  R+  12:39  0:00 grep mon
```

Getting mails that fping not found:

Subject: ALERT servers/ping: could not open pipe to fping: No such file or directory (Thu Feb 28 12:38:08)

Summary output : could not open pipe to fping: No such file or directory

Download and install fping:

```
wget http://fping.sourceforge.net/download/fping.tar.gz
```

```
tar xzf fping.tar.gz  
cd fping-2.4b2_to/
```

```
./configure  
make  
make install
```

```
vi /usr/local/mon/mon.d/fping.monitor  
my $CMD = "/usr/local/sbin/fping -e -r $RETRIES -t $TIMEOUT";
```

```
cp clients/mon.cgi /var/www/cgi-bin/
```

```
chmod +x /var/www/cgi-bin/mon.cgi
```

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```
vi /var/www/cgi-bin/mon.cgi
```

```
...
```

```
$organization = "TestSite"; # Organization name.
```

```
$monadmin = "kamran@wbitt.com"; # Your e-mail address. Make sure the backslash is present.
```

```
$reload_time = 30; # Seconds for page reload.
```

```
...
```

Check through browser: <http://192.168.0.251/cgi-bin/mon.cgi> .

Alhumdulillah.