

YOUBOT INSTALLATION INSTRUCTIONS



Author: Frederik Hegger and Jan Paulus
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1 Ubuntu Distribution

This installation guide was created while installing the *11.10* (Oneiric) Ubuntu distribution on the internal PC of the youBot. In general, this guide should be also applicable to all other earlier distributions down to *10.04* (Lucid). For future release like *12.04* (Precise) we do not have any experience up to now.

1.1 User Name(s) and Password(s)

For the internal and a potential external pc, please use the following information to setup the standard user account

- User name: b-it-bots
- Password: *please ask a staff member for the current password to set*

If the Ubuntu installation is successfully completed, set the root password with same password as used for the previously mentioned user account:

```
sudo passwd
```

1.2 Remove Unused Software

Some software or tools of the standard Ubuntu installation are not required for a youBot installation. In order to save space, those packages can be removed:

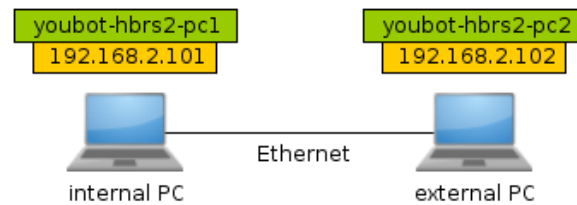
```
sudo apt-get remove deja-dup brasero brasero-cdrkit brasero-common tomboy
ubuntuone-control-panel ubuntuone-client gbrainy gnome-mahjongg gnome-
sudoku gnomine libreoffice-* shotwell simple-scan empathy gwibber
thunderbird transmission-* banshee usb-creator-gtk onboard
```

1.3 Install Additional Software Packages

Some network tools and other packages are required for latter installation steps:

```
sudo apt-get install openssh-server beep
```

2 Network Configuration



2.1 IP Address(es)

2.1.1 Ethernet

In case of an additional laptop beside the internal youBot PC, the network connection needs to be configured. According to the previous paragraph the IP addresses are set as follows:

```
192.168.#.10#
```

- **first '#':** indicates the actual youBot, i.e. for the youBot-hbrs2 the IP address space is 192.168.2.10#
- **second '#':** indicates the PC number on a particular youBot, i.e. *youbot-hbrs2-pc1* gets the IP 192.168.2.101 and *youbot-hbrs2-pc2* gets the IP 192.168.2.102.

2.1.2 EtherCAT

For the EtherCAT connection, a random but valid static IP address is recommended.

INFO: do not forget to set the subnet mask to 255.255.255.0

2.2 Hostname(s)

If the hostname was not set correct during the installation, it can be changed by editing the file:

```
sudo nano /etc/hostname
```

The hostname of a youBot PC is constructed as follows:

```
youbot-hbrs#-pc#
```

- **first '#':** indicates the actual youBot. At BRSU, there currently exist two youBots, resulting in the names *youbot-hbrs1-pc#* and *youbot-hbrs2-pc#*.
- **second '#':** indicates the PC number on a particular youBot. The *youbot-hbrs2* has two PCs, the internal and an additional laptop. The internal PC is called *youbot-hbrs2-pc1* and the second laptop *youbot-hbrs2-pc2*.

Finally, add the hostname and the related IP address of another youBot PC to the hosts file:

```
sudo nano /etc/hosts
```

2.3 Generate SSH key

Generate a SSH key pair ...

```
ssh-keygen
```

... and copy it to all remote computers on which components need to be launched:

```
cat ~/.ssh/id_rsa.pub | ssh b-it-bots@youbot-hbrs#-pc# 'cat >> ~/.ssh/authorized_keys'
```

Finally, copy the generated SSH key and add it to the related github account:

```
cat ~/.ssh/id_rsa.pub
```