MonLink

Monlink runs as a service on the D-STAR gateway. It reads the 'dplus.log' file as input and actively monitors and manages the remote link connections.

- If a link is established and remains inactive for a configurable amount of time, it is automatically disconnected. There are separate configurable time values for input over the link and for local transmissions sent out on the link. Therefore if the far end of the link has a lot of activity but nothing locally, it can still be disconnected in a specific amount of time.
- If a link is established but is dropped by dplus due to repeated timeouts of the keep-alive pings, then monlink will (if configured to do so) automatically try to reconnect the link. The first attempt will be made 10 seconds after the failure. Subsequent attempts will be made at 60 second intervals up to the maximum number set in the configuration file.
- If a link is established, a recorded announcement will be played at a specific configurable interval to notify the users that a link is up and ALSO what system is on the other end. For example, the announcement might say "Linked to REF001 module C". These announcements are 'friendly' in that they will only be played if the module has been quiet for a minimum of 30 seconds.

Because monlink is tracking channel activity, it also provides the ability to configure "general announcements" to be played on specified days, times, and modules. Multiple messages can be defined and they will be played in rotation. These announcements are managed as follows:

- The channel must have been quiet for the preceding 60 seconds, and
- No other "general announcement" has been played for the preceding 10 minutes, and
- This particular announcement has not been played for the preceding 60 minutes.
- Times can be blocked out for any "general announcements" (e.g. during SE WX Net, etc.)

A new feature added in 'version 0.3f' is the ability to manage a "default link". Some D-STAR systems like to stay linked to a particular reflector (e.g. REF001-C) during portions of the day in order to have activity and generate local interest in D-STAR. Now, the gateway administrator can define one or more defaults and monlink will attempt to keep the link up with some limitations. For example, the configuration can be set to maintain a link between Module C and REF001-C during the period of Monday-Friday, and from 6:00 AM until 10:00 PM. During this period, monlink will bring the link up however monlink will NEVER disconnect an existing link in order to bring up the default. Also, if the default is active and someone (or a cron entry) disconnects the link, monlink will wait for 10 minutes before attempting to bring the default back up. This way, if the default is up, and a user wants to connect to another system, the user sends an unlink (URCALL="   U") and then has 10 minutes to issue a link to the desired system. A configuration example with remarks can be found in the "/dstar/util/monlink.conf.new" file after the install.

Also added in 'version 0.3f' is the functionality to automatically check for new "linked to ….." announcement files each time monlink is started. If new recording files are found, they will automatically be downloaded and added to the recording library (/dstar/util/dv directory). Note that any locally generated recordings are never over written or altered. In addition, monlink checks a new release of monlink. If a new version is found, it is NOT automatically downloaded and installed. Instead, a notation will be placed in the first few lines of the /var/log/monlink.log file.

With 'version 0.3f', monlink can now send voice announcements and/or data message announcements to indicate what link is currently established. See configuration examples in the /dstar/util/monlink.conf.new' file. This can be set by module. For example, monlink can send data messages only on two meters, voice announcements only on 440, and send both on the 23cm module.

Also, effective with this release, monlink now checks the monlink.conf file once every fifteen minutes looking for any configuration changes.   With this addition, a restart of monlink is no longer required to implement configuration changes.

The program can be installed (or updated) by: (user must have 'root' privileges to install)
```
cd /tmp
curl -O http://wb4fay.com/util/monlink-install.sh
sh monlink-install.sh
```


Once installed, it can be managed by:
```
service monlink start
service monlink stop
service monlink restart
service monlink version
```

You can follow the actions of the program by tailing the log file:
```
tail -f /var/log/monlink.log
```

You will also want to include /var/log/monlink.log in the list for logrotate on the gateway. Just as with dplus, the process needs to be restarted after the logrotate so that the process will start writing to a new log file.   See the file located at: http://wb4fay.com/.util/dstar for an example of a file to simply place in the /etc/logrotate.d directory to implement the logrotate and the restarts.

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