OpenBlocks A Family

Quick Installation Guide

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Serial Console

To configure your OpenBlocks, connect it to the serial port on your PC. If your PC does not have a serial port, you can use a serial-port -USB adapter (not included).

Use a LAN straight cable (included) to connect the console port of the OpenBlocks and the console adapter (included). Plug the adapter's serial connector into the serial port of your PC.

To login, you need a terminal client such as Hyperterminal (standard on windows, up to XP), PuTTY, or TeraTerm.

You should apply the parameters below on the terminal client :

Baud rate	115,200
Data	8bit
Parity	none
Stop bit	1

```
fsck from util-linux-ng 2.17.2
done.
Setting up networking....
Mounting local filesystems...done.
Activating swapfile swap...done.
Cleaning up temporary files....
Configuring network interfaces...pool #0: pkt_size=1536, buf_size=1632 - 2048 of
 2048 buffers added
eth0: started
pool #1: pkt_size=1536, buf_size=1632 - 2048 of 2048 buffers added
eth1: started
done.
Setting kernel variables ...done.
Cleaning up temporary files....
INIT: Entering runlevel: 2
Starting enhanced syslogd: rsyslogd.
Starting periodic command scheduler: cron.
Starting OpenBSD Secure Shell server: sshdsshd (1077): /proc/1077/oom_adj is dep
recated, please use /proc/1077/oom_score_adj instead.
.

Debian GNU/Linux 6.0 obsax3 ttyS0

obsax3 login:
```

Login via command line

Login with the default ID "root", and password "root".

Or you can change the root password with the command "passwd".

To edit the configuration files, you can use "vi editor". Here you can refer the

quick reminder for common vi commands.

Quick vi editor reference:

Move cursor up : k   Move cursor down : j

Move cursor left : h   Move cursor right : l

Insert text : I   Leave text input mode : ESC

Delete character under cursor : x   Quit without saving : q!

Undo all changes : e!   Save the file and quit : x!

Network Configration

The first you have to do right out of the box is to configure the network.

You can access to OpenBlocks Console with SSH connection to the IP address in Factory Setting, or via the serial port. To operate the unit you can almost use the method on Debian GNU/Linux 6.0, except to save setting. In this document you are able to study the how-to information for elemental network configuration.

1. Hostname

To set the hostname as "openblocks," see below.

```
/etc/hostname
 openblocks
```

2. Ethernet ports

The Ethernet ports can be configured in the file "/etc/network/interfaces".

This example shows the case to assign a static IP address to eth0 and a dynamic IP address from DHCP server to eth1.

```
/etc/network/interfaces

auto lo
iface lo inet loopback

auto eth0
iface eth0 inet static
      address 192.168.254.254
      network 192.168.254.0
      netmask 255.255.255.0
      broadcast 192.168.254.255
      gateway 192.168.254.1

auto eth1
iface eth1 inet dhcp
```

3. DNS

To enable DNS, edit the file "/etc/resolv.conf".

```
/etc/resolv.conf

domain example.jp
nameserver 192.168.254.33
```

4. Proxy server

With "/etc/profile.d/proxy.sh" and "/etc/apt/apt.conf.d/99proxy" you can add the proxy server(s) as you like.

```
/etc/profile.d/proxy.sh

http_proxy=http://proxy.example.jp:8080
ftp_proxy=http://proxy.example.jp:8080
no_proxy=.example.jp
export http_proxy ftp_proxy no_proxy
```

```
/etc/apt/apt.conf.d/99proxy

Acquire::http::Proxy "http://proxy.example.jp:8080";
Acquire::ftp::Proxy "http://proxy.example.jp:8080";
```

Save Settings

When you want to reboot the unit, you have to save all the changes on the files or directries in User Area with the command "flashcfg".

```
# flashcfg -S
FlashROM overwrites the current data.
Are you ok? [y|N] y
Archiving userland files... done (Approximately 0 MBytes)
Save files to FlashROM
*
done
Archiving /etc config files... done (Approximately 4 KBytes)
Save files to FlashROM
*
done
```

Notification: This operation is unnecessary when you reboot the unit that has ext4 or ext3 storage that is set as "DEBIAN" for volume label.

Timezone

To change the timezone, run "dpkg-reconfigure" as follows.

```
# dpkg-reconfigure tzdata
```

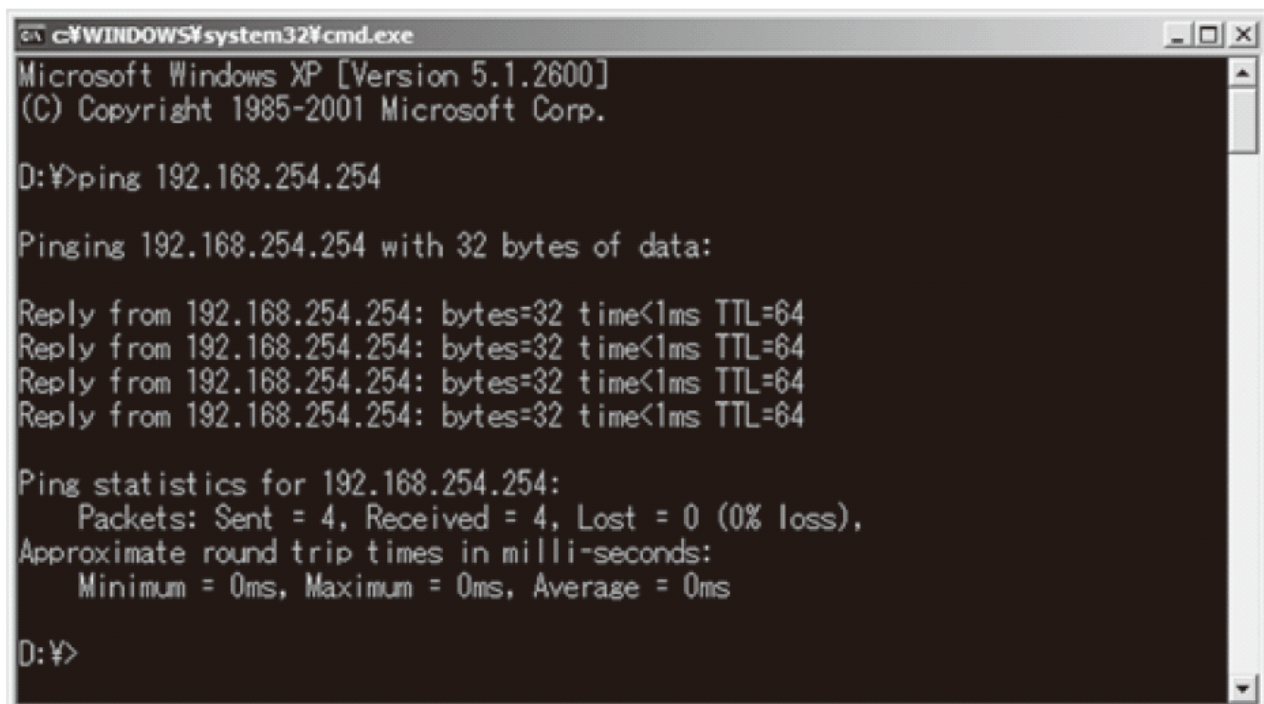When everything goes right, save your all settings aganin as the instructions above.

LAN Connection

Now connect the OpenBlocks to your local network , via the ETHER-0 port.

Then your OpenBlocks is ready to use.

Connection test with ping

To check if the network connection to the OpenBlocks works, use ping command. The factory default IP address on each unit is 192.168.254.254.


```
c:\WINDOWS\system32\cmd.exe                                     _ □ X
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

D:\>ping 192.168.254.254

Pinging 192.168.254.254 with 32 bytes of data:

Reply from 192.168.254.254: bytes=32 time<1ms TTL=64
Reply from 192.168.254.254: bytes=32 time<1ms TTL=64
Reply from 192.168.254.254: bytes=32 time<1ms TTL=64
Reply from 192.168.254.254: bytes=32 time<1ms TTL=64

Ping statistics for 192.168.254.254:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

D:\>
```

Factory Settings

ID	root
Password	root

Host Name

	AX3	A6
Host Name	obsax3	obsa6
Domain name	N/A	

IP addresses

		AX3	A6
Ether-0 (eth0)	IP address	192.168.254.254	192.168.254.254
	Netmask	255.255.255.0	255.255.255.0
Ether-1 (eth1)	IP address	192.168.253.254	No I/F
	Netmask	255.255.255.0	
Ether-2 (eth2)	IP address	AX3/4 : N/A AX3/2 : No I/F	
	Netmask		
Ether-3 (eth3)	IP address		
	Netmask		