Access Point and Access Server

Quickstart

Bluegiga Technologies

Access Point and Access Server: Quickstart

by Bluegiga Technologies

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Table of Contents

1. Getting Started	1
1.1. Powering Up	1
1.2. WWW Interface	3
1.3. Shell Prompt Access	5
1.3.1. Management Console (Access Server only)	6
1.3.2. Accessing Remotely	7
1.3.3. Transferring Files to/from Access Server	7
1.4. Introduction to Configuration	8
1.5. Using the Setup WWW Interface	8
1.6. Using the setup Command Line Application	15
1.7. Resetting a Configuration	16
1.8. Exporting and Importing Configurations	16

List of Tables

1-1. The Management	Console Port Settings)
0	0	

Chapter 1. Getting Started

Access Point and Access Server can be controlled in four ways:

- by using Bluegiga Solution Manager (see BSM documentation for details)
- by using the WWW interface
- by entering commands and using applications at the shell prompt
- by sending and/or retrieving files to/from the device.

Note: The default username is **root** and the default password is **buffy**.

1.1. Powering Up

To get started with Access Point or Access Server, connect it to your local area network (LAN) by using an ethernet cable, and connect the power adapter. The unit will power up and retrieve the network settings from your network's DHCP server.

Access Point and Access Server will also use Zeroconf (also known as Zero Configuration Networking or Automatic Private IP Addressing) to get a unique IP address in the 169.254.x.x network. Most operating systems also support this. In other words, you can connect your controlling laptop with a cross-over ethernet cable to Access Server, then power up Access Server, and the devices will automatically have unique IP addresses in the 169.254.x.x network. With Access Point, also a direct ethernet cable works.

Note: If you need to configure the network settings manually and cannot connect Access Server first by using Zeroconf, you can do it by using the management console. For more information, see Section 1.3.1. Access Point, however, does not provide user access to the management console. You can configure static network settings by sending the settings in a management packet for example using a USB memory dongle. See User's and Developer's Guide for more information.

The physical interface locations of Access Point are described in Figure 1-1.



Figure 1-1. Access Point Interfaces

Note: There is no power switch in Access Point. The adapter is the disconnection device; the socketoutlet shall be installed near the equipment and shall be easily accessible. Unplug and plug the power adapter to switch the power on and off. The power led in Figure 1-1 is on when the power adapter is connected.

The physical interface locations of Access Server are described in Figure 1-2 and Figure 1-3.



Figure 1-2. Access Server Connectors

Note: There is no power switch in Access Server. The adapter is the disconnection device; the socketoutlet shall be installed near the equipment and shall be easily accessible. Unplug and plug the power adapter to switch the power on and off. The power led in Figure 1-3 is on when the power adapter is connected.



Figure 1-3. Access Server leds

All the blue status leds are turned off and the rightmost blue led (closest to the power led, led number 1 in Access Point) blinks on four second intervals when the boot procedure is finished and the unit is ready to be connected. Bluetooth led, (led number 2 in Access Point and blue led furthest away from power led in Access Server) blinks quickly every 30 seconds indicating Bluetooth service activity.

1.2. WWW Interface

Most Access Point and Access Server functionality can be controlled through the WWW interface by using any standard WWW browser.

The wrapfinder application (see Figure 1-4), available for the Windows operating system from Bluegiga Techforum (http://techforum.bluegiga.com/) provides an easy-to-use interface for finding Access Points and Access Servers (with SW version 2.1.0 or later) in the local area network.

WRAP Acces	s Server Finder							_ 🗆 🗙
Serial Number 0403110009 0511020072 0511170051 0511170092 0607240124	IP Address 10.1.1.93 10.1.1.71 10.1.1.60 10.1.1.104 10.1.1.104	Туре 2293 2293 2293 2293 2291 2293	Software 2.1.07 2.27 3.1 3.1 3.0?	BT Friendly Name W0511020072_1 Old_31_1 Helsinki Weather W0607240124_1	Hostname wrap.localdomain wrap.localdomain	Description	Broadcast Address 10 1 1 Bescan Details Connect Egit	. 255
Press "Connect"	Press "Connect" -button or double-click serial number to connect to Access Server with WWW browser.							

Figure 1-4. Access Server Finder Application

When wrapfinder is launched, it automatically identifies the broadcast address of the network it runs in and sends a special query packet (UDP broadcast) to units. The most important information in their responses is then shown in table format.

You can change the broadcast address used for finding Access Points and Access Servers. A new scan can be done by clicking **Rescan**.

Select a unit by clicking its serial number, and click **Details** to see more information (such as all Bluetooth addresses and friendly names). See Figure 1-5 for details.

Access Server Details
Access Server 2293 (S/N 0511170051) (build: 3.1) - Hostname: wrap.localdomain - IP: 10.1.1.60 (nap), 169.254.98.121 (nap:9), 192.168.161.1 (gn) - Ethernet MAC: 00:07:80:00:08:b0 - WRAP: 10101 00:07:80:80:ac:e6 bt1.2 (Old_3.1_1) - WRAP: 10102 00:07:80:80:ac:e6 bt1.2 (Old_3.1_2) - WRAP: 10103 00:07:80:80:ac:e5 bt1.2 (Old_3.1_3)
Close

Figure 1-5. Details Dialog of Access Server Finder

Click **Connect** or double-click a serial number to connect to the selected Access Point or Access Server by using a WWW browser.

Click Exit to close the program.

Note: To find Access Server's IP address without wrapfinder, see Section 1.3.2.

To access the WWW interface, enter the IP address of Access Point or Access Server to the browser's address field and press **Enter** (see Figure 1-6).



Figure 1-6. WWW Interface

From the top-level page, click Setup to log in to the configuration interface. The default username is **root** and the default password is **buffy** (see Figure 1-7).

Authenticatio	on Required
?	A username and password are being requested by http://192.168.42.3. The site says: "Bluegiga"
User Name:	root
Password:	•••••
	OK Cancel

Figure 1-7. WWW Login Prompt for Access Server Setup

After logging in, you can configure several settings (see Figure 1-8). These are discussed in detail in Section 1.4.

🕲 Ac	cess Se	rver -	Setup	Mozill	a Firef	бох					_ 🗆	×
<u>F</u> ile	<u>E</u> dit (<u>V</u> iew	Hi <u>s</u> tory	<u>B</u> ookr	narks	<u>T</u> ools	ļ	<u>H</u> elp				42
<) > -	C	×	☆		http://	19	92.168.42.3/setu	⊳☆ •	G·	Google	P
Ac WAF WAF	CCES RNING: R RNING: S	SS loot p ietup	Serv asswor passwo	er - 1 is stil rd is st	Se I defa ill defa	tup ult. Plea ault. Ple	as	se change it. ase change it.				•
VVAF	ANING: N	WKAP	passw	ora is s	sun de	rauit. Pi	le	ase change it.				
1108	security s	setting	is Hi	яр								
	eneric s	setting	js Hi	яþ								
100	letwork	settin	gs H	elp								
LI⊪A	oplicatio	ons	H	elp								
−TI⊫i∖	WRAP s	etting	s H	elp								
LI⊪A	dvanced	d setti	ngs H	elp								
Exit												
Acce	ess Serv	er, S/I	N 03122	12/27	(4.0) ·	– Сору	rig	ght © Bluegiga	rechnolo	gies inc		-
Done												//.

Figure 1-8. The WWW Configuration Interface

1.3. Shell Prompt Access

Shell prompt access may be needed for advanced controlling operations that cannot be performed by using the WWW interface. You can get to the shell prompt by using SSH. When you are connected to the same LAN network with your Access Server or Access Point, you can find its IP address using the wrapfinder application (see Section 1.2 for details). You can use SSH to get shell prompt access also using Bluetooth LAN Access or PAN profile. Access Server and Access Point can be seen in Bluetooth inquiries as "Wserialno_n", where "serialno" is the serial number of the device and "n" is the number of the Bluetooth baseband in question (model 2293 has three Bluetooth basebands, any of which can be connected). After you have connected to the server (no PIN code, username or password is needed), establish an SSH connection to the device at the other end of the connection. You can use the wrapfinder application to find the IP address (see Section 1.2 for details).

Note: Bluetooth LAN Access and PAN profiles are disabled by default. Use the WWW interface to enable them, if needed. The PAN profile can also be enabled by sending the enable-pan.noarch.wpk file (available on-line at http://bluegiga.com/as/current/enable-pan.noarch.wpk) to Access Server by using Bluetooth Object Push profile or by inserting a USB memory dongle with the file in its root directory to Access Server's or Access Point's USB port.

Note: The default username is **root** and the default password is **buffy**.

1.3.1. Management Console (Access Server only)

If you do not have a Bluetooth LAN/PAN client and if Access Server is not connected to your LAN, or if you do not know the IP address given to Access Server, you can get the first shell prompt access by using the management console. The management console is only needed to change the network configuration settings if you cannot configure the network by using DHCP or Zeroconf. The management console is connected to Access Server with a serial cable. After you have configured the network settings by using the management console, all further controlling activities can be performed remotely using SSH sessions over ethernet or Bluetooth LAN/PAN connection.

To setup the management console, proceed as follows:

- 1. Have a PC with a free COM port.
- 2. Power off Access Server.
- 3. Configure your terminal application, such as HyperTerminal in Windows, to use the settings below for your computer's free COM port

Setting	Value
Speed	115200bps
Data Bits	8
Parity	None
Stop Bits	1
Flow Control	None

Table 1-1. The Management Console Port Settings

- 4. Connect the serial cable shipped with Access Server to your PC's free COM port.
- 5. Connect the serial cable to the management (user) port in Access Server (see Figure 1-2).
- 6. Power on Access Server.
- 7. Enter letter **b** in the terminal application during the first five seconds.
- 8. The management console is now activated and you can see the boot log in your terminal window.

Note: The boot process may stop at the following U-Boot prompt:

Hit any key to stop autoboot: 0 U-Boot>

If this happens, enter command **boot** to continue to boot Linux.

9. Wait for the device to boot up and end with the following prompt:

Please press **Enter** to activate this console.

10. Press Enter to activate the console. You will be logged in as **root** in directory /root:

[root@wrap root]

11. You can now control Access Server from the management console.

1.3.2. Accessing Remotely

When Access Server or Access Point is connected to a LAN, it tries to get the IP address by using DHCP and Zeroconf by default. You can then use the wrapfinder application to find the IP address (see Section 1.2).

With Access Server but not Access Point, if you cannot get the IP address by using the wrapfinder, another way to see the IP address is to connect with a management console (see the previous section), power on the unit and, after the system is up and running, give the **ifconfig nap** command. The inet addr field for the nap interface contains the IP address of Access Server. For example, in the following capture from the management console, the IP address is 192.168.42.3.

```
[root@wrap /]$ ifconfig nap
nap Link encap:Ethernet HWaddr 00:07:80:00:BF:01
inet addr:192.168.42.3 Bcast:192.168.42.255 Mask:255.255.255.0
inet6 addr: fe80::207:80ff:fe00:bf01/64 Scope:Link
UP BROADCAST MULTICAST MTU:1500 Metric:1
RX packets:12635 errors:0 dropped:0 overruns:0 frame:0
TX packets:8 errors:0 dropped:0 overruns:0 carrier:0
collisions:0 txqueuelen:100
RX bytes:1686246 (1.6 MiB) TX bytes:1640 (1.6 KiB)
Interrupt:24 Base address:0xc000
```

You can use this address to connect to Access Server remotely over SSH, SCP or SFTP.

Note: The default username is **root** and the default password is **buffy**.

1.3.3. Transferring Files to/from Access Server

You can transfer files to and from Access Server and Access Point by using, for example:

- SCP (secure copy over SSH).
- SFTP (secure FTP connection over SSH).
- FTP (plain FTP connection).

Note: FTP is disabled by default for security reasons. Use SFTP instead. FTP server is not installed by default. You can install it from software package ftpd. See User's and Developer's Guide for information about installing software components.

Tip: If enabled, use the integrated FTP client on the Internet Explorer (type ftp://root:buffy@wrap-ip-address/ in the address bar).

- Bluetooth OBEX (Object Push and File Transfer Profiles) to/from directory /tmp/obex in Access Server or Access Point.
- NFS (mount an NFS share from a remote computer as a part of Access Server's or Access Point's file system).
- SSHFS (mount an Access Server or Access Point directory over SSH as a part of any other Linux host file system).

To download and install SSHFS, visit http://fuse.sourceforge.net/sshfs.html.

- CIFS (mount a Common Internet File System share from a remote computer as a part of Access Server's or Access Point's file system). A CIFS client, available in a separate software packet cifs-client, is required. See User's and Developer's Guide for information about installing software components.
- USB memory dongle (see User's and Developer's Guide for more information.
- Xmodem/Ymodem/Zmodem (use rz/rx/rb/sz/sx/sb commands from the management console). You can install these commands from software package rzsz. See User's and Developer's Guide for more information about installing software components.

Note: The management console is not available for Access Point, only for Access Server.

1.4. Introduction to Configuration

When Access Server or Access Point is installed and powered up for the first time, the default configuration settings are being used. With these settings, the unit automatically configures its network settings assuming that it is connected to a LAN network with a DHCP server running. Additionally, the unit also uses Zero Configuration Networking (also known as Automatic Private IP Addressing) to connect to the 169.254.x.x network, which can be used if the network has no DHCP server.

After booting up, the only Bluetooth profiles enabled are the Object Push and File Transfer Profiles, used to send files to/from Access Server.

More Bluetooth profiles can be enabled, and most of Access Server and Access Point settings can be configured by using the **setup** application. It has a WWW interface at http://wrap-ip/setup but it can also be run at the command line.

Note: The default username is **root** and the default password is **buffy**.

1.5. Using the Setup WWW Interface

The easiest way to change Access Server or Access Point settings is to use the WWW interface. Accessing the WWW interface is instructed in Section 1.2.

A typical WWW configuration page is shown in Figure 1-9 (This page can be found at Setup \rightarrow Security settings)

🐸 Access Server - Setup - Security -	Mozilla Firefox
Eile Edit View History Bookmark	s <u>T</u> ools <u>H</u> elp
🔇 🖸 - C 🗙 🏠 🛽	http://192.168.42.3/setup?r=security 🏠 🔹 💽 Google 🛛 🔎
Access Server - S	etup - Security
Access Derver - O	etup - Security
WARNING: Root password is still de	fault. Please change it.
WARNING: Setup password is still d WARNING: iWRAP password is still d	efault. Please change it. default. Please change it.
Root password	\$1\$rUj/KWS1\$v3FZcBP.6HiN4f5PaATMq: Help
Setup password	\$1\$d8c5ae63\$sLjxI2szlLxPV3yIobnFQ1 Help
iWRAP password	\$1\$6dc63888\$7xiwV9YrbdopwqVOU9rcG Help
Allow local clients without password	⊙ Yes C No Help
Bluetooth PIN code	Help
wpkgd autoinstall password	Help
wpkgd hotplug password	Help
Reset	Save
Back Exit	
Access Server, S/N 0312272727 (4.0) – Copyright©Bluegiga Technologies Inc
Done	li.

Figure 1-9. Example WWW Setup Page

The different parts of the WWW Setup page are discussed in the following list:

Status area

The status area serves three purposes:

- It indicates that the changes are permanently saved when the user clicks the Save button (or when the user clicks a toggling Yes/No link).
- It warns when default passwords are in use.
- If invalid values were entered in one or more fields, an error message is shown in this area (see Figure 1-10).

🐸 Access Server - Setup - Security -	Mozilla Firefox	
Eile Edit View History Bookmark	s <u>T</u> ools <u>H</u> elp	
🔇 🖸 C 🗙 🏠 🛽	http://192.168.42.3/setup?r=security 🏠	? • 💽 • Google 🔎
Access Server - S	etup - Security	
Access Server - S	etup - Security	
ERROR: Value too long for "Bluetoot	h PIN code'' (max=16).	
Changes will NOT be saved.		
Root password	bu55y	Help
Setup password	bu55y	Help
iWRAP password	bu55y	Help
Allow local clients without password	⊙Yes CNo	Help
Bluetooth PIN code		Help
wpkgd autoinstall password		Help
wpkgd hotplug password		Help
Reset	Save	
Back Exit		
Access Server, S/N 0312272727 (4.0) — Copyright©Bluegiga Technologies I	inc
Done		1.

Figure 1-10. Trying to Save an Invalid Input

Note: It is typically necessary to reboot Access Server or Access Point for the changes to take effect. This can be done through the WWW interface (Advanced settings menu).

• Number or text entry fields

Most of the configurable settings are text (or number) entry fields. For some fields, such as the IP address or netmask, there are restrictions on the input format. Setup validates the input at save time and accepts valid data only. The fields with errors are shown to the user so that mistakes can be fixed (see Figure 1-10).

• Help link

Click the Help link to retrieve the setup page again with requested help information displayed. For an example, see Figure 1-11.

😻 Access Server - Setup - Security - Mo	zilla Firefox		
<u>Eile Edit View History Bookmarks</u>	[ools Help		
🔇 🔊 - C 🗙 🏠 🗋	http://192.168.42.3/setup?r=security&h=security.t	otpin 🟠 🔹 🔽 Google	P
Access Server - Set	up - Security		
Root password	\$1\$add47575\$AauMWgyhL1If0V.RIUoS	Help	
Setup password	\$1\$e361c146\$VJ5MM/Lxi8OL3NrpeW.70	Help	
iWRAP password	\$1\$ffef22cc\$faQQofkWyUPtDxUmAiakp	Help	
Allow local clients without password	⊙yes ONo	Help	
Bluetooth PIN code		Help	
Default value for this option is This PIN code is used when estal can be used.	s empty. Dlishing connections. Up to 16 chars	ucters	
If there is no default PIN code a PIN code when establishing co	set, Access Server does not require mections.	2	
However, if there is no default requests a PIN code, "0000" is ;	PIN code set, but the other device ceplied.		
wpkgd autoinstall password		Help	
wpkgd hotplug password		Help	
Back Exit	oave		
Access Server, S/N 0312272727 (4.0) -	Copyright © Bluegiga Technologies Inc		
Done			1.

Figure 1-11. Help Links in WWW Setup

Note: If you have made changes to the settings on the page before clicking Help and not saved them yet, a warning message is displayed. See Figure 1-12

• Yes and No radio buttons

These buttons are typically used to configure a setting that can be either enabled or disabled, and this setting has no effect on the visibility of other settings.

Reset button

Reset button resets the fields to the values currently in use at Access Server or Access Point. In other words, the **Reset** button discards unsaved changes.

Note: The Reset button does not make a "factory reset".

Save button

Save button sends the WWW page to the setup application for validation. If the values in the fields are valid, they are permanently saved and the page is refreshed with the Changes have been saved. message at the top. The accepted values are shown in the page fields.

If there were errors in the fields, these are shown as in Figure 1-10.

Note: It is typically necessary to reboot Access Server or Access Point for the changes to take effect. This can be done through the WWW interface (Advanced settings menu).

Back link

Press the Back link to return to the previous level of the Setup menu hierarchy.

Note: Pressing the **Back** link does *not* save changes in the fields on the current page. Therefore, if there are changes not saved, a warning message is displayed, see Figure 1-12.



Figure 1-12. Warning Message of Changes not Saved

- Exit link
 - Exit link quits the setup application and returns to the Access Server's main WWW page. **Note:** Pressing the Exit link does *not* save changes in the fields on the current page. Therefore, if there are changes not saved, a warning message is displayed, see Figure 1-12.
- Link to a configuration file

Some of the configurable settings are actually editable configuration files, such as /etc/rc.d/rc.local for Setup \longrightarrow Advanced setting \longrightarrow System startup script. Clicking the link will retrieve the file for editing in the browser window, or create a new file, if it does not exist. See Figure 1-13.



Figure 1-13. Editing Files in WWW Setup

Note: You can edit any file through the WWW Setup. to edit files, navigate to Setup \longrightarrow Advanced setting \longrightarrow Edit other configuration files.

• Toggling Yes/No and on/off links

Clicking the Yes/No link (see Figure 1-14) immediately changes the setting and saves the change. Typically these links are used to display or hide further settings.

🐸 Access Server - Setup - Network	: - NAP Interface - Mozilla Firefox		- D ×		
<u>File E</u> dit <u>V</u> iew Hi <u>s</u> tory <u>B</u> ookma	rks <u>T</u> ools <u>H</u> elp				
🔇 🔊 - C 🗙 🏠 [http://192.168.42.3/setup?r=nap&na	p.dynamic=No 🏠 🔹 🔽 Google	P		
Access Server - S	Setup - Network - N	AP Interface			
Use dynamic network configuration	n No	Help			
IP address	192.168.42.3	Help			
Subnet mask	255.255.255.0	Help			
IP address of the default gateway	192.168.42.254	Help			
List of name server IPs	192.168.42.1 192.168.42.2	Help			
III DHCP server settings		Help			
Reset	Save				
Back Exit					
Access Server, S/N 0312272727 (4.0) — Copyright© Bluegiga Technologies Inc					
Done			1.		

Figure 1-14. Yes / No links in WWW Setup

The on/off links in Setup \longrightarrow Applications \longrightarrow Default startup applications behave in a same way, making and saving the change immediately (see Figure 1-15).

😻 Access Server -	- Setup - Ap	plications	- Default startup applications - Mozilla Firefox	-D×
<u>File E</u> dit <u>V</u> iew	Hi <u>s</u> tory <u>B</u>	ookmarks	Iools Help	
C	: × {	<u>ک</u>	http://192.168.42.3/setup?r=applications.initd	P
Access S	Server	- Set	up - Applications - Default startup applicatio	ons
bluetooth	0:off	3: on	iWRAP server	
connector	0:off	3:on		
crond	0:off	3:on	cron is a standard UNIX program that runs user-specified programs at p	eriodic s
dhcpd	0:off	3:off	dhcpd provide access to Dynamic Host Control Protocol.	
finder	0:off	3: on		
httpd	0:off	3: on		
inetd	0:off	3:off	The internet superserver daemon starts a variety of other internet ser	vices as
iptables	0:off	3: on	Default iptables rules for PPP and PAN-GN devices.	
leds	0:off	3: on		
network	0:off	3:on	Activates/deactivates all network interfaces configured to start at bo	ot time.
ntpd	0:off	3:on		
obexsender	0:off	3:on		
serialport	0:off	3:off		
sshd	0:off	3:on	OpenSSH server daemon	
swap	0:off	3:on	Swap to nfs server.	
syslog	0:off	3: on	Syslog is the facility by which many daemons use to log messages to va	rious sys
telnetd	0:off	3:off		
watchdog	0:off	3:on		
wpkgd	0:off	3:on		
Back Exit				
Access Server, S/	N 03122727	27 (4.0) -	Copyright © Bluegiga Technologies Inc	
•				►
Done				11.

Figure 1-15. Selecting Default startup applications in WWW Setup

Note: To configure the default startup applications from the command line, use the **chkconfig** command.

• Upload links

The WWW Setup has settings that allow user to upload files to Access Server or Access Point, for example Setup \longrightarrow Advanced \longrightarrow Upload a software update (see Figure 1-16).

😻 Access Server - Setup - Advanced - Upload a software update - Mozilla Firefox						
<u>File Edit View His</u> tory <u>B</u> ookmarks <u>T</u> ools <u>H</u> elp	- 42					
C × 🕜 http://192.168.42.3/setup?r=advanced.upwpk	P					
Access Server - Setup - Advanced - Upload a software update						
Upload a file to /tmp/obex Browse Upload Help Back Exit						
Access Server, S/N 0312272727 (4.0) — Copyright © Bluegiga Technologies Inc						
Done						

Figure 1-16. Uploading files through WWW Setup

Use the **Browse**... button to select the file to be uploaded, and send it to Access Server or Access Point by clicking Upload.

• Browsing files

Some WWW Setup pages allow users to browse the file system or part of it, such as Setup \longrightarrow Advanced settings \longrightarrow Browse all files (see Figure 1-17).

🕲 Access Serv	er - Setup - Ad	vanced -	Browse all file	s - Mozilla Firefox		- D ×	
<u>File E</u> dit <u>V</u> ie	w Hi <u>s</u> tory <u>B</u>	ookmarks	<u>T</u> ools <u>H</u> elp				
	C X (http://192.168	.42.3/setup?r=advanced.	dir 🞧 🍷 🔂 🕻 Googl	2 🎤	
Access	Server	' - Se	tup - A	dvanced - E	Browse all fi	les	
Directory:	/						
-							
drwxr-xr-x	1970-01-01	00:00	0	4.4			
drwxr-xr-x	2009-01-10	04:33	0	bin	[de	1]	
drwxrwxrwt	1970-01-01	00:00	2920	dev	[de	1]	
drwxr-xr-x	1970-01-01	00:32	0	etc	[de	1]	
drwxr-xr-x	2009-01-10	04:33	0	home	[de	1]	
drwxr-xr-x	2009-01-10	04:33	0	lib	[de	1]	
drwxr-xr-x	2009-01-10	04:33	0	mnt	[de	1]	
dr-xr-xr-x	1970-01-01	00:00	0	proc	[de	1]	
drwxr-xr-x	2009-01-10	04:33	0	root	[de	1]	
drwxr-xr-x	2009-01-10	04:33	0	sbin	[de	1]	
drwxr-xr-x	1970-01-01	00:00	0	sys	[de	1]	
lrwxrwxrwx	2009-01-10	04:33	11	tmp -> dev/shm/tm	p [de	1]	
drwxr-xr-x	2009-01-10	04:33	0	usr	- [de	11	
drwxr-xr-x	1970-01-01	00:00	0	var	[de	1]	
Upload a file to	, <u> </u>		Browse	Upload	Help	í.	
Book Evit							
DACK EXIL							
Access Server.	S/N 03122727	27 (4.0)	– Copyright©	Bluedida Technolodies	Inc		
Done						11.	

Figure 1-17. Browsing files via WWW Setup

Click the directory names to navigate in the file system.

Click a file name to view its contents.

Note: Currently it is only possible to view contents of text files. It is not possible to download files, either.

Click **del** to delete a file or an empty directory.

	Warning	
You w	ill not be asked for confirmation for the deletion.	

The WWW Setup also has menu items that run commands in Access Server or Access Point, and show the output in the browser window. Some commands, such as rebooting the unit, require your confirmation before execution.

1.6. Using the setup Command Line Application

The basic configuration settings can also be changed by using the **setup** application at the command line interface.

The **setup** application displays the settings in a hierarchical menu (see Figure 1-18). Navigating the menu is accomplished by entering the number or letter corresponding to the setting to be viewed and/or changed and pressing **Enter**. Pressing only **Enter** either accepts the previous value of the setting or returns to the previous level in the menu hierarchy.



Figure 1-18. Using the setup Command Line Application

Note: Ensure that your terminal application does not send line ends with line feeds. If your terminal sends both CR and LF when you press **Enter**, you cannot navigate in the **setup** application.

If you use the command line setup application, files are edited by default with the **vi** editor. If you want to use another editor, you can specify it in VISUAL environment variable.

You can not enable or disable default startup applications using the command line setup application. Use command **chkconfig** application on /off instead.

1.7. Resetting a Configuration

You can reset the default configuration with the **setup** -**r** command. The command requires rebooting of Access Server or Access Point. When the system starts up, the default configuration settings are restored. If you have only changed the configuration by using the **setup** application, the following commands at the Access Server's or Access Point's command prompt will suffice:

```
[root@wrap /]$ setup -r
[root@wrap /]$ reboot
```

Note: This does not reset the edited files to factory defaults; it only affects the settings changed through the WWW Setup or the **setup** command line application. It does not uninstall extra applications installed by the user or reset **Default startup applications** settings, either. See Bluegiga Tech Forum (http://techforum.bluegiga.com/) for more information on how to perform a full factory reset.

1.8. Exporting and Importing Configurations

You can export configuration settings (expect for passwords and the list of default startup applications) by using the following command:

[root@wrap /root]\$ setup -o > settings.txt

The saved settings can later be restored by using the following commands:

```
[root@wrap /root]$ setup -m settings.txt
[root@wrap /root]$ reboot
```