

# Persistent SSH Tunnels

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# 1 Persistent SSH Tunnels

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## 2 Persistent SSH Tunnels

The following is how to create a persistent SSH Tunnel between two systems. This is handy if you want to secure data flowing across networks, or even setup a tunnel without messing with VPN configuration.



## 3 Create User/Generate SSH key

First you will create the user you will use for the tunnel. This will allow you to forward non-privileged ports over 1024.

*Note: This user does not have a password assigned or a shell. This will prevent user logins to the system.*

```
useradd -m -s /bin/false autossh
```

Now switch to the user and generate an SSH key:

```
su -s /bin/bash useradd  
cd ~  
ssh-keygen -b 4096
```

*Note: Leave password blank*

Once done, exit back to your normal user shell

```
exit
```



## 4 Copy public key to target system

You will need to copy `id_rsa.pub` file from `/home/useradd/.ssh/` to the `authorized_keys` file on the remote system you want to connect to for the tunnel.

*Note: It is recommended that you also create a normal user on the remote system and not use root.*



## 5 Install autossh

You will need to install the autossh program on the system that will initiate the SSH tunnel. Autossh automatically restarts the SSH tunnel when it exits.

```
apt-get install autossh
```



## 6 Setup script

Copy the following script, making the necessary changes as specified between the <> and place on the system that will initiate the tunnel (usually /opt):

```
#!/bin/sh
#
# Uses autossh to establish a tunnel to allstarlink.org for the Graylog
# Collector Sidecar
# on seal to pass data.

su -s /bin/sh autossh -c 'autossh -M 0 -N -o "ServerAliveInterval 30" -o
"ServerAliveCountMax 3" -o "ExitOnForwardFailure=yes" -f -T -R <target IP or
localhost>:<target port>:<local IP or localhost>:<local port> <user>@<domain>'
```

| Parameter                | Description   |
|--------------------------|---|
| <target IP or localhost> | localhost or IP address on target system                |
| <target port>            | port on target system                                   |
| <local IP or localhost>  | localhost or IP address on system initiating tunnel     |
| <local port>             | port on system initiating tunnel                        |
| <user@domain>            | username and domain to use when SSHing to target system |

An example of this command is:

```
su -s /bin/sh autossh -c 'autossh -M 0 -N -o "ServerAliveInterval 30" -o
"ServerAliveCountMax 3" -o "ExitOnForwardFailure=yes" -f -T -R
localhost:3306:localhost:3306 joe@blow.com'
```

This would allow the target (remote) system to access the local (system initiating the SSH tunnel) system's MySQL server over the tunnel.

You can also use -L to change the direction of the port forwarding from Remote to Local and have the initiating system forward data over the tunnel the the remote.



## 7 Make script executable

Make sure you mark the script as executable with:

```
chmod +x <name_of_script>.sh
```



# 8 Tunnel at startup

To have this tunnel automatically start if the system is rebooted, add a call to the script to rc.local.

```
/opt/<name_of_script>.sh
```

*Note: You may have to enable rc.local on Ubuntu and Debian based systems via systemd. Refer to your distribution's documentation for information on how to enable it.*

## 8.1 Contributors

- KK9ROB<sup>1</sup>
- N8EI<sup>2</sup>
- This page was last edited on 24 October 2024, at 13:07.

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1 <https://wiki.allstarlink.org/index.php?title=User:KK9ROB&action=edit&redlink=1>

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