

SUPERMON 6.0+

Supermon 6.0+ 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. The latest version Supermon 6.0+ brings many more advances and features.

Features

Supermon 6.0+ includes all the features of Allmon 2.1 plus all these and more:

- Much improved Security allows much safer Internet access
- Many bugs and quirks fixed
- Opens less screens and tabs
- Drop down menus, organize by system for many node configurations
- 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.
- Configuration Editor to easily view 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, Allstar wiki, hamvoip webpage and Howto's.
- Show Active nodes and all nodes.
- Access AllStar logs, Connection logs, IRLP logs if installed, and Web access and error logs.
- Isnodes with full IRLP information compatibility.
- Node info and registry info access.
- Full AllStar status display.
- Asterisk module and rpt reload

Supermon 6.0+ file changes

The logger has changed from swissarmy to smlogger. The web_console and swissarmy files are no longer used and have been deleted from the distribution. Security has been significantly improved. It should be safe to put this out on the web **BUT safe practices still apply!!** A future version will include access control. Until then ALL buttons and operations are available to anyone that logs in and they would have significant control over your Allstar server. If you do put this on the web make sure you use secure passwords.

Installation Notes

Installation is similar to Allmon2+. Both Allmon2 and Supermon are provided with hamvoip V1.5 and above. The directions for Allmon2 and Supermon are similar. Note that if you already have the manager user/pass setup for Allmon2 you do not need to repeat that for Supermon. Both can 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. **For current Supermon users see the update notes at the end of this file.**

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. You will probably do other editing in this file later but for now this will get you going.

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 existing .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 >. Do NOT use a ! (exclamation) in the password.

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 .htpasswd <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 button if the files are writable or doing it manually in Linux. File permissions are set for security reasons if you make Supermon available to the outside world. Be aware that changing these permissions could make you system vulnerable to hackers.

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 a 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 view 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. Add additional nodes as desired. The user and passwd must match the manager.conf password for the defined host. 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=
menu=yes
```

```

hideNodeURL=no
[1999]
host=127.0.0.1:5038
user=admin
passwd=
menu=yes
hideNodeURL=no
[All Nodes]
nodes=1998,1999
menu=yes
[IsNodes]
url="/cgi-bin/ltnodes_web?node=1998"
menu=yes
[HAMVOIP]
url="http://HamVOIP.org"
menu=yes

```

Note – the Supermon allmon.ini file retains the menu=yes|no directive but the logic has changed in version 6.0+. If no menu statement is entered or entered as menu=no it will NOT be displayed. To display a stanza it MUST be menu=yes in that stanza.

See the /srv/http/supermon/allmon.ini.example file for more examples including for RTCM's. **The voter.ini file is no longer used in Allmon2 or Supermon.** All node information is stored in allmon.ini.php for Allmon2 or allmon.ini for Supermon.

global.inc

global.inc 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.inc**'

To view using the Supermon editor select '**Configuration Editor**' then '**Supermon Configuration**' on the dropdown menu.

Change the “**bolded**” items below to your settings. Other items can be edited to change displayed text, select a different background image or color and set image display size.

```

<?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";
//
// 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 are are not user configurable. **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 that displays at the bottom of the Supermon page and shows your **name** and **call** as entered in the global.inc file.

NOTE – in version 6.0+ the login/logout icon has been moved to the second line of the header as shown above in the upper left below the call.

Logging Configuration

The swissarmy tool which was used for logging in prior versions is no longer used by Supermon 6.0+ and no longer supported. In its place the program smlogger now does the logging.

In order for logging to work you must add the following statements to your /etc/asterisk/rpt.conf file for

smlogger to function. If you previously used Supermon with swissarmy replace that name with smlogger as shown below.

connpgm=/usr/local/sbin/supermon/smlogger 1
dispcgm=/usr/local/sbin/supermon/smlogger 0

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

Description of Supermon Buttons



27225 Permanent

[Pi3-test] [WAN IP: [67.165.29.63](#)] [LAN IP: 192.168.0.211] [AstP: 4569] [MgrP: 5038] [SShP: 222]
 [Thursday, February 15, 2018 EST 12:22:51 up 1 day, 12:14, 1 user, load average: 0.42, 0.13, 0.05]

Node 1998 => WA3DSP Test Node Richboro, PA Bubble Chart IsNodes						
Node	Node Information	Received	Link	Direction	Connected	Mode
27225	WA3DSP Philadelphia Hub Richboro, PA 18954	Never	ESTABLISHED	OUT	00:00:40	Transceive

/
 System maintained by: *Doug*, WA3DSP

Refer to this image for the descriptions of the buttons and display blocks below. Note that the **AST registry** button will not be shown if exclusively using DNS node lookup and the **IRLP log** button will not be shown if IRLP is not active which would usually be the case.

Important Note

For Supermon to work correctly browser POPUPS must be allowed and scripts cannot be blocked. You can allow popups selectively in your browser for just this application. Supermon and Allmon2 DO NOT work in Microsoft browsers. Other browsers like firefox, chrome, etc work fine.

Header

The header photo and text is defined in the /srv/http/supermon/global.inc file. The URL's at the bottom of the header (Node numbers, Isnodes, and HAMVOIP) select the operational node(s), display the Isnodes screen, 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 **CONNECT, DISCONNECT, MONITOR, LOCAL MONITOR** performs that action immediately. The action is displayed and a window at the bottom shows the connection details. In this example it shows connected to node 27225 after entering 27225 in the box and selecting connect. The connected nodes are shown at the bottom of the screen. When this screen shot was taken 27225 was also active and shown in blue background. Checking the permanent box makes a permanent connect or disconnect.

Below the buttons are shown your WAN public IP address, LAN IP address, Asterisk IAX port, Asterisk manager port and Linux SSH port. The Linux uptime and load averages are shown on the next line.

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. The DTMF commands are sent to the active node selected in the blue area of the display and the selected node in the drop-down menu if “All nodes” are selected. This can be done locally or remotely.

Bubble Chart gives the currently connected display of node interconnects.

Lookup gives information about the data entered in the entry box. This can be a call or node number of an Allstar, Echolink, or IRLP node. When using node numbers the Allstar number is entered as is. The Echolink node number is preceded by a “3” and the IRLP node number by an “8”. So Echolink node number “140140” would be “3140140” and IRLP node number “9999” would be “89999” as entered. Partial lookups can also be used such as “WA3” which would list all the WA3xxx calls currently active in all three modes. **NOTE – Echolink and IRLP will not display if they are not enabled on this server.**

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

Control allows quick execution of common commands. 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 /svr/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.

Configuration Editor – The configuration editor allows you to edit many of your Asterisk /Allstar and related files but for security reasons many of the files are read only. If the files are writeable you have the option of using this editor otherwise you must edit it directly in Linux. Editing files unsecured over the web is not desirable but this does allow you to view the files if they have read permissions.

AST MODULES/RPT RELOAD, FAST RESTART, AST STOP, AST START, SERVER REBOOT

These commands perform Asterisk and system functions. AST Modules/rpt Reload reloads the reloads configuration files without restarting Asterisk, Restart Asterisk, Stop and Start Asterisk, and Reboot the server. All of these commands ask for confirmation.

DOCS, HOW-To's, Wiki

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

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

Allstar Status – shows pertinent information about your nodes.

Allstar Registry – shows the rpt_extnodes file if not in all DNS mode. **This button does not display when all nodes are in DNS mode on this server.**

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

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

Pi GPIO – View and manipulate the Pi GPIO bits

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 to suit their needs.

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

Connection Log – Shows date and time of node connections

IRLP Log – Shows IRLP log only when IRLP is installed and active. **This button does not display when IRLP is not active on this server.**

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

Node Allow/Restrict – Allows the user to establish a whitelist/blacklist. See the hamvoip.org whitelist/blacklist howto.

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, and HAMVOIP. 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"
menu=yes
```

```
[lsNodes]
url="/cgi-bin/lsnodes_web?node=1998"
menu=yes
```

```
[IRLP Status]
url="http://status.irlp.net"
menu=yes
```

```
[HAMVOIP]
url="http://HamVOIP.org"
menu=yes
```

Note – the “about” url no longer exists and can be removed from existing allmon.ini files. **See the /srv/http/supermon/allmon.ini.example file for several more examples on configuring the allmon.ini file.**

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 New Users

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.inc with your call, name, location
4. Add or change the lines in all nodes in rpt.conf

```
connpgm=/usr/local/sbin/supermon/smlogger 1
discpgm=/usr/local/sbin/supermon/smlogger 0
```

5. 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 .htpasswd remove the old one first - rm .htpasswd

6. Reboot the system after the prior steps.

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

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

9 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. Also don't block any scripts. Supermon and Allmon2 DO NOT work on Microsoft browsers. All other browsers are known to work fine – firefox, chrome, etc.

10. Have fun with your new SUPERMON!

Summary of Configuration Items when Updating from a Previous Version

1. Edit /srv/http/supermon/allmon.ini to add menu=yes to each stanza you wish to display.
2. Edit /srv/http/supermon/global.inc with your call, name, location.
3. Add or change the logger lines in all nodes in rpt.conf changing swissarmy to smlogger as per directions at the bottom of page 5 above.
4. Recommend deleting and reestablishing the .htpasswd file in /srv/http/supermon as per directions above. The new -B directive adds a better level of security to the password and was added in mid 2017.

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 then 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.inc
/srv/http/supermon/.htaccess
/srv/http/supermon/.htpasswd

This document is believed to be correct. If you spot any discrepancies or feel something needs to be better described or added please pass it along. WA3DSP - doug@crompton.com