

# gpg-agent forwarding

Search tags: gpg gpg remote gpg-agent gpg-agent forwarding.

Source:

- [GPG Agent Forwarding by Matthias Lohr](#)
- [Forwarding gpg-agent to a remote system over SSH](#)

## local machine

Ensure gpg-agent is running:

~/.bashrc

```
# Launch gpg-agent if not started
export GPG_TTY="$(tty)"
gpgconf --launch gpg-agent
```

Public and secret key must be present on local machine

```
gpg --import user@example.com-public.asc
gpg --import user@example.com-secret.asc
```

Get gpg-agent socket paths on local and **remote** machines:

```
$ gpgconf --list-dirs agent-extra-socket
/run/user/1000/gnupg/S.gpg-agent.extra
```

```
$ ssh remote gpgconf --list-dirs agent-socket
/run/user/1000/gnupg/S.gpg-agent
```

Edit SSH user configuration and add sockets forwarding for remote host:

~/.ssh/config

```
Host remote
  RemoteForward /run/user/1000/gnupg/S.gpg-agent
  /run/user/1000/gnupg/S.gpg-agent.extra
```

## remote machine

Public key must be imported on remote machine:

```
gpg --import usert@example.com-public.asc

gpg: key XXXXXXXXXXXXX: public key "User <user@example.com>" imported
gpg: Total number processed: 1
gpg:             imported: 1
```

Modify ssh server configuration to enable automatic removal of stale sockets when connecting to the remote machine:

[/etc/ssh/sshd\\_config](#)

```
StreamLocalBindUnlink yes
```

and restart sshd:

```
systemctl restart ssh
```

## usage

On remote machine:

```
gpg --list-secret-keys
```

Sign message:

```
echo TEXT | gpg -s
```

## Issues

gpg: signing failed: Inappropriate ioctl for device

```
gpg-agent[2022]: command 'SCD' failed: Forbidden
gpg-agent[2022]: command 'KEYINFO' failed: Forbidden
gpg-agent[3881]: No $DBUS_SESSION_BUS_ADDRESS found, falling back to curses
gpg-agent[3881]: Failed to lookup password for key
n/63B10EA3FEB8F818AEC11B943DFF4F7A33E4624D with secret service: Cannot
autolaunch D-Bus without X11 $DISPLAY
gpg-agent[2022]: failed to unprotect the secret key: Inappropriate ioctl for
device
gpg-agent[2022]: failed to read the secret key
gpg-agent[2022]: command 'PKSIGN' failed: Inappropriate ioctl for device
<Pinentry>
```

Problem with displaying password prompt. Solution (exec on host)

```
echo "UPDATESTARTUPTY" | gpg-connect-agent > /dev/null 2>&1
```

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