

XLX Multiprotocol Reflector Gateway for D-Star



Installation Package for Linux



1. Copyright:

The XLX Multiprotocol Gateway Reflector Server is part of the software system for the D-Star Network. The sources are published under GPL Licenses.

2. Usage:

The packages which are described in this document are designed to install server software which is used for the D-Star network infrastructure.

It requires a 24/7 internet connection which can **support 20 voice streams** or more to connect repeaters and hotspot dongles!!

- The server requires a **fix IP-address** !
- The public IP address should have a DNS record which must be published in the common host files.

If you want to run this software please make sure that you can provide this service **free of charge**, like the developer team provides the software and the network infrastructure free of charge!

3. Requirements:

The software packages for Linux are tested on CentOS 6.7 / 32 and 64bit or newer.

Raspbian will work but is not recommended.

Please use the stable version listed above, we cannot support others.

CentOS 6.7 / 32 and 64bit:

```
// after a clean installation of centos check your hostname and FQDN
# hostname
# hostname -f (if hostname returns " Unknown host" set FQDN in /etc/hosts)
# echo "your IP"      "FQDN" >> /etc/hosts

// get SELinux Level
# getenforce (if level is Enforcing set it to Permissive)
# setenforce 0

// to keep SELinux Level Permissive after rebooting
# nano /etc/selinux/config (change SELINUX=enforcing to permissive) <ctrl> X and Y

//run upgrade
# sudo yum install upgrade

// install git
# sudo yum install git git-core

// install webserver with PHP5 support
# sudo yum install httpd php

//install g++ compiler
# sudo yum install centos-release-scl-rh
# sudo yum install devtoolset-3-gcc devtoolset-3-gcc-c++
# scl enable devtoolset-3 bash

//download and compile the XLX sources
# git clone https://github.com/LX3JL/xlxd.git
# cd xlxd/src/
# make
# make clean
# make install

// copy startup script "xlxd" to /etc/init.d
# cp ~/xlxd/scripts/xlxd /etc/init.d/

// adapt the default startup parameters to your needs
# nano /etc/init.d/xlxd

// to make the startup script working under CentOS following lines need to be replaced.
The top line is the original line (commented out with a #). The next line is the line to replace with:

#. /Lib/lsb/init-functions
./etc/init.d/functions

# start-stop-daemon --start --exec $DAEMON --chuid $USER:$GROUP --background -- $ARGUMENTS
$DAEMON $ARGUMENTS

# start-stop-daemon --stop --pidfile $PIDFILE
killproc $DAEMON
```

```
// start or stop the service with:
# service xlxd start
# service xlxd stop

// copy dashboard to /var/www/html
# cp -r ~/xlxd/dashboard/* /var/www/html

// give the dashboard read access to the server log file
# chmod +r /var/log/messages

// start the webserver
# service httpd start

// enable xlxd and httpd service on server startup
# chkconfig httpd on
# chkconfig xlxd on

// reboot server to see if the auto-start is working

# reboot
```

By default, on CentOS iptables is enabled. You need to open the needed ports !!
If you are behind a hardware firewall you can stop the service.

```
# service iptables stop
```

Firewall settings:

XLX Server requires the following ports to be open and forwarded properly for in- and outgoing network traffic:

TCP port 80	(http) optional	TCP port 443	(https)
TCP port 8080	(RepNet)		
UDP port 10001	(json interface XLX Core)		
UDP port 10002	(XLX interlink)		
TCP port 22	(ssh) alternative	TCP port 10022	
UDP port 30001	(DExtra protocol)		
UDP port 20001	(DPlus protocol)		
UDP port 30051	(DCS protocol)		