SUPERMON

Supermon is Allmon on steroids and it is being installed as an update to hamvoip Allstar V1.5. Paul Aidukas, KN2R has been working on an improved Allmon2 for several years and Supermon is the result. It is a one stop place to do management of your Allstar system from a web browser from anywhere in the world.

Features

Supermon includes all the features of Allmon2 plus all these and more:

- Fully supports IRLP display and control if IRLP is installed.
- Is compatible on all iPhones and Android smart phones!
- Date/time, Uptime, and load average display.
- Callsign and node number 'LookUp' for AllStar. Also for Echolink and IRLP, if installed.
- DTMF commands can be entered.
- Stats for your local node number or remote node numbers.
- Favorites Panel function to easily connect to your favorite nodes.
- Web Console for shell like function from web page.
- Configuration Editor to easily edit ALL the AllStar/IRLP/Echolink configuration files from the web.
- Full CPU and disk information display.
- Easily Start/Stop/Restart/Reboot The AllStar software or reboot machine.
- Access online AllStar docs and Howto's.
- Show Active nodes and all nodes.
- Access AllStar logs, Connection logs, IRLP logs if installed, and Web access and error logs.
- lsnodes with full IRLP information compatibility.
- Node info and registry info access.
- Full AllStar status display.

Installation Notes

Installation is similar to Allmon2 and both Allmon2 and Supermon are installed on hamvoip V1.5. The directions for some of the setup will be repeated here. Note that if you already have the manager user/pass setup for Allmon2 you do not need to repeat that here. Both use the same manager and password although if desired you could add a different user/pass to the manager.conf file for each one. If you have already created a manager user and password and you intend to use it for Supermon you can skip step 1 below.

1. Create a password for Allmon to login to the Asterisk Manager

Enter the /etc/asterisk directory

cd /etc/asterisk

Edit the manager.conf file

nano manager.conf

Add a secure password where it shows 'secret =' under the [admin] stanza, for example:

secret = xxxxx

Enter you desired password in place of the xxxxx above.

Restart asterisk.

astres.sh

2. Configure Supermon with your node number and Asterisk Manager password

Change to the Supermon directory

cd /srv/http/supermon

Edit the allmon.ini file

nano allmon.ini

Change the line's with 1998 to your node number. Also change the passwd= line and replace the xxxxx with the password your chose in step 1 or have already assigned in the manager.conf file.

3. Create a password for you and possibly other users to login to Supermon

Change to the Supermon directory if not already there.

cd /srv/http/supermon

Recommend removing any exisitng .htpasswd file - rm .htpasswd

Add an htpasswd file

htpasswd -cB .htpasswd <userID> (subsequent additional entries use just -B)

Supply a password of your choice when prompted.

<userID> is the login ID and can be any username you would like to assign; your callsign or admin for example. DO NOT enter the < or >.

You can have more than one login and password. If assigning additional passwords the 'c' create file switch must be dropped. In this case use:

htpasswd B .htpassword <userID>

To start Supermon in your browser enter your server's IP address/supermon in the address bar.

If your servers IP address is 192.168.1.100 then:

http://192.168.1.100/supermon - assumes port 80

If you are using a different port - http://192.168.1.100:PORT/supermon - where PORT = your port number.

Additional items to configure

There are several Supermon parameters that you can configure to your liking.

To edit the following files you have the choice of entering Supermon and using the configuration editor icon or doing it manually in Linux.

When you run Supermon the first time these parameters will have generic settings. The hamvoip software initializes with two nodes configured, 1998 and 1999. These are temporary private nodes. The setup program configures the first node, 1998 to your real node number. 1999 is left as a spare pseudo node that if desired could be configured as a second node. Supermon is initially configured for these two nodes 1998 and 1999. 1998 should be replaced with your first node number and 1999 with your second if it exists.

Allmon.ini

This was already configured in your initial setup above with your primary (first) node number but this shows more detail and how you can add additional nodes. If you had a second registered node on this server you would replace the 1999's below with its node number.

To edit manually use '**nano /srv/http/supermon/allmon.ini**'
To edit using the Supermon editor select '**Configuration Editor**' then '**Supermon allmon.ini**' on the dropdown menu.

Here is the default allmon.ini file. Replace the **1998's** with your first node number and **1999's** with your second if it exists. This file can be further edited to your liking at a later date. See more info on this below.

```
[1998]
host=127.0.0.1:5038
user=admin
passwd=wa3dsp
menu=yes
hideNodeURL=no
[1999]
host=127.0.0.1:5038
user=admin
passwd=wa3dsp
menu=yes
hideNodeURL=no
[All Nodes]
nodes=1998,1999
menu=yes
[lsNodes]
url="/cgi-bin/lsnodes_web?node=1998"
[IRLP Status]
url="http://status.irlp.net"
[HAMVOIP]
url="http://HamVOIP.org"
[About]
url=about.php
```

global.php

global.php contains the user specific information that is displayed on the Supermon screen. Your call, name, location, and what is displayed on various parts of the screen.

To edit manually use '**nano /srv/http/supermon/global.php**'
To edit using the Supermon editor select '**Configuration Editor**' then '**Supermon Configuration**' on the dropdown menu.

Change the “bolded” items below to your settings.

```
<?php
// Set the values to your parameters
// ONLY change text between quotes
//
// Your callsign
$CALL = "Your CALL";
//
// Your name
$NAME = "Your NAME";
//
// Your location
$LOCATION = "Your LOCATION";
//
// Title in header when logged in
$TITLE_LOGGED = "Supermon 5+ Allstar Manager";
//
// Title in header when not logged in
$TITLE_NOT_LOGGED = "Supermon 5+ Allstar Monitor";
//
// Second line header title
$TITLE2 = "RPi2-3 Node";
//
// Third line header title
$TITLE3 = "Allstar/IRLP/Echolink System Manager";
//
// Background image - specify path if not /srv/http/supermon
// Leaving BACKGROUND null "" results in BACKGROUND_COLOR
$BACKGROUND = "background.jpg";
//
// Background color if no image
$BACKGROUND_COLOR = "blue";
//
// Height of background - matches image height
$BACKGROUND_HEIGHT = "124px";
?>
```

TITLE_LOGGED and **TITLE_NOT_LOGGED** are the FIRST line above in the Photo. **TITLE2** is the second line. **TITLE3** is the last line. The Location line is from the location parameter and will show Anywhere, USA until changed. **BACKGROUND** defines the image file and **BACKGROUND_COLOR** defines the solid color background if the image file is not present. **BACKGROUND_HEIGHT** in px defines the displayed height of the image which should match the actual image height.

Site maintained by: ***Doug, WA3DSP***

This is the footer line and shows the display of your **name** and **call** entered in the global.php file.

Swissarmy.conf

The swissarmy tool by K0KN is included as part of the Supermon package installed on hamvoip version 1.5 and greater. It is integrated into the Supermon package and adds many features and utilities. The user needs to edit the config file and change instances of 1998 to there assigned node number and add sections for other nodes. The config file has many options. Do not change anything unless you understand what it does.

To edit manually use '**nano /usr/local/sbin/supermon/swissarmy.conf**'
To edit using the Supermon editor select '**Configuration Editor**' then '**Allstar swissarmy.conf**' on the drop down menu. If the file is READ ONLY you can only view in the editor. You must use the manual method to edit.

You must add the following statements to your /etc/asterisk/rpt.conf file for swissarmy to function.

connpgm=/usr/local/sbin/supermon/swissarmy 1
discpgm=/usr/local/sbin/supermon/swissarmy 0

These statements are added in the node section for EACH defined node on your Allstar server.

The **/usr/local/sbin/supermon/swissarmy.conf** file should contain sections for all of the nodes you have defined with the connpgm and discpgm statements in rpt.conf above. The config file has beginning and ending tags for each node that look like this:

:1998: << beginning of config marker for this node
config lines....
1998 << end of config marker for this node

A complete look at the sample config file for node 1998 - **/usr/local/sbin/supermon/swissarmy.conf**

```
:1998:
# SUBJECT=Node 1998 Alert
# SENDTO=
# SENDAS=
# BANLIST_DENY_EMAIL=
# ACCEPTLIST_DENY_EMAIL=
SHOW_DATE_TIME=0
NODELIST=/dev/shm/allstar_nodelist
ALLMONDIR=/srv/http/supermon
PRIVATE_LIST=/srv/http/supermon/privatenodes.txt
LISTURL=stats.allstarlink.org
ALLSTARRPTEXTNODES=/tmp/rpt_extnodes
ECHOLOOKUP=/usr/local/sbin/supermon/echolookup
IRLPLOOKUP=/usr/local/sbin/supermon/irlplookup
SOUNDS=/var/lib/asterisk/sounds/myrpt
LOGFILE=/var/log/asterisk/connectlog
BANLIST=/srv/http/supermon/edit/banlist
# ACCEPTLIST=/srv/http/supermon/edit/acceptlist
BANLIST_DENY_ALERT=0
ACCEPTLIST_DENY_ALERT=0
BANDELAY=15
DISABLE=/etc/asterisk/~statusdisable
NODENO_ACTIONFILE=
CALLSIGN_ACTIONFILE=
GLOBALINFO=0
VERBOSE=0
ANNOUNCENUMBER=0
WEBTX_TEXT=0
ANNOUNCEMESSAGE=
ANNOUNCE_EXT=ulaw
SWISSARMYRANDOMSLEEP=1
ALLSTAR_CONN_ALERTS=0
ALLSTAR_DISC_ALERTS=0
ECHO_CONN_ALERTS=0
ECHO_DISC_ALERTS=0
ECHOLINK_WELCOME=
TEXTMINCHARS=2
TEXTMAXCHARS=10000
SHOW_MULTIMESSAGE_NUMBER=1
MULTIMESSAGE_LIMIT=6
MULTIMESSAGE_DELAY=2
# ECHOLINK_WELCOME=/var/lib/asterisk/sounds/myrpt/welcome_echolink_station
ECHOLINK_CONN_CMD=
ECHOLINK_DISC_CMD=
ALLSTAR_BAN_CMD=
```

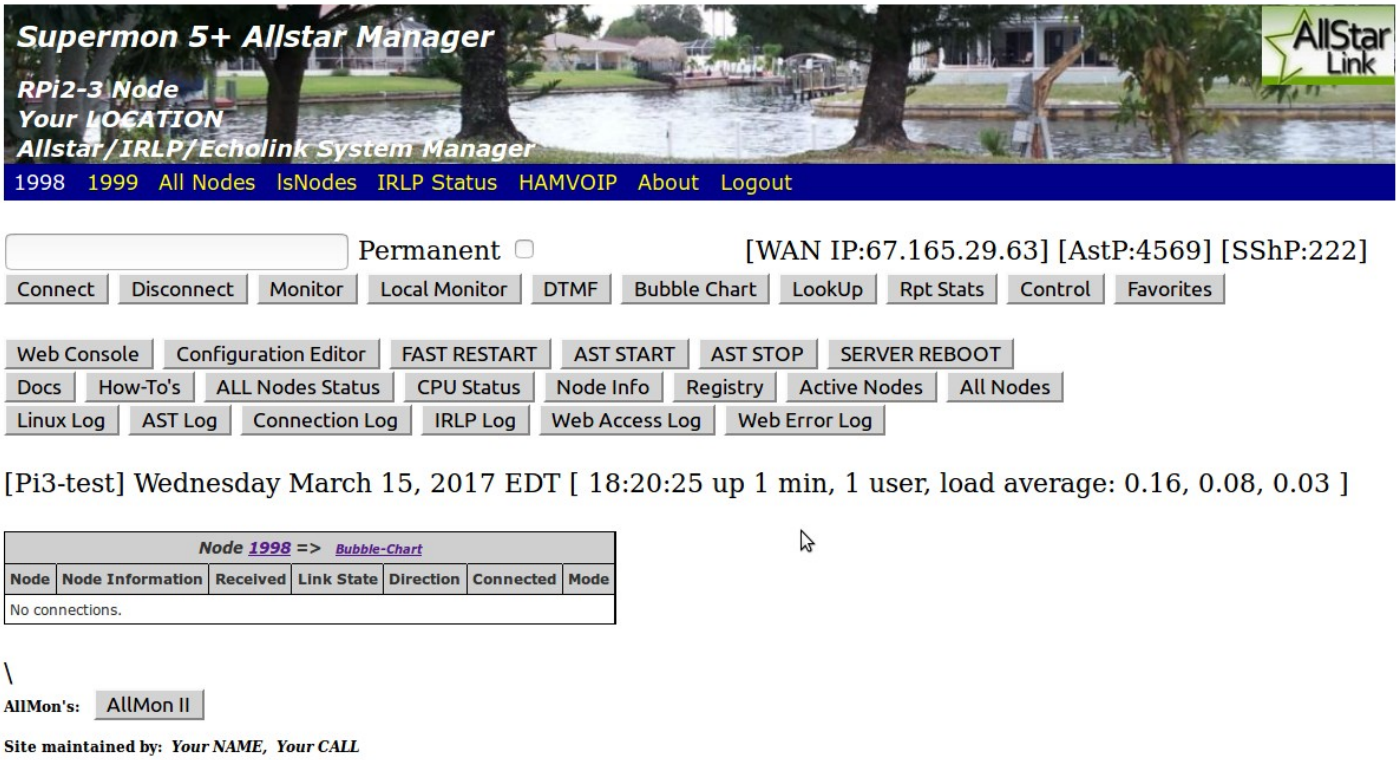
ALLSTAR_NOTACCEPTED_CMD=
ALLSTAR_CONN_CMD=
ALLSTAR_DISC_CMD=
EXTENSION_CONN_CMD=
EXTENSION_DISC_CMD=
TOTALCOUNT_ALERT=100
TOTALCOUNT_ACTION=
ASTKICK=/var/lib/asterisk/sounds/myrpt/automatically_disconnecting
ASTKICK2=/var/lib/asterisk/sounds/myrpt/automatically_disconnecting
EXIT_CMD=
1998

This entire context would be repeated for each defined node with the associate beginning and ending markers with additional node numbers.

The swissarmy utility has many powerful features that can be configured but not all of the features are supported with Supermon and for some additional configuration would be required. This is up to the user to configure and not generally a part of Supermon support. See this link for additional information:

http://www.qsl.net/k0kn/swissarmy_README

Description of Supermon Buttons



Refer to this image for the descriptions of the buttons and display blocks below.

Important Note

For Supermon to work correctly browser POPUPS must be allowed. You can allow popups selectively in your browser just for this application.

Header

The header photo and text is defined in the /srv/http/supermon/global.php file. The URL's at the bottom of the header (Node numbers, lsnodes, IRLP status, HAMVOIP, and About) select the operational node(s), display the lsnodes screen, show the current IRLP status page, open the hamvoip web page, and give a description of Supermon. These nodes and URL's are defined in /srv/http/supermon/allmon.ini. See the allmon.ini description above.

Connection Control

Below the header are the lines which control the selected Allstar node. Selections are at the bottom of the header and in this example and in the default settings are 1998 and 1999. Selecting All nodes display both.

Entering a node number in the blank box and selecting an option of **CONECT, DISCONNECT, MONITOR, LOCAL MONITOR** performs that action immediately. The action is displayed and a window at the bottom shows the connection details. It this example it shows connected to node 27225 after entering 27225 in the box and selecting connect. Checking the permanent box makes a permanent connect or disconnect.

To the right is shown your WAN public IP address, your Asterisk IAX port, and your Linux SSH port.

DTMF allows full DTMF sequences as you would enter on a keypad. So entering *81 in the box and selecting DTMF would play the time locally.

Bubble Chart gives the currently connected display of node interconnects.

Lookup gives information about the node entered in the entry box.

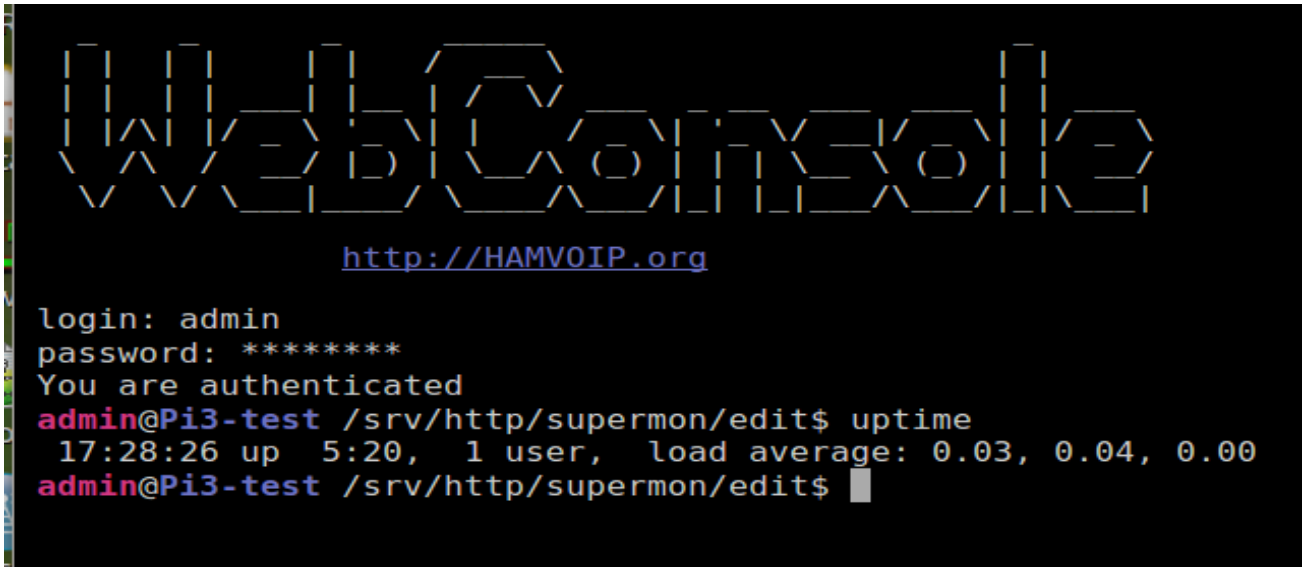
Rpt Stats gives statistics on the node entered in the entry box

Control allows quick execution of common comands. Supermon has default commands defines but users can edit the /svr/http/supermon/controlpanel.ini file to change or add their own commands. This can also be edited in the configuration editor with dropdown selection Supermon controlpanel.ini.

Favorites allows quick connects to your favorite nodes. This could be Allstar, or IRLP/Echolink if enabled. This is user definable by editing the /srv/http/supermon/favorites.ini file or with the configuration editor dropdown selection Supermon favorites.ini.

The second section of controls are used for checking and controlling your Linux/Allstar system.

Web Console – The web console gives you login to your server via the web through Supermon



This is an example of logging in and issuing a command.

NOTE - The web console must be configured separately with a user/pass. Edit:

/srv/http/supermon/edit/smconsole.php

Add a **user/pass** of your choice. Save the file.

Configuration Editor – The configuration editor is a web access editor that allows you to edit many of your Asterisk /Allstar and related files but for security reasons many of the files are read only. You have the option of using this web based editor or doing it directly in Linux. There are some situations where a direct edit may be desirable but this offers a quick and effective way to edit your files via the web with Supermon.

FAST RESTART, AST STOP, AST START, SERVER REBOOT

These commands restart Asterisk, Stop and Start Asterisk, and reboot the server. All of these commands ask for confirmation.

DOCS, HOW-To's

Brings up a window with Allstarlink.org documentation and hamvoip.org how-to's.

ALL Nodes Status – shows the status of all defined nodes

CPU Status – Show lots of information about the CPU and operating system.

Node Info – Gives Node, Call, Description, Location of all online Allstar nodes.

Registry – Current Allstar node registry list.

Active Nodes, All Nodes – Show Allstarlink list of currently active and all registered nodes.

Linux Messages Log – Displays the Linux log. Note for readability reason lines with 'sudo' are filtered from the output as they would consume most of the log when running lsnodes or allmon2/supermon. If you need to see an unfiltered log you can use the 'journalctl' command in Linux.

AST Log – Asterisk log. Useful for troubleshooting

The asterisk log as configured is not terribly useful. To make it more useful with more messages do the following.

Edit - **/etc/asterisk/logger.conf**

messages => notice,warning,error**,verbose**

Add verbose to the end of the messages line as shown above. Save the file

Because this adds a great deal more detail to the log there needs to be a means to keep the log manageable and not exceeding a certain size. A script called trimlog.sh in /usr/local/sbin will do this for you. You need to setup a cron to run this script periodically. Use 'crontab -e' to add and save the file. A suggested cron is:

10,25,40,55 * * * * /usr/local/sbin/trimlog.sh /var/log/asterisk/messages 1000

This runs the check every 15 minutes and if the number of lines is greater than 1000 only the last 1000 lines are retained. The user can optionally change the number of lines t suit their needs.

A future update will eliminate the annoying manager connect/disconnect messages at the standard verbose level.

Connection Log – Shows date and time of node connections

IRLP Log – Shows IRLP log only when IRLP is installed and active

Web Access and Error Logs – Shows the web server (httpd) access and error log.

More Configuration Information

The /srv/http/allmon.ini file has the ability to add items to the top menu. As you can see below a portion of the distributed allmon.ini file has label and actions for lsNODES, IRLP Status, HAMVOIP, and About. As an example if you wanted to open lsnodes windows for other nodes on your server you would just create additional labels and actions. You could have [lsnodes40000] [lsnodes40001] with appropriate actions. The labels can be anything, the action has to do something correctly. Suppose you wanted to add a link to Ham Radio outlet so you could buy equipment at a moments notice while you Allstar'ed! It would look like this -

```
[HRO]
url=”http://www.hamradio.com”

[lsNodes]
url="/cgi-bin/lsnodes_web?node=1998"
[IRLP Status]
url="http://status.irlp.net"
[HAMVOIP]
url="http://HamVOIP.org"
[About]
url=about.php
```

Firefox insecure login message – beginning in Firefox 51 you will get an insecure message if you try to login to a site that is not https. You can still login but it is annoying. You can turn this off - open a window to about:config - accept the risk warning – put secure_field_warning.contextual in the search field. When it appears click on the value field to make it false. Exit the window. You should no longer get the message when you login. Be aware though this turns this check off for every insecure login.

It is possible other browsers may start this practice also. If so Google for a possible work around if it bothers you.

Summary of Configuration Items

1. Edit /srv/http/supermon/allmon.ini for manager user/pass that matches user/pass in /etc/asterisk/manager.config.

2. Also edit /srv/http/supermon/allmon.ini for your node(s) and any URL changes you desire.

3. Edit /srv/http/supermon/global.php with your call, name, location

4. Edit /srv/http/supermon/edit/smconsole.php and set user/pass

5. Edit /usr/local/sbin/supermon/swissarmy.conf and replace all 1998 with your primary node number

6. Follow the directions at the beginning of this document (item 3, page 2) to setup your .htpasswd – **make sure you are in the /srv/http/supermon directory** when setting up. Always use the -cB or -B option when creating or updating the file. The uses the most secure blowfish option. Also don't use simple passwords, mix upper/lower alpha, numeric and special characters. Security is important especially when you use Allmon or Supermon outside of your LAN. Also consider setting your httpd listen port to other than port 80 in /etc/httpd/conf/httpd.conf. If you want to start over with a new .htpassword remove the old one first - rm .htpasswd

7. Reboot the system after the prior steps.

8. Open your browser to http://YOUR-SERVER-IP/supermon or http://YOUR-SERVER-IP:PORT/supermon if using other than port 80.

9. Login using the user/pass you assigned in the .htpassword setup above. If this doesn't work and you are sure you are using the correct user/pass assigned in the .htpassword setup try doing that setup again after removing the .htpassword file

10 Remember to turn ON popups in your browser for this URL. If they are not on your should see a warning at the top or bottom of the screen.

11. For security reasons you will be asked for your user/pass again when you first open an item on the Supermon page. This only happens once. Always select “remember user/pass” unless you are using an insecure computer (one you don't own or don't have control over).

12. Have fun with your new SUPERMON!

Protected Files

Hamvoip updates are programmed to not overwrite user configured files. Instead the update creates a new file with the name <filename>.pacnew. This leaves all of your settings intact. If there was additional features added to any of these protected files they would be noted in the <filename>.pacnew file. The user could them integrate any changes. If one of these files was changed in an update it would also be noted in an announcement on the arm-allstar forum. The following user configurable files are protected:

srv/http/supermon/allmon.ini
srv/http/supermon/controlpanel.ini
srv/http/supermon/favorites.ini
srv/http/supermon/global.php
srv/http/supermon/edit/smconsole.php
usr/local/sbin/supermon/swissarmy.conf-1.6