autossh Self-healing ssh tunnels

CONCEPTS

autossh runs ssh for you: every argument except its own flags goes to ssh unchanged. Get the plain ssh command working first, then put autossh in front.

Use key or agent login: autossh cannot answer a password prompt, and -f makes that impossible.

autossh supervisor
↓ spawns
ssh your tunnel or session
↓ keepalive or test data
Remote host sshd
↓ ssh exits or stalls
Restart backs off up to the poll time

RUNNING AUTOSSH

autossh -M 0 *<host>*
Supervised login session

autossh -M 0 -N -L *<lport>*:*<dst>*:*<dport>* *<host>*
Keep a local forward alive

autossh -M 0 -N -R *<rp>*:**localhost:***<p>* *<host>*
Keep a reverse tunnel alive

autossh -M 0 -N -D *<port>* *<host>*
Keep a SOCKS proxy alive

autossh -M 0 -f -N *<ssh args>*
Drop to the background

Prefer an entry in ~/.ssh/config for the forwards and keepalives, then run just autossh -M 0 -f -N <host>.

MONITORING

-M 0
Disable the monitor port, rely on ssh keepalives

-M *<port>*
Monitor with a port pair

-o ServerAliveInterval=30 -o ServerAliveCountMax=3
Ssh quits after ~90 s of silence

-o ExitOnForwardFailure=yes
Exit ssh if a forward cannot bind

MONITORING (cont.)

On the server side ClientAliveInterval in sshd_config closes stale listening sockets when the client vanishes, so a restarted reverse tunnel can bind again.

ENVIRONMENT VARIABLES

AUTOSSH_GATETIME=*<s>*
Seconds ssh must survive to count as started (30)

AUTOSSH_POLL=*<s>*
Seconds between connection tests (600)

AUTOSSH_DEBUG=1
Debug log, copied to stderr

Variables go in front of the command (AUTOSSH_GATETIME=0 autossh ...) or in a systemd Environment= line.

CONTROL AND TROUBLESHOOTING

kill -USR1 *<pid>*
Kill ssh and start a new one

kill *<pid>*
Stop autossh and its ssh child

If autossh exits at once, ssh failed in the first 30 s (gate time) or with status 1: run the ssh command alone to see the error.

SERVICES

systemd unit

```
[Unit]
Description=Tunnel to <host>
After=network-online.target
Wants=network-online.target

[Service]
User=<user>
Environment=AUTOSSH_GATETIME=0
ExecStart=/usr/bin/autossh -M 0 -N \
  -o ServerAliveInterval=30 -o
ServerAliveCountMax=3 \
  -o ExitOnForwardFailure=yes \
  -L <lport>:localhost:<dport> <host>
Restart=on-failure
RestartSec=10

[Install]
WantedBy=multi-user.target
```