Turnkey software

Maintain Guide

Rev. 2.1

2008/3/28

Revision History

Revision	Date	Comment
2.0	2008/03/28	Initial version
2.1	2008/04/17	Modify web logo change

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1 Introduction

Metanoia turnkey software solution provide user total software turnkey solution. User can easily evaluate the software and customize it for the user requirement.

2 Basic skill

2.1 Initial setup

1. setup PC's ip to 192.168.168.1, netmask: 255.255.255.0,
2. use browser to login http://192.168.168.168
3. ID:admin PWD:@admin@
4. change configuration if needed (for example CO/CPE)
5. modify ip and netmask than save.
6. test board's new ip again. setup ip to the same network then http://new-ip

2.2 System Console

use RS232, baud rate: 38400 N81
ID: root, pwd: @admin@
command line utility: dslcli
through this utility you can change advance configuration

2.3 SSH interface

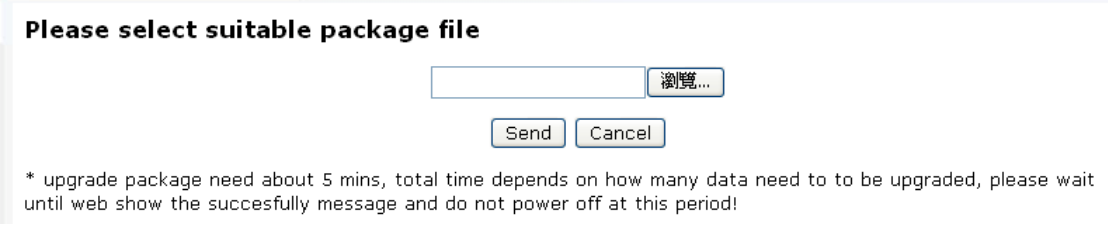
using ssh protocol to login modem, ID: root, pwd: @admin@
if you are using windows,you can download here:
http://www.putty.nl/download.html, select putty.exe.

2.4 Reset to default

holding reset_to_default(S2) for 3 seconds after modem booting 30 seconds.
all setting will be restore to default.

2.5 System patch by Web

Firmware upgrade or system patch can be done by web interface.
Upgrade procedure will reserve user setting and apply it after upgrade. Preserve setting niclude VDSL, network, QOS setting. Basically, every setting is preserve.



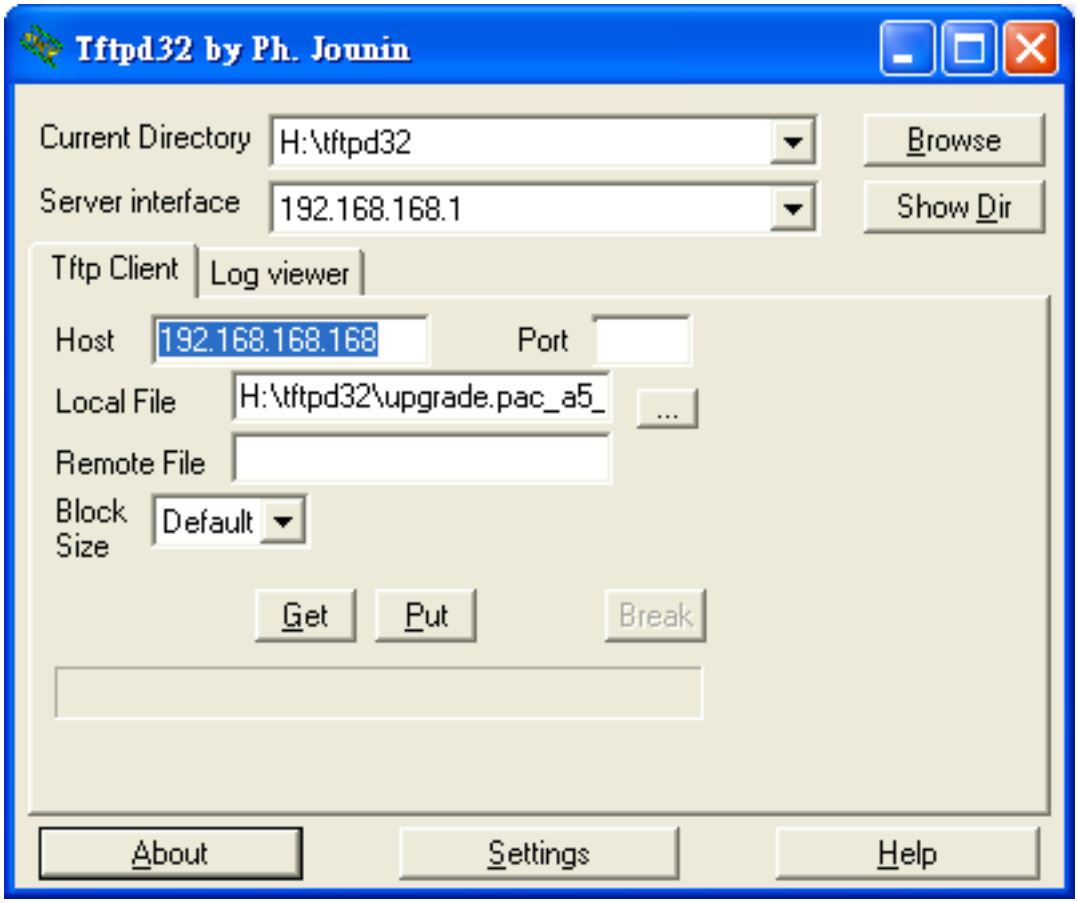
2.6 System upgrade by tftp in loader

Whole system can be upgrade by loader. If upgrade have some problem, you can upgrade again without any problem.

Requirement:
Any tftp client can work. We already test on windows, linux, mac.
We show the procedure on the windows, using a free tftp GUI client

Step by step procedure:

1. Setup PC with IP=192.168.168.1, NETMASK=255.255.255.0
2. Using network cable to connect EVB with PC
3. press restore button (S2), plug-in power at the same time.
4. Wait until power led off, when power LED off, system already setup ready in upgrade mode
5. Runing tftp client



6. Choose server interface to 192.168.168.1, Host=192.168.168.168
7. Select upgrade package, the file name ext is pac
8. Press Put, if tftp not start, press Break and try again.
9. After tftp complete, it will show

10. After upload, the upgrade procedure will spent 4 minutes, and system will reboot automatically. After reboot, power LED will always ON without any blinking. If your upgrade have problem, just re-upgrade again.
11. Detail process and LED behavior is like this:

Step	Duration	power LED behavior
TFTP upload	20s	off

Erase flash	90s	Blinking twice per second
Write flash	130s	Blinking once per second
Reboot	30s	LED on

3 Advanced skill

3.1 System config

dslcli setup->run script in /etc/system.conf

[root@VDSL]# cat /etc/system.conf
script /etc/default.scr
script /etc/preset.scr
script /mtd/vdsl_master.scr
script /mtd/sw_master.scr
script /etc/postset.scr
script /mtd/uc_systemUC_SYSTEM.scr
shellscript /mtd/network.sh

[root@VDSL]# cat /etc/preset.scr
vdsl portop 6 1
vdsl ut df 1 /mtd/bin/fw-FW_SIDE-FW_ID.b
vdsl portop 5 1
$V_DISABLE_P1$vdsl bdset 9 1

3.2 Board.conf

network
CLI_ETH0_IP=192.168.8.181
CLI_ETH0_NETMASK=none
CLI_ETH0_GATEWAY=192.168.8.254
CLI_ETH1_IP=none
CLI_ETH1_NETMASK=none
CLI_ETH1_GATEWAY=none

export SW_NETWORK=bridge
export NAT_MODE=0
Firewall_rule_0="IP=0@Port=0@Proto=0@Mac=0"
VirtualServer_rule=flag@comment@PublicPort@VirtualServerIP@VirtualPort

export DHCPD_START=192.168.1.2
export DHCPD_END=192.168.1.253
export DHCP_Router_IP=192.168.1.1

VDSL seting:
V_BANDPLAN=8

V_TARGETSNR1=36
V_DS_RATELIMIT1=131072
V_US_RATELIMIT1=131072
V_INTERDELAY1=0

3.3 Snmp supported

snmpwalk -v 2c -c public 192.168.8.223
snmpget -v 2c -c public 192.168.8.223 .1.3.6.1.4.1.6123.101.1.0.10.8.0
snmpset –v 2c –c private 192.168.8.223 .1.3.6.1.4.1.6123.101.1.0.10.8.0 I 24

3.4 Firmware Upgrade procedure

scp firmware_ot.b root@hostip:/bin/firmware_ot.b
scp firmware_rt.b root@hostip:/bin/firmware_rt.b

3.5 Dslcli useful command

>vdsl show firmver 1
FimrwareVersion=20000
FimrwareDate=52907
FimrwareTime=164402
BoardType=1
Terminal=121
Bit0(1-RT,0-OT)
Bit1(1-Xenos/SMII,0-Award/MII)
Bit2(1-HDLC,0-NOHDLC)

Bit3(1-NeedConnect,0-NoNeedConnect)
FwSetting:RT, AWARD/MII, No HDCL Framming, NoNeed Connect Command, Pacing Signal Disabled

>vdsl show linerate 1

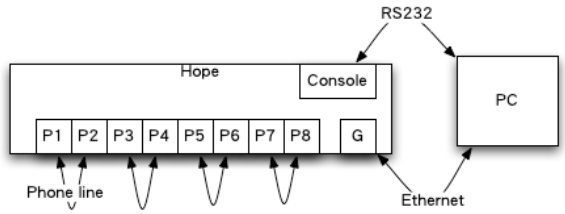
3.6 Burn-in test mode on Hope

Normal Mode → Test Mode

Attention:

The device will become a network loop in the test mode, please follow the instruction carefully.

Installation:



By Web ：

1. Setup PC's ip to 192.168.168.1, netmask: 255.255.255.0
2. Connect HOPE gigabit ethernet port(RJ-45 connector) to PC
3. Use any web explore to login http://192.168.168.168, ID:admin PWD:@admin@
4. Select a CLI command page
5. Make sure there is no phone line connected on VDSL port
6. Input “script /mtd/test_mode.scr”, after complete, pull out the connectivity of Hope and computer
7. The Hope will automatically reboot and get in to Test Mode
8. Connect port 1 with port 2, connect port 3 with port 4,
   Connect port 5 with port 6, connect port 7 with port 8
9. **Test mode action:**
   i. Setting the Port1, Port3, Port5, Port7 is CO, Port2, Port4, Port6, Port8 is CPE.
   ii. If all ports can't show time within 3 mins, system will automatic reboot. If all port can’t show time after reboot five times , the system will stop reboot. Trying connect

iii. After show time, the system will run ping command and continuously send out packet to all ports.

LED status:

Dark→Idle，Blinking→handshake，Bright→Show time，Quickly blinking→ Deliver packet

10. When all port quick blinking, It is burning now.

By system console：

1. Use RS232,baud rate:38400 N81, ID:root PWD:@admin@
2. Input “dslcli /mtd/test_mode.scr”
3. Same step with “by web” #7

Test Mode → Normal Mode

Web-based：

1. Disconnect port 1 with port 2, disconnect port 3 with port 4, Disconnect port 5 with port 6, disconnect port 7 with port 8
2. Connect HOPE gigabit ethernet port(RJ-45 connector) to PC
3. Use browser to login and Select a CLI command page
4. Input “script /mtd/normal_mode.scr”
5. The HOPE will automatically reboot and get in to Normal Mode

System console：

1. disconnect port 1 with port 2, disconnect port 3 with port 4, disconnect port 5 with port 6, disconnect port 7 with port 8
2. Input “dslcli /mtd/normal_mode.scr”
3. The HOPE will automatically reboot and get in to Normal Mode

3.7 SNMP Manager

In the beginning:

snmpmgr is management utility that demo who can we support by SNMP.
We provide this utility to help user verify our SNMP functionality.
It also help user to integrate SNMP with customer's features.
Welcome to have suggestion on this utility but we can't promise any support on this utility.

Requirement:

This is python utility, we test it on python 2.5 on linux.
system need snmpget, snmpset, snmpwalk supported (Net-SNMP package)
If you need snmp host scanner, you need nmap.

Files:

snmp_cfg:

master configuration file

snmp_hosts:

snmp hosts ip list

snmp_oids:

default MIB oid definition

snmp_mibin:

default set mib file

snmp_mibout:

default get mib file

snmp_script_sample:

snmp script sample and command list

Installation step by step:

1. Check/Modify snmp_cfg
2. Check/Modify snmp_hosts, fill some hope's ip address
3. backup snmp_script_sample, modify it with correct ip address,
   remind you that script depends on enviroment supported, for ex, ftp server exist.
   If you find any problems, check the detail of script or your enviroment setting.
4. run "python snmpmgr.py"

4 User customization:

4.1 Web Customization

4.1.1 LOGO change

•All web page in packed in /mtd/web.tar.gz

•Using WinSCP to download from award

Refer WinSCP: http://winscp.net/eng/index.php

•Using WinRAR to unpack it

Refer WinRAR: http://www.win-rar.com/

•Replace file and Java-script code

•Using WinRAR too pack it

•Using WinSCP to upload to /mtd/web.tar.gz

Key file

•Logo: web/images/02.jpg

•Make sure image size is the same (pixel 181*100)

•web/header.htm, web/index.htm

•search metanoia and replace it.

4.1.2 Code modification

Refer: Software design guide

4.2 switch setting customization

•all switch setting in the script

•all you need is modify the script file in /mtd

•Ex: enable hardware IGMP snooping

•add “switch wbit c 1 1 1” in /mtd/

sw_a_all.scr

4.3 CLI Script customization

•We provide sample script file. Update this by

user requirement

•System script

•VDSL script

•Switch script

4.4 Turn on features

- Web console->User customization
- Remote syslog
- setcfg SYSLOG_ENABLE 1
- setcfg SYSLOG_IP $IP_ADDRESS
- setcfg SYSLOG_PORT $Port