

UNIX / LINUX Basics  
⇒ Prerequisites

## Bash Guide for Beginners

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 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/0mInqvK0 goik@bw-lehrpool

The key's randomart image is:

```
+---[RSA 2048]-----+
|
|
|          .
|         + . S
|        o. =.o
|       .+ +.oOo.
|      =o=+&*+=.o
|     .=*%E#oo*.
+-----[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 fb1prof    0 Oct 13 16:03 .
drwxr-xr-x+ 30 goik fb1prof    0 Oct 13 16:04 ..
-rw-r--r--+  1 goik fb1prof   398 Oct 13 16:02 authorized_keys
-rw-----+  1 goik fb1prof 1675 Oct 13 16:02 id_rsa
-rw-r--r--+  1 goik fb1prof   398 Oct 13 16:02 id_rsa.pub
-rw-r--r--+  1 goik fb1prof   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 ...
```

- 287. Enabling index based file search
- 288. Using the **tail -f** command