

Shell / Bash

Bash Guide for Beginners

Secure Shell

The definitive guide, also available at SafariOnline

- Public/private keys, pass phrases
- Trusted hosts
- Port forwarding
- X11 forwarding
- **ssh** agent

Working with files

- **rm, rmdir**
- **ls, file**
- **find / locate**
- **touch**
- **chmod / chown**
- **head, tail**
- **grep**

Gathering network related information

- **ifconfig**
- **dig (nslookup)**
- **ping**
- **route**
- **traceroute**

Handle processes

- **ps**
- **kill**
- **top / htop**
- **nice**

vim text editor introduction

Vim Introduction and Tutorial

Creating a ssh public/private key pair

ssh-keygen

Generating public/private rsa key pair.

Enter file in which to save the key (/home/goik/.ssh/id_rsa):

Created directory '/home/goik/.ssh'.

Enter passphrase (empty for no passphrase):

Enter same passphrase again:

Your identification has been saved in /home/goik/.ssh/id_rsa.

Your public key has been saved in /home/goik/.ssh/id_rsa.pub.

The key fingerprint is:

SHA256:mi/5CaYsND/Dc+qr8CJ9Yji/zzP1SwuES/0mlnqvK0 goik@bw-lehrpool

The key's randomart image is:

```
+---[RSA 2048]----+
|
|
|
|  .
|  + . S
|  o. =.o
|. + +.o0o.
|=o=+&*+=.o
|. =*%E#o0*.
|
+-----[SHA256]-----+
```

Configuration file permissions on windows network file systems

```
cd .ssh ❶
```

```
touch known_hosts ❷
```

```
cp id_rsa.pub authorized_keys ❸
```

```
setfacl -R --remove-all . * ❹
```

```
chmod go-w . * ❺
```

```
chmod ugo-x * ❻
```

```
chmod go-r id_rsa ❼
```


Resulting permissions and configuration test

```
ls -al
```

```
drwxr-xr-x+  2 goik fblprof    0 Oct 13 16:03 .
drwxr-xr-x+ 30 goik fblprof    0 Oct 13 16:04 ..
-rw-r--r--+  1 goik fblprof  398 Oct 13 16:02 authorized_keys
-rw-----+  1 goik fblprof 1675 Oct 13 16:02 id_rsa
-rw-r--r--+  1 goik fblprof  398 Oct 13 16:02 id_rsa.pub
-rw-r--r--+  1 goik fblprof  222 Oct 13 16:03 known_hosts
```

Testing **ssh** private key based logins to your local system:

```
~> ssh localhost
```

```
Welcome to Ubuntu 18.04.3 LTS ...
```

Related exercises

Exercise 1: Enabling index based file search

Exercise 2: Using the **tail** -f command