

LevelOne

WBR-3405TX

11g Wireless AP Router

User`s Manual

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1. Overview

Congratulations on the purchase of your new LevelOne WBR-3405TX, 11g Wireless AP Router. The LevelOne 11g Wireless AP Router is a multi-function device. Before you install and use this product, please read this manual carefully for fully exploiting the functions of this product.

1.1 Product Feature

- Compliance with IEEE 802.11g and 802.11b standards
- Highly efficient design mechanism to provide unbeatable performance
- Strong network security with WEP and 802.1X encryption
- Achieving data rate up to 54Mbps for 802.11g and 11Mps for 802.11b with wide range coverage; high performance to deliver up to 108Mbps raw data rate for 802.11g
- Quick and easy setup with Web-based management utility

1.2 System Requirements

- Windows 98, 98SE, Millennium Edition (ME), 2000 and XP operating systems
- Microsoft Internet Explorer 5.5 or higher
- DSL/ Cable Modem Broadband Internet connection and ISP account
- PCs equipped with 10Mbps or 10/100 Mbps Ethernet connection to support TCP/IP protocol
- One CD-ROM drive

1.3 Applications

- Home SOHO networking for device sharing and wireless multimedia
- Wireless office provides a wider range for home and SOHO Ethernet
- Enables wireless building-to-building data communication
- Built-in infrastructure mode
- Router provides ideal solution for:
- Difficult-to-wire environments
- Temporary LANs for scenarios such as trade-exhibitions and meetings
- Enables LAN adaptability to frequently changing environments

• Enables remote access to corporate network information, for example e-mail and the company home page

2. Getting Start

2.1 Know the 11g Wireless Router-WBR-3405TX

Ports:



LEDs:

LED	Status	Description	
Dowon	On	Indicates proper connection to power supply.	
Power	OFF	The unit is not receiving power	
Status	On Indicates that the device is connected to the WLAN.		
XXZANT		Indicates connection to the WAN port	
WAN	Blinking	Data transmission.	
		Link is established	
WLAN	Blinking	Packet transmit or receive activity	
		No Link activity	
		Indicates connection is established.	
LAN	Blinking	Data transmissions	
		No LAN connections	

2.2 Connect to the 11g Wireless Router

2.2.1 Access the Setting Menu

You could start to access the configuration menu anytime by opening a web browser window by typing the IP address of this wireless router. The default IP is 192.168.1.1.



The below window will popup. Please enter the user name and password. Both of the default is "admin".

連線到 192.168.1.	1 ? 🛛
	G
AP-Router 使用者名稱(U): 密碼(P):	 sdmin ***** 記憶我的密碼(R)
	確定 取消

Now, the main menu screen is popup.

	Q 🖬 🎯 🗗 🎒 🕅 • 🗉			🇃 - 🗗 ×
Wireless Router			108 Mbps	
	LAN&DHCP server WAN	Password Time	Dynamic DNS	THELP
	Host Name	AP-Router		
	IP Address	192.168.1.1		
e LAN Setting	Subnet Mask	255.255.255.0		
O Wireless	DHCP Server	⊙ Enabled ○ Disable	d	
Status	Start IP	192.168.1.100		
Routing	End IP	192.168.1.199		
Access	Domain Name			
Management	Lease Time	1 Week 💌		
 Tools Wizard 	Cancel Apply			
	Host Name	IP Address	MAC Address	
	skyler 192	. 168. 1. 100	00-00-E8-4A-4A-01	

2.2.2 Quick Setup with Wizard

Setup wizard is provided as the part of the web configuration utility. You can simply follow the step-by-step process to get your wireless router configuration ready to run in 6 easy steps by clicking on the "**Wizard**" button on the function menu. The following screen will appear. Please click "**Next**" to continue.

Welcome to Wireless Router Setup Wizard
Step 1. Set your new password
Step 2. Choose your time zone
Step 3. Set LAN connection and DHCP server
Step 4. Set internet connection
Step 5. Set wireless LAN connection
Step 6. Restart
Next > Exit display wizard next time? Yes No update

Step 1: Set your new Password

You can change the password as you like and then click "Next" to continue.

Welcome to Wireless Router Setup Wizard				
Set Password				
Password *******				
Verify Password				
< Back Next > Exit				

Step2: Choose your time zone

Select your time zone from the drop down list. Please click "Next" to continue.

Welcome to Wireless Router Setup Wizard Choose Time Zone			
(GMT-08:00) Pacific Time (US & Canada)			
< Back Next > Exit			

Step 3: Set LAN connection and DHCP server

Set your IP address and mask. The default IP is 192.168.1.1. If you like to enable DHCP, please click "**Enabled**". DHCP enabled is able to automatically assign IP addresses. Please assign the range of IP addresses in the fields of "**Range start**" and "**Range end**". Please click "**Next**" to continue.

Welcome to Wireless Router Setup Wizard				
Set LAN & DHCP Server				
LAN IP Address 192.168.1.1				
LAN Subnet Mask 255.255.255.0				
DHCP Server 💿 Enable 🔿 Disable				
Range Start 192.168.1.100				
Range End 192.168.1.199				
< Back Next > Exit				

Step 4: Set Internet connection

Select how the router will set up the Internet connection: Obtained IP automatically; Fixed IP address; PPPoE to obtain IP automatically; PPPoE with a fixed IP address; PPTP.

Obtain IP automatically (DHCP client):

If you have enabled DHCP server, choose "Obtain IP automatically (DHCP client)" to have the router assign IP addresses automatically.

Welcome to Wireless Router Setup Wizard
Select Internet Connection Type
 Obtain IP automatically (DHCP client)
 Fixed IP address
O PPPoE to obtain IP automatically
O PPPoE with a fixed IP address
O PPTP
< Back Next > Exit

Fixed IP Address:

Welcome to Wireless Router Setup Wizard		
Select Internet Connection Type		
Obtain IP automatically (DHCP client)		
Fixed IP address		
O PPPoE to obtain IP automatically		
O PPPoE with a fixed IP address		
O PPTP		
< Back Next > Exit		

If Fixed IP address is assigned, the below screen will pop up. Please set the WAN address and DNS server.

Welcome to Wireless Router Setup Wizard				
Set Fixed IP Address				
WAN IP Address	s 0.0.0.0			
WAN Subnet Mask	< 0.0.0.0			
WAN Gateway Address	s 0.0.0.0			
DNS Server Address ?	0.0.0.0			
DNS Server Address 2	2 0.0.0.0			
DNS Server Address 3	3 0.0.0.0			
< Back Next > Exit				

<u>PPPoE to obtain IP automatically:</u>

Welcome to Wireless Router Setup Wizard
Select Internet Connection Type
O Obtain IP automatically (DHCP client)
O Fixed IP address
PPPoE to obtain IP automatically
O PPPoE with a fixed IP address
O PPTP
< Back Next > Exit

Welcome to Wireless Router Setup Wizard				
Set PPPoE to obtain IP automatically IP				
User Name				
Password	****			
Verify Password	****			
< Back Next > Exit				

<u>PPPoE with a fixed IP address:</u>

Welcome to Wireless Router Setup Wizard
Select Internet Connection Type
 Obtain IP automatically (DHCP client) C Fixed IP address
PPPoE to obtain IP automatically PPPoE with a fixed IP address
O PPTP
< Back Next > Exit
Welcome to Wireless Router Setup Wizard
Welcome to Wireless Router Setup Wizard Set PPPoe with a fixed IP Address
Set PPPoe with a fixed IP Address
Set PPPoe with a fixed IP Address User Name
Set PPPoe with a fixed IP Address User Name Passward

<u>PPTP:</u>

Welcome to Wireless Router Setup Wizard
Select Internet Connection Type
 Obtain IP automatically (DHCP client)
C Fixed IP address
O PPPoE to obtain IP automatically
O PPPoE with a fixed IP address
© PPTP
< Back Next > Exit

Welcome to Wireless Router Setup Wizard			
Set PPTP Client			
My IP	0.0.0.0		
Subnet Mask	0.0.0.0		
GateWay	0.0.0.0		
Server IP	0.0.0.0		
PPTP Account			
PPTP Password	*****		
Retype Password	*****		
< Back Next > Exit			

Step 5: Set Wireless LAN connection

Click "enable" to enable wireless LAN. If you enable the wireless LAN, type the SSID in the text box and select a communications channel. The SSID and channel must be the same as wireless devices attempting communication to the router.

Welcome to Wireless Router Setup Wizard			
Set Wireless LAN Connection			
Wireless LAN ☉ Enable ☉ Disable			
ESSID default			
Channel 6			
< Back Next > Exit			

Step 6: Restart

The Setup wizard is now completed. The new settings will be effective after the Wireless router restarted. Please click "**Restart**" to reboot the router. If you do not want to make any changes, please click "**exit**" to quit without any changes. You also can go back to modify the setting by clicking "**Back**".



3. Configuration

3.1 LAN Setting

The screen enables you to configure the LAN & DHCP Server, set WAN parameters, create Administrator and User passwords, and set the local time, time zone, and dynamic DNS.

3.1.1 LAN & DHCP Server

This page enables you to set LAN and DHCP properties, such as the host name, IP address, subnet mask, and domain name. LAN and DHCP profiles are listed in the DHCP table at the bottom of the screen.

← → → 🙆 😰 🖓	Q 🖬 🎯 🖥 - 🎒 🕅 -	E		🇃 - 🗗 ×
Wireless Router		N ► Password ► Time	IO8 Mbps	THELP
	Host Name	AP-Router		
😑 LAN Setting	IP Address	192.168.1.1		
	Subnet Mask	255.255.255.0		
Wireless	DHCP Server	Image: Construction of the second	d	
Status	Start IP	192.168.1.100		
Routing	End IP	192.168.1.199		
Access	Domain Name			
Management	Lease Ti	me 1 Week 💌		
	Cancel Apply			
Wizard				
	Host Name	IP Address	MAC Address	
	skyler 1	92.168.1.100	00-00-E8-4A-4A-01	

Host Name: Type the host name in the text box. The host name is required by some ISPs. The default host name is "AP-Router."

IP Address: This is the IP address of the router. The default IP address is 192.168.1.1. **Subnet Mask:** Type the subnet mask for the router in the text box. The default subnet

mask is 255.255.255.0.

DHCP Server: Enables the DHCP server to allow the router to automatically assign IP addresses to devices connecting to the LAN. DHCP is enabled by default.

All DHCP client computers are listed in the table at the bottom of the screen,

providing the host name, IP address, and MAC address of the client.

Start IP: Type an IP address to serve as the start of the IP range that DHCP will use to assign IP addresses to all LAN devices connected to the router.

End IP: Type an IP address to serve as the end of the IP range that DHCP will use to assign IP addresses to all LAN devices connected to the router.

Domain Name: Type the local domain name of the network in the text box. This item is optional.

3.1.2 WAN

This screen enables you to set up the router WAN connection, specify the IP address for the WAN, add DNS numbers, and enter the MAC address.

⇔ • ⇒ • ③ ∅ ♂	
Wireless Router	IOB Mbps
	► LAN&DHCP server ► WAN ► Password ► Time ► Dynamic DNS
	Connection Type DHCP Client or Fixed IP 💌
LAN Setting	Obtain IP Automatically Specify IP IP Address 192.168.10.164
Wireless Status	Subnet Mask 255.255.255.0 Default Gateway 0.0.0
Routing Access	DNS 1 0.0.0.0 DNS 2 0.0.0.0
Management Tools	DNS 3 0.0.0.0 00 - 03 - 2F - 18 - 18 - A5
Wizard	MAC Address Clone MAC Address
	Cancel Apply

← • → • 🔕 🕼 🖄		2 - E
Wireless Router	ІОВ мьрз	
-	► LAN&DHCP server ► WAN ► Password ► Time ► Dynamic DNS	THELP
	Connection Type DHCP Client or Fixed IP	
LAN Setting Wireless Status	Obtain IP Automatically Obtain IP Automatically Specify IP IP Address Subnet Mask O.0.0 Default Gateway 0.0.0	
Routing Access Management Tools Wizard	DNS 1 0.0.0.0 DNS 2 0.0.0.0 DNS 3 0.0.0.0 MAC. Address 0 . 80 . C8 . 111 . 5A . 8B	
- Wizdid	Cancel Apply	

Connection Type: Select the connection type, either DHCP client, Fixed IP or PPPoE from the drop-down list.

WAN IP: Select whether you want to specify an IP address manually, or want DHCP to obtain an IP address automatically. When *Specify IP* is selected, type the IP address, subnet mask, and default gateway in the text boxes. Your ISP will provide you with this information.

DNS 1/2/3: Type up to three DNS numbers in the text boxes. Your ISP will provide you with this information.

MAC Address: If required by your ISP, type the MAC address of the router WAN interface in this field.

DNS 1/2/3: Type up to three DNS numbers in the text boxes. Your ISP will provide you with this information.

3.1.3 Password

This screen enables you to set administrative and user passwords. These passwords are used to gain access to the router interface.

		🏥 - 🗗 ×
Wireless Router	IO8 Mbps	
	► LAN&DHCP server ► WAN ► Password ► Time ► Dynamic DNS	THELP
	Administrator(The login name is "admin") New Password	
e LAN Setting	Confirm Password	
Wireless	User(The login name is "user")	
Status	New Password	
Routing	Confirm Password	
Management	Cancel Apply	
Wizard		

Administrator: Type the password the Administrator will use to log in to the system. The password must be typed again for confirmation.

3.1.4 Time

This screen enables you to set the time and date for the router's real-time clock, select your time zone, and enable or disable daylight saving.

← • → - 🔕 🙆 🖓		- 8 ×
Wireless Router	IO8 Mbps	
-	► LAN&DHCP server ► WAN ► Password ► Time ► Dynamic DNS	P
	Local Time Dec/11/2003 00:20:27 Time Zone (GMT-08:00) Pacific Time (US & Canada)	-
😝 LAN Setting	Default NTP server	
Wireless Status	Set the time	
Routing Access Management	O Enabled ☉ Disabled Daylight Saving Start Jan ▼ 01 ▼ End Jan ▼ 01 ▼	
ToolsWizard		
	Cancel Apply	

Local Time: Displays the local time and date.

Time Zone: Select your time zone from the drop-down list.

Daylight Saving: Enables you to enable or disable daylight saving time. When enabled, select the start and end date for daylight saving time.

3.1.5 Dynamic DNS

This allows you to set the DNS server.

	Q & G B	1 - 8 ×
Wireless Router	IO8 Mbps	
	► LAN&DHCP server ► WAN ► Password ► Time ► Dynamic DNS	THELP
	Dynamic DNS	
	DDNS C Enabled C Disabled	
😑 LAN Setting	Server Address members.dyndns.org	
Wireless	Host Name user.dyndns.org	
Status	User Name 11gUSER	
Routing	Password ******	
Management	Cancel Apply	
Tools		
Wizard		

DDNS: Enable or disable DDNS setting by clicking the blanks.

Server Address: Entering the Server Address. For example, if you would like to apply the address at dyndns.org, please entering "members.dyndns.org"...
Host Name: Entering the address you applied before. For example: user.dyndns.org
User Name: Entering the account you used for applying DDNS address.
Password: Entering the password of the user.

3.2 Wireless

This section enables you to set wireless communications parameters for the router's wireless LAN feature.

3.2.1 Basic

This page allow you to enable and disable the wireless LAN function, create a SSID, and select the channel for wireless communications.

← • → • ⑧ 🕼 🖄	Q 🖻 🎯 🛂 🗃 🖬 • 🗐		🎒 - 🗗 🗙
Wireless Router		108 Mbps	
	Basic Authentication Advanced		THELP
 LAN Setting Wireless Status Routing Access Management Tools Wizard 	 Enabled ○ Disabled SSID default Channel 6 ▼ (Domain: USA) 		

Enable/Disable: Enables and disables wireless LAN via the router.

SSID: Type an SSID in the text box. The SSID of any wireless device must match the SSID typed here in order for the wireless device to access the LAN and WAN via the router.

Channel: Select a transmission channel for wireless communications. The channel of any wireless device must match the channel selected here in order for the wireless device to access the LAN and WAN via the router.

3.2.2 Authentication

This screen enables you to set authentication type for secure wireless communications. Open System allows public access to the router via wireless communications. Shared Key requires the user to set a WEP key to exchange data with other wireless clients that have the same WEP key.

	Q 🖻 🧭 🗳 🖬 ·		10 - 🕫 🛪
Wireless Router		IO8 Mbps	
-	Basic Authentication	► Advanced	HELP
		Open System C Shared Key	
 LAN Setting Wireless 	Authentication Type	C WPA C WPA-PSK C 802.1x	
	WEP		
Status		HEX 🔽	
Routing	WEP Key	64-bit 💌	
	Key 1	© 000000000	
Management	Key 2	0 000000000	
	Key 3	C 000000000	
Wizard	Key 4	C 000000000	
	Cancel Apply Clear		

Mode: Select the level of encryption you want from the drop-down list. The router supports, 64- and 128-bit encryption.

WEP Key: Select WEP Key - 64 or 128 bits from the drop-down list.

Key 1 ~ **Key 4:** Enables you to create an encryption scheme for Wireless LAN transmissions. Manually enter a set of values for each key. Select which key you want to use by clicking the radio button next to the key. Click **Clear** to erase key values.

If WPA is selected, please set the parameters for the RADIUS server. This is also referred to the 802.1X setting.

1	Q 🖹 🥸 🖏 🎒 🕅 ·	-		🌆 - 🗗 ×
Wireless Router				
	Basic Authentication	Advanced		THELP
LAN Setting	Authentication Type	O Open System O Shara ⊙ WPA O WPA	ed Key -PSK O 802.1x	
😝 Wireless		Lifetime	30 Minutes 💌	
Status	Encryption Key	Length	● 64 bits ○ 128 bits	
Routing		IP	0.0.0.0	
	RADIUS Server 1	Port	1812	
Management Tools		Shared Secret		
Wizard	RADIUS Server 2	IP	0.0.0.0	
- mzuru	(Optional)	Port	0	
		Shared Secret		
	Cancel Apply Clear			

3.2.3 802.1X

There are three essential components to the 802.1x infrastructure: (1) Supplicant, (2) Authenticator and (3) Server. The Router serves as an Authenticator, and the EAP methods used must be supported by the backend Radius Server. The 802.1x security supports both MD5 and TLS Extensive Authentication Protocol (EAP). Please follow the steps below to configure 802.1X security.

	Q 🖻 🧭 🗗 🎒 🕅			👩 – 8 ×
Wireless Router			108 Mbps	
	Basic > Authentication	Advanced		THELP
LAN Setting	Authentication Type	C Open System C Share C WPA C WPA		
e Wireless		Lifetime	30 Minutes 💌	
Status	Encryption Key	Length		
Routing		IP	0.0.0.0	
	RADIUS Server 1	Port	1812	
Management		Shared Secret		
	RADIUS Server 2	IP	0.0.0.0	
Wizard	(Optional)		0	
		Shared Secret		
	Cancel Apply Clear			

1. Select the **Encryption Key Length Size** ranging from 64 to 128 Bits that you would like to use.

Select the **Lifetime of the Encryption Key** from 5 Minutes to 1 Day. As soon as the lifetime of the Encryption Key is over, the Encryption Key will be renewed by the Radius server.

2. Enter the **IP address** of and the **Port** used by the **Primary** Radius Server Enter the **Shared Secret**, which is used by the Radius Server.

- 3. Enter the **IP address** of, **Port** and **Shared Secret** used by the **Secondary** Radius Server. (*Click "Help" to get interpretation for Encryption Key and Radius Server.*)
- 4. Click "**Apply**" button for the 802.1x settings to take effect after Wireless router reboots itself.

Note: As soon as 802.1X security is enabled, all the wireless client stations that are connected to the Router currently will be disconnected. The wireless clients must be configured manually to authenticate themselves with the Radius server to be reconnected.

3.2.4 WPA-PSK

Allows user to set WPA-PSK for security reason.

Set the devices in the same Passphrase will block undesired connection to your WBR-3405TX.



3.3 Advanced

↓ • → • ② ② ③ 础 ③ ③ ဩ • ④ • ⊟ Vireless 108 Mbps Router HELP Basic Authentication Advanced Beacon Interval 100 (default:100 msec, range:20~1000) LAN Setting RTS Threshold 2346 (default:2346, range: 1~2346) 😑 Wireless Fragmentation Threshold 2346 (default:2346, range: 256~2346, even number only) Status DTIM Interval Routing (default:1, range: 1~255) TX Rates (MBps) 🛛 Auto 💌 Access 11g only mode C Enable © Disable Management Antenna transmit power full -Tools Super G Mode Disabled • Wizard Cancel Apply

This screen enables you to configure advanced wireless functions.

Beacon Interval: Type the beacon interval in the text box. You can specify a value from 1 to 1000. The default beacon interval is 100.

RTS Threshold: Type the RTS (Request-To-Send) threshold in the text box. This value stabilizes data flow. If data flow is irregular, choose values between 256 and 2432 until data flow is normalized.

Fragmentation Threshold: Type the fragmentation threshold in the text box. If packet transfer error rates are high, choose values between 256 and 2432 until packet transfer rates are minimized. (*NOTE*: *set this fragmentation threshold value may diminish system performance.*)

DTIM Interval: Type a DTIM (Delivery Traffic Indication Message) interval in the text box. You can specify a value between 1 and 65535. The default value is 3.

TX Rates (MBps): Select one of the wireless communications transfer rates, measured in megabytes per second, based upon the speed of wireless adapters connected to the WLAN.

11g only mode: enable or disable.

3.3 Status

This selection enables you to view the status of the router LAN, WAN connections, and view logs and statistics pertaining to connections and packet transfers.

3.3.1 Device Information

This screen enables you to view the router LAN, Wireless and WAN configuration.

← → → 🖄 🕼 🖄	Q 📾 🎯 🖪 • 🗐 • 🗏 📲 •	₽×
Router	IO8 Mbps	^
	▷ Device information ▷ Log ▷ Log Setting ▷ Statisic ▷ Wireless	
	Firmware Version: 1.5.0 , 2003/11/21	
LAN Setting	LAN	
Wireless	MAC Address 00-80-C8-11-5A-8A	
😑 Status	IP Address 192.168.1.1	
 Routing 	Subnet Mask 255.255.255.0	
	DHCP Server Enabled DHCP Table	
 Management 		
 Wizard 	Wireless	
	Connection 802.11g AP Enable	
	ESSID default	
	Channel 6	
	WEP DISABLE	
	WAN	
	MAC Address 00-80-C8-11-5A-8B	•

Firmware Version: Displays the latest build of the router firmware interface. After updating the firmware in Tools - Firmware, check this to ensure that your firmware was successfully updated.

LAN: This field displays the router's LAN interface MAC address, IP address, subnet mask, and DHCP server status. Click *DHCP Table* to view a list of client stations currently connected to the router LAN interface.

Wireless: Displays the router's wireless connection information, including the router's wireless interface MAC address, the connection status, the SSID status, which channel is being used, and whether WEP is enabled or not.

WAN: This field displays the router's WAN interface MAC address, DHCP client

status, IP address, subnet mask, default gateway, and DNS.

Click *DHCP Release* to release all IP addresses assigned to client stations connected to the WAN via the router. Click *DHCP Renew* to reassign IP addresses to client stations connected to the WAN.

3.3.2 Log

This screen enables you to view a running log of router system statistics, events, and activities. The log displays up to 200 entries. Older entries are overwritten by new

entries. The Log screen commands are as follows:

Click *First Page* to view the first page of the log

Click *Last Page* to view the final page of the log

Click Previous Page to view the page just before the current page

Click Next Page to view the page just after the current page

Click *Clear Log* to delete the contents of the log and begin a new log Click *Refresh* to renew log statistics

	0. 🖻 🧭 🗗	🥔 🗹 - 🖻		2 - 8 ×
Wireless Router	Device informat	ion ▶Log ▶ Log Setting ▶ Stati	IO8 M	DDS
LAN Setting		ast Page Previous Page	Next Page Clear Log	Refresh
Wireless	page 1 of 3 Time	Message	Source Destination	Note
😑 Status	Dec/11/2003 00:38:16	Wireless PC connected		00-50-FC-BE- 4A-9D
Routing Access	Dec/11/2003 00:38:16	Wireless PC connected		00-50-FC-BE- 4A-9D
 Access Management 	Dec/11/2003 00:38:15	Wireless PC connected		00-50-FC-BE- 4A-9D
Tools	Dec/11/2003 00:38:15	Wireless PC connected		00-50-FC-BE- 4A-9D
Wizard	Dec/11/2003 00:38:14	Wireless PC connected		00-50-FC-BE- 4A-9D
	Dec/11/2003 00:38:14	DHCP lease IP 192.168.1.102 to nbxp		00-50-FC-BE- 4A-9D
	Dec/11/2003 00:38:14	Wireless PC connected		00-50-FC-BE- 4A-9D
	Dec/11/2003 00:37:53	Wireless PC connected		00-50-FC-BE- 44_9D

Time: Displays the time and date that the log entry was created.

Message: Displays summary information about the log entry.

Source: Displays the source of the communication.

Destination: Displays the destination of the communication.

Note: Displays the IP address of the communication

3.3.3 Log Setting

This screen enables you to set router logging parameters.

		🇊 - 🗗 ×
Wireless Router	IOS Mbps > Device information > Log > Log Setting > Statisic > Wireless	HELP
	SMTP Server	
LAN Setting		
Wireless		
😑 Status	Syslog Server 0.0.0.0	_
Routing	Log Type 🗹 System Activity	_
	Debug Information	
Management	🗹 Attacks	
Tools	🗖 Dropped Packets	
Wizard	☑ Notice	
	Cancel Apply	

SMTP Server: Type the SMTP server address for the email that the log will be sent to in the next field.

Send to: Type an email address for the log to be sent to. Click *Email Log Now* to immediately send the current log.

Syslog Server: Type the IP address of the Syslog Server if you want the router to listen and receive incoming Syslog messages.

Log Type: Enables you to select what items will be included in the log:

- System Activity: Displays information related to router operation.
- **Debug Information:** Displays information related to errors and system malfunction.
- **Attacks:** Displays information about any malicious activity on the network.
- **Dropped Packets:** Displays information about packets that have not been transferred successfully.
- **Notice:** Displays important notices by the system administrator.

3.3.4 Statistic

This screen displays a table that shows the rate of packet transmission via the router LAN and WAN ports (in bytes per second).

State and the second	0. 🖻 🕉	B 🥔 🔟 - E			- 8 ×
Wireless Router			10	8 Mbps	
	Device in	formation ► Log ► Log S	etting 🕨 Statisic 🕨 Wirele	255	THELP
LAN Setting	Utilization	(bytes/sec)		ireless W/	AN
Wireless	Send	Average	508	4	83
		Peak Average	28790	143165576	5619 199
😑 Status	Receive	Peak	5343	143165576	30838
 Routing Access Management Tools Wizard 	Reset				

Click *Reset* to erase all statistics and begin logging statistics again.

3.3.5 Wireless

This screen enables you to view information about wireless devices that are connected to the wireless router.

] ← → → ⊗ 😰 🖄	0, 11 (3) 🗳 🖉 - 🗉		1 - 8 ×
Wireless Router		108 мьр	5
	► Device information ► Log ► Log Sett	ing 🕨 Statisic 🍃 Wireless	THELP
	Connected Time	MAC Address	
LAN Setting	Dec/11/2003 00:38:16	00-50-FC-BE-4A-9D	
Wireless	Dec/11/2003 00:33:42	00-50-FC-BE-2E-82	
😑 Status			
Routing			
Management			
Wizard			
- WIZUIG			

Connected Time: Displays how long the wireless device has been connected to the LAN via the router.

MAC Address: Displays the devices wireless LAN interface MAC address.

3.4 Routing

This selection enables you to set how the router forwards data: Static and Dynamic. Routing Table enables you to view the information created by the router that displays the network interconnection topology.

3.4.1 Static

It enables you to set parameters by which the router forwards data to its destination if your network has a static IP address.

1	Q 📾 🧭 🛃 - 🎒 🕅 - E				10 - 日×
Wireless Router			10	8 мьр.	5
	Static 🕨 Dynamic 🕨 Routing Ta	able			THELP
	Network Address				
	Network Mask				
LAN Setting	Gateway Address				
Wireless	Interface LAN 💌	1			
Status	Metric	1			
😑 Routing					
Access	Add Update Delete New				
Management					
Tools					
Wizard					
	Network Address	Mask	Gateway	Interface	Metric

Network Address: Type the static IP address your network uses to access the Internet. Your ISP or network administrator provides you with this information.

Network Mask: Type the network (subnet) mask for your network. If you do not type a value here, the network mask defaults to 255.255.255.255. Your ISP or network administrator provides you with this information.

Gateway Address: Type the gateway address for your network. Your ISP or network administrator provides you with this information.

Interface: Select which interface, WAN or LAN, you use to connect to the Internet. **Metric:** Select which metric you want to apply to this configuration.

Add: Click to add the configuration to the static IP address table at the bottom of the page.

Update: Select one of the entries in the static IP address table at the bottom of the page and, after changing parameters, click *Update* to confirm the changes.

Delete: Select one of the entries in the static IP address table at the bottom of the page and click *Delete* to remove the entry.

New: Click *New* to clear the text boxes and add required information to create a new entry.

3.4.2 Dynamic

This screen enables you to set NAT parameters.

] ← • → • ⑧ 🙆 🖄		🇃 - 🗗 ×
Wireless Router	IO8 Mbps	
	▶ Static ▶ Dynamic ▶ Routing Table	THELP
 LAN Setting Wireless Status Routing Access Management Tools Wizard 	NAT © Enabled © Disabled Transmit © Disabled © RIP 1 © RIP 2 Receive © Disabled © RIP 1 © RIP 2 Cancel Apply	

NAT: Click the radio buttons to enable or disable NAT.

Transmit: Click the radio buttons to set the desired transmit parameters, disabled, RIP 1, or RIP 2.

Receive: Click the radio buttons to set the desired transmit parameters, disabled, RIP 1, or RIP 2

3.4.3 Routing Table

This screen enables you to view the routing table for the router. The routing table is a database created by the router that displays the network interconnection topology.

] ⇔ • → - ② ② ₫	Q 🗈 🧭 🔤 - 🖨 🖬 - 🗏) — B ×
Wireless Router		108 <i>Mbps</i>
	Static Dynamic Routing Table	THELP
LAN Setting	Network Address Network Mask	Gateway Address Interface Metric Type
Wireless		
Status		
e Routing		
Management		
Wizard		

Network Address: Displays the network IP address of the connected node.
Network Mask: Displays the network (subnet) mask of the connected node.
Gateway Address: Displays the gateway address of the connected node.
Interface: Displays whether the node is connected via a WAN or LAN.
Metric: Displays the metric of the connected node.
Type: Displays whether the node has a static or dynamic IP address

3.5 Access

This page enables you to define access restrictions, set up protocol and IP filters, create virtual servers, define access for special applications such as games, and set firewall rules.

3.5.1 Filters

Using filters to deny or allow the users to access. Five types of filters to select: MAC, URL blocking, IP, Protocol filter and Domain blocking.

MAC Filters:

← • → • 🔕 🖗 🖓	Q 🖻 🎯 🖪 - 🎒 🕅	- E		🗐 – 🗗 🗙				
Wireless Router		Î						
	Filter Virtual Server Special AP DMZ Firewall Rule							
LAN Setting	Filters							
Wireless	Filters are used to allow or deny LAN users from accessing the Internet.							
Status	O MAC Filters	O URL Blocking						
	O IP Filters	O Domain Blocking	O Protocol Filters					
Routing								
Access	MAC Filter							
Management	• Disabled							
	Only allow computers with MAC address listed below to access the network							
Wizard	O Only deny computers with MAC address listed below to access the network							
	Apply							
	MAC Table							
	Name							
	MAC Address							
	Add Update Delete Clear							
	Name	MAC Address	Connection	-				

MAC Filter: Enables you to allow or deny Internet access to users within the LAN based upon the MAC address of their network interface. Click the radio button next to *Disabled* to disable the MAC filter.

Disable: Once the function of MAC filter is disable, those listed in the MAC Table are allowed Internet access.

Enable: All users are allowed Internet access except those user in the MAC Table are deny Internet access.

MAC Table: Use this section to create a user profile which Internet access is denied or allowed. The user profiles are listed in the table at the bottom of the page. (*Note:* Click anywhere in the item. Once the line is selected, the fields automatically load the item's parameters, which you can edit.)

Name: Type the name of the user to be permitted/denied access.

MAC Address: Type the MAC address of the user's network interface.

Add: Click to add the user to the list at the bottom of the page.

Update: Click to update information for the user, if you have changed any of the fields.

Delete: Select a user from the table at the bottom of the list and click *Delete* to remove the user profile.

New: Click *New* to erase all fields and enter new information.

URL Blocking:

↔ • ⇒ • 🙆 🙆 🖄	Q 🖻 🎯 B- 🎒 🕅	• E		顫 – 🗗 ×			
Wireless Router							
	Filter ► Virtual Server ► Special AP ► DMZ ► Firewall Rule						
LAN Setting	Filters						
	Filters are used to allow or deny LAN users from accessing the Internet.						
Wireless							
Status	O IP Filters	URL Blocking Development	O Protocol Filters				
Routing		O Domain Blocking	O Protocol Filters				
\varTheta Access							
Management	URL Blocking						
	Block those URLs which contain keywords listed below.						
 Wizard 	© Enabled C Disabled						
	Delete						
			Add	Cancel			

You could enable URL blocking to deny the users from accessing the specified URL. Add those specified URL in the text box.
IP Filters:

This screen enables you to define a minimum and maximum IP address range filter; all IP addresses falling in the range are not allowed Internet access. The IP filter profiles are listed in the table at the bottom of the page. (*Note*: Click anywhere in the item. Once the line is selected, the fields automatically load the item's parameters, which you can edit.)

	Q 🖬 🎯 🗗 🎒 👿	- E		🇃 - 🗗 ×
Wireless Router			108 Mbps	
	Filter 🕨 Virtual Serve	er 🕨 Special AP 🕨 DMZ	Firewall Rule	THELP
LAN Setting	Filters			
		^r deny LAN users from access	and the Internet	
Wireless	O MAC Filters	O URL Blocking	sing the internet.	
Status	C IP Filters	°	C Protocol Filters	
Routing		O Domain Blocking	O Protocol Flitters	
e Access	IP Filter			
Management	Enabl	e O Enable O Disabled		
Tools	Range Sta	rt		
Wizard	Range En			
		· · · · · · · · · · · · · · · · · · ·		
	Add Update Delete	Clear		
	s	tart	End	

Enable: Click to enable or disable the IP address filter.

Range Start: Type the minimum address for the IP range. IP addresses falling between this value and the Range End are not allowed to access the Internet.

Range End: Type the minimum address for the IP range. IP addresses falling between this value and the Range Start are not allowed to access the Internet.

Add: Click to add the IP range to the table at the bottom of the screen.

Update: Click to update information for the range if you have selected a list item and have made changes.

Delete: Select a list item and click *Delete* to remove the item from the list.

New: Click New to erase all fields and enter new information.

Domain Blocking:

(+ • → • (3) (2) (2)		×
Wireless Router	IO8 Mbps	<u> </u>
	Filter Virtual Server Special AP DMZ Firewall Rule	
LAN Setting	Filters	
Wireless	Filters are used to allow or deny LAN users from accessing the Internet.	
Status	C MAC Filters C URL Blocking	
 Routing 	O IP Filters	
Management	Domain Blocking	
	• Disabled	
Wizard	Allow users to access all domains except "Blocked Domains"	
	C Deny users to access all domains except "Permitted Domains" Permitted Domains	
	Delete Delete	

You could specify the domains which allow users to access or deny by clicking one of the two items. Also, add the specified domains in the text box.

Protocol Filters:

This screen enables you to allow and deny access based upon a communications protocol list you create. The protocol filter profiles are listed in the table at the bottom of the page.

Note: When selecting items in the table at the bottom, click anywhere in the item. The line is selected, and the fields automatically load the item's parameters, which you can edit:

← ▪ ⇒ - 🙆 🐼 🖓	Q 🗈 🧭 🖪- 🍠 🕅	▼ III		- 19	Β×
Wireless Router	Filter Virtual Serve	r ► Special AP ► DMZ ►	IOS Mbps	THELP	•
LAN Setting	Filters				
		deny LAN users from accessi	u u tha lutawat		
Wireless	C MAC Filters	O URL Blocking	ng the internet.		
Status			O Protocol Filters		
Routing	O IP Filters	O Domain Blocking	C Protocol Filters		
😑 Access	Protocol Filter				
Management	O Disable List				
Tools	• Enable List : Deny to	access internet from LAN whe	n		
Wizard	Apply				
	Edit protocol Filter in Lis	st			
	Enabl	e O Enable O Disabled			
	Nam	e			
	Protoc	J TCP 💌			
	Po		Type Range for ICMP)		
					-

3.5.2 Virtual Server

This screen enables you to create a virtual server via the router. If the router is set as a virtual server, remote users requesting Web or FTP services through the WAN are directed to local servers in the LAN. The router redirects the request via the protocol and port numbers to the correct LAN server. The Virtual Sever profiles are listed in the table at the bottom of the page.

Note: When selecting items in the table at the bottom, click anywhere in the item. The line is selected, and the fields automatically load the item's parameters, which you can edit.

	Q 🖻 🧭 🗗 🎒 🕅	• III		1 - 8 ×
Wireless Router			108 мьр	5
	Filter 👂 Virtual Serve	r 🕨 Special AP 🕨 DMZ 🕨	Firewall Rule	THELP
	Enable O Ena	ble O Disabled		
LAN Setting	Name			
Wireless	Protocol TCP	·		
Status	Private Port			
Routing	Public Port			
🗎 Access	LAN Server			
Management				
Tools		add Update Dele	te Clear	
Wizard				
				N Server
	■ Virtual Server FTF			
	✓ Virtual Server HT.			
	☐ Virtual Server HT.			
	Virtual Server SM			
	Virtual Server POI			
	Virtual Server Teln	etTCP 23/2	0.0.0.0	-

Enable: Click to enable or disable the virtual server.

Name: Type a descriptive name for the virtual server.

Protocol: Select the protocol (TCP or UDP) you want to use for the virtual server.

Private Port: Type the port number of the computer on the LAN that is being used to act as a virtual server.

Public Port: Type the port number on the WAN that will be used to provide access to the virtual server.

LAN Server: Type the LAN IP address that will be assigned to the virtual server. Add: Click to add the virtual server to the table at the bottom of the screen. **Update:** Click to update information for the virtual server if you have selected a list item and have made changes.

Delete: Select a list item and click *Delete* to remove the item from the list. **New:** Click *New* to erase all fields and enter new information.

3.5.3 Special AP

This screen enables you to specify special applications, such as games, that require multiple connections that are inhibited by NAT. The special applications profiles are listed in the table at the bottom of the page.

Note: When selecting items in the table at the bottom, click anywhere in the item. The line is selected, and the fields automatically load the item's parameters, which you can edit.

4 - → - ③ ④ 益	Q 🖻 🎯 🗗 🎒 🖥	1 • 🖻		🏥 – 🗗 🗙
Wireless Router			108 Mbps	
	► Filter ► Virtual Serve	er 🝺 Special AP 🕨 DM	1Z 🕨 Firewall Rule	HELP
	Enabl	e O Enabled O Disab	led	
LAN Setting	Nam	e		
Wireless	Trigge	Protocol	TCP 💌	
Status	11995	Port Range	-	
Routing	Incomin	Protocol	TCP 💌	
Access		Port		
Management				
Tools	Add Update Delete	Clear		
Wizard				
	Name	Triger Port Range		
	E Battle.net	6112	6112	
	🗖 Dialpad	7175	51200-51201,51210	
	LCA I	2019	2000-2038,2050-2051,2069,2085,303	10-3030
	🗖 MSN Gaming Zone	47624	2300-2400,28800-29000	
	🗖 PC-to-Phone	12053	12120,12122,24150-24220	
	🗖 Quick Time 4	554	6970-6999	

Enable: Click to enable or disable the application profile. When enabled, users will be able to connect to the application via the router WAN connection. Click Disabled on a profile to prevent users from accessing the application on the WAN.

Name: Type a descriptive name for the application.

Trigger: Defines the outgoing communication that determines whether the user has legitimate access to the application.

• **Protocol:** Select the protocol (TCP, UDP, or ICMP) that can be used to access the application.

• **Port Range:** Type the port range that can be used to access the application in the text boxes.

Incoming: Defines which incoming communications users are permitted to connect with.

• **Protocol:** Select the protocol (TCP, UDP, or ICMP) that can be used by the incoming communication.

• **Port:** Type the port number that can be used for the incoming communication. **Add:** Click to add the special application profile to the table at the bottom of the screen.

Update: Click to update information for the special application if you have selected a list item and have made changes.

Delete: Select a list item and click *Delete* to remove the item from the list. **New:** Click *New* to erase all fields and enter new information.

3.5.4 DMZ

This screen enables you to create a DMZ for those computers that cannot access Internet applications properly through the router and associated security settings. **Note:** Any clients added to the DMZ exposes the clients to security risks such as viruses and unauthorized access.

(+ • → - ⊗ Ø Å	Q 🖻 🎯 🖏 - 🖨 🗃 - 🗏	🇃 - 🗗 ×
Wireless Router	IO8 Mbps	
	Filter ► Virtual Server ► Special AP ► DMZ ► Firewall Rule	HELP
LAN Setting	Enable C Enabled © Disabled	
Wireless	DMZ Host IP 0.0.0.0	
 Status 	Apply	
Routing		
e Access		
Management		
Tools Wizard		
Wizdid		

Enable: Click to enable or disable the DMZ.

DMZ Host IP: Type a host IP address for the DMZ. The computer with this IP address acts as a DMZ host with unlimited Internet access.

Apply: Click to save the settings.

3.5.5 Firewall Rule

This screen enables you to set up the firewall. The router provides basic firewall functions, by filtering all the packets that enter the router using a set of rules. The rules are in an order sequence list--the lower the rule number, the higher the priority the rule has.

	Q 🖻 🎯	B- 4 🗑 - E			1 - E ×
Wireless Router	► Filter	Virtual Server Special AP D		IO8 M	bps
	Ena	able O Enable O Disabled			
	Na	ime			
LAN Setting	Ac	tion C Allow C Deny			
Wireless		Interface IP Range Start	IP Range	e End Protocol	Protocol
Status	Sou	irce *			
Routing	Destina	tion *		TCP .	7 <u></u>
Access			1		
Management	Add Upd	ate Delete New Priority Up	Priori	ty Down Update	Priority
Tools					
Wizard					
		Name		Destination	Protocol
P.	🛛 Allow	Allow to Ping WAN port msmsgs (192.168.1.102:9223)	WAN,*	LAN,192.168.1.1	ICMP,8
7	🗸 Allow	msmsgs (192.168.1.102:9225) 516	WAN,*	LAN,192.168.1.102	UDP,9223-51685
7	🛛 Allow	msmsgs (192.168.1.102:14780) 29	WAN,*	LAN, 192, 168, 1, 102	TCP,14780- 29432
٦.	🛛 Deny	Default	*,*	LAN,*	₽ (0),*
٩	🗸 Allow	Default	LAN,*	*,*	₽ (0),*

Enable: Click to enable or disable the firewall rule profile.

Name: Type a descriptive name for the firewall rule profile.

Action: Select whether to allow or deny packets that conform to the rule.

Inactive Timeout: Type the number of seconds of network inactivity that elapses before the router refuses the incoming packet.

Source: Defines the source of the incoming packet that the rule is applied to.

- Interface: Select which interface (WAN or LAN) the rule is applied to.
- IP Range Start: Type the start IP address that the rule is applied to.
- IP Range End: Type the end IP address that the rule is applied to.

Destination: Defines the destination of the incoming packet that the rule is applied to.

- Interface: Select which interface (WAN or LAN) the rule is applied to.
- **IP Range Start:** Type the start IP address that the rule is applied to.
- **IP Range End:** Type the end IP address that the rule is applied to.
- **Protocol:** Select the protocol (TCP, UDP, or ICMP) of the destination.
- **Port Range:** Select the port range.

Add: Click to add the rule profile to the table at the bottom of the screen.

Update: Click to update information for the rule if you have selected a list item and have made changes.

Delete: Select a list item and click *Delete* to remove the item from the list.

New: Click New to erase all fields and enter new information.

Priority Up: Select a rule from the list and click *Priority Up* to increase the priority of the rule.

Priority Down: Select a rule from the list and click *Priority Down* to decrease the priority of the rule.

Update Priority: After increasing or decreasing the priority of a rule, click *Update Priority* to save the changes.

3.6 Management

Management enables you to set up SNMP and Remote Management feature.

3.6.1 SNMP

This screen enables you to configure SNMP.

← • → • 🛞 🕼 🖄		🇊 - 🗗 ×
Wireless Router	ІОВ мьря	
	SNMP Remote Management	HELP
	C Enabled © Disabled	
LAN Setting	System Name AP-Router	
Wireless	System Location	
Status	System Contact	
Routing	Community	
Access	Trap Receiver 1 0.0.0.0	
Management	2 0.0.0	
	3 0.0.0	
Wizard	Cancel Apply	

Enabled/Disabled: Click to enable or disable SNMP.

System Name: Displays the name given to the router.

System Location: Displays the location of the router (normally, the DNS name).

System Contact: Displays the contact information for the person responsible for the router.

Community: SNMP system name for exchanging SNMP community messages. The name can be used to limit SNMP messages passing through the network. The default name is 'public.'

Trap Receiver: Type the name of the destination PC that will receive trap messages.

3.6.2 Remote Management

This screen enables you to set up remote management. Using remote management, the router can be configured through the WAN via a Web browser. A user name and password are required to perform remote management.

1	Q 🖻 🧭 🗗 🗗 🗹	
Wireless Router		108 Mbps
	► SNMP ► Remote Man	
LAN Setting		Enable O Enable O Disabled
Wireless	HTTP	
Status		Remote IP Range From To To Enable O Disabled
Routing	Allow to Ping WAN Port	Remote IP Range From * To
Access	UPNP Enable	
Management	Gaming mode	Enable © Enabled O Disabled
	РРТР	Enable © Enabled O Disabled
Wizard	IPSec	Enable © Enabled O Disabled
	IDENT	Enable C Closed
	Cancel Apply	

HTTP: Enables you to set up HTTP access for remote management.

• Enable: Click to enable or disable HTTP access for remote management. Allow to Ping WAN Port: Type a range of router IP addresses that can be pinged

from remote locations

UPNP: UPNP is short for Universal Plug and Play which is a networking architecture that provides compatibility among networking equipment, software, and peripherals. The Router is a UPnP enabled router and will only work with other UPnP devices/softwares. If you do not want to use the UPnP functionality, it can be disabled by selecting "Disabled".

GAMING MODE: If you are experiencing difficulties when playing online games or even certain applications that use voice data, you may need to enable Gaming Mode for these applications to work correctly. When not playing games or using these voice applications, it is recommended that Gaming Mode is disabled.

PPTP: Enables you to set up PPTP access for remote management.

IPSec: Enables you to set up IPSec access for remote management. **IDENT:** Default is closed. This enables you to set port 113 stealth.

3.7 Tools

This page enables you to restart the system, save and load different settings as profiles, restore factory default settings, run a setup wizard to configure router settings, upgrade the firmware, and ping remote IP addresses.

3.7.1 Restart

Click *Restart* to restart the system in the event the system is not performing correctly.

		🏥 - 🗗 ×
Wireless Router	IO8 Mbps	
	➢ Restart ► Settings ► Firmware ► Ping test	THELP
 LAN Setting Wireless Status Routing Access Management Tools Wizard 	Restart	

3.7.2 Settings

This screen enables you to save your settings as a profile and load profiles for different circumstances. You can also load the factory default settings, and run a setup wizard to configure the router and router interface.

← • → • ⊗ ∅ △		顫 - 🗗 ×
Wireless Router	IO8 Mbps	THELP
 LAN Setting Wireless Status Routing Access Management Tools Wizard 	▶ Restart ▶ Settings ▶ Firmware ▶ Ping test Save Settings Save Load Settings Restore Factory Default Settings Restore	

Save Settings: Click to save the current configuration as a profile that you can load when necessary.

Load Settings: Click *Browse* and go to the location of a stored profile. Click *Load* to load the profile's settings.

Restore Factory Default Settings: Click to restore the default settings. All configuration changes you have made will be lost.

Setup Wizard: click to run a setup wizard that configures the router and interface

3.7.3 Firmware

This screen enables you to keep the router firmware up to date.

← • → • 🔕 🕼 🖄	Q 🗈 🏈 🖏 - 🖨 🖬 - 🖻	🗐 - 🗗 ×
Wireless Router	ІОВ мьря	
	► Restart ► Settings ► Firmware ► Ping test	HELP
 LAN Setting Wireless Status Routing Access Management Tools Wizard 	Upgrade Firmware 	

Please follow the below instructions:

- 1. Download the latest firmware from the manufacturer's Web site, and save it to your disk.
- 2. Click *Browse* and go to the location of the downloaded firmware file.

Select the file and click Upgrade to update the firmware to the latest release

3.7.4 Ping Test

The ping test enables you to determine whether an IP address or host is present on the Internet. Type the host name or IP address in the text box and click Ping.

] ← • → • 🔕 🚯 🖄		🗐 – 🗗 ×
Wireless Router	ІОВ мьря	2
	► Restart ► Settings ► Firmware ► Ping test	THELP
LAN Setting	Host Name or IP address: Ping	
 Wireless 		
Status		
 Routing Access 		
 Management 		
😑 Tools		
Wizard		

4. Glossary

Access Point

An interview networking device that seamlessly connects wired and wireless networks

Authentication

Authentication refers to the verification of a transmitted message's integrity.

DMZ

DMZ (DeMilitarized Zone) is a part of a network that is located between a secure LAN and an insecure WAN. DMZs provide a way for some clients to have unrestricted access to the Internet.

DHCP

DHCP (Dynamic Host Configuration Protocol) software automatically assigns IP addresses to client stations logging onto a TCP/IP network, which eliminates the need to manually assign permanent IP addresses.

DNS

DNS stands for Domain Name System. DNS converts machine names to the IP addresses that all machines on the net have. It translates from name to address and from address to name.

Domain Name

The domain name typically refers to an Internet site address.

DTIM

DTIM (Delivery Traffic Indication Message) provides client stations with information on the next opportunity to monitor for broadcast or multicast messages.

Filter

Filters are schemes which only allow specified data to be transmitted. For example, the router can filter specific IP addresses so that users cannot connect to those addresses.

Firewall

Firewalls are methods used to keep networks secure from malicious intruders and unauthorized access. Firewalls use filters to prevent unwanted packets from being transmitted. Firewalls are typically used to provide secure access to the Internet while keeping an organization's public Web server separate from the internal LAN.

Firmware

Firmware refers to memory chips that retain their content without electrical power (for example, BIOS ROM). The router firmware stores settings made in the interface. Fragmentation

Refers to the breaking up of data packets during transmission.

FTP

FTP (File Transfer Protocol) is used to transfer files over a TCP/IP network, and is typically used for transferring large files or uploading the HTML pages for a Web site to the Web server.

Gateway

Gateways are computers that convert protocols enabling different networks, applications, and operating systems to exchange information.

Host Name

The name given to a computer or client station that acts as a source for information on the network.

HTTP

HTTP (HyperText Transport Protocol) is the communications protocol used to connect to servers on the World Wide Web. HTTP establishes a connection with a Web server and transmits HTML pages to client browser (for example Windows IE). HTTP addresses all begin with the prefix 'http://' prefix (for example,

http://www.yahoo.com).

ICMP

ICMP (Internet Control Message Protocol) is a TCP/IP protocol used to send error and control messages over the LAN (for example, it is used by the router to notify a message sender that the destination node is not available).

IP

IP (Internet Protocol) is the protocol in the TCP/IP communications protocol suite that contains a network address and allows messages to be routed to a different network or subnet. However, IP does not ensure delivery of a complete message—TCP provides the function of ensuring delivery.

IP Address

The IP (Internet Protocol) address refers to the address of a computer attached to a TCP/IP network. Every client and server station must have a unique IP address. Clients are assigned either a permanent address or have one dynamically assigned to them via DHCP. IP addresses are written as four sets of numbers separated by periods (for example, 211.23.181.189).

ISP

An ISP is an organization providing Internet access service via modems, ISDN (Integrated Services Digital Network), and private lines.

LAN

LANs (Local Area Networks) are networks that serve users within specific geographical areas, such as in a company building. LANs are comprised of servers, workstations, a network operating system, and communications links such as the router.

MAC Address

A MAC address is a unique serial number burned into hardware adapters, giving the adapter a unique identification.

Metric

A number that indicates how long a packet takes to get to its destination.

MTU

MTU (Maximum Transmission/Transfer Unit) is the largest packet size that can be sent over a network. Messages larger than the MTU are divided into smaller packets.

NAT

NAT (Network Address Translation - also known as IP masquerading) enables an organization to present itself to the Internet with one address. NAT converts the address of each LAN node into one IP address for the Internet (and vice versa). NAT also provides a certain amount of security by acting as a firewall by keeping individual IP addresses hidden from the WAN.

(Network) Administrator

The network administrator is the person who manages the LAN within an organization. The administrator's job includes ensuring network security, keeping software, hardware, and firmware up-to-date, and keeping track of network activity.

NTP

NTP (Network Time Protocol) is used to synchronize the realtime clock in a computer. Internet primary and secondary servers synchronize to Coordinated Universal Time (UTC).

Packet

A packet is a portion of data that is transmitted in network communications. Packets are also sometimes called frames and datagrams. Packets contain not only data, but also the destination IP address.

Ping

Ping (Packet INternet Groper) is a utility used to find out if a particular IP address is present online, and is usually used by networks for debugging.

Port

Ports are the communications pathways in and out of computers and network devices (routers and switches). Most PCs have serial and parallel ports, which are external sockets for connecting devices such as printers, modems, and mice. All network adapters use ports to connect to the LAN. Ports are typically numbered.

PPPoE

PPPoE (Point-to-Point Protocol Over Ethernet) is used for running PPP protocol (normally used for dial-up Internet connections) over an Ethernet.

PPTP

Point-to-Point Tunneling Protocol uses TCP to deal data for tunnel maintenance, and uses PPP for sum up the information carried within the tunnel. The data carried within the tunnel can be compressed or encrypted. The encryption method used is RSA RC4. PPTP can operate when the protocol is supported only on the client and the server located on the other end that the client is corresponds with. No support is essential from any of the routers or servers within the network the two PCs are connecting across

Protocol

A protocol is a rule that governs the communication of data.

RIP

RIP (Routing Information Protocol) is a routing protocol that is integrated in the TCP/IP protocol. RIP finds a route that is based on the smallest number of hops between the source of a packet and its destination.

RTS

RTS (Request To Send) is a signal sent from the transmitting station to the receiving station requesting permission to transmit data.

Server

Servers are typically powerful and fast machines that store programs and data. The programs and data are shared by client machines (workstations) on the network.

SMTP

SMTP (Simple Mail Transfer Protocol) is the standard Internet e-mail protocol. SMTP is a TCP/IP protocol defining message format and includes a message transfer agent that stores and forwards mail.

Subnet Mask

Subnet Masks (SUBNETwork masks) are used by IP protocol to direct messages into a specified network segment (i.e., subnet). A subnet mask is stored in the client machine, server or router and is compared with an incoming IP address to determine whether to accept or reject the packet.

SysLog Server

A SysLog server monitors incoming Syslog messages and decodes the messages for logging purposes.

ТСР

(Transmission Control Protocol) is the transport protocol in TCP/IP that ensures messages over the network are transmitted accurately and completely.

TCP/IP

TCP/IP (Transmission Control Protocol/Internet Protocol) is the main Internet communications protocol. The TCP part ensures that data is completely sent and received at the other end. Another part of the TCP/IP protocol set is UDP, which is used to send data when accuracy and guaranteed packet delivery are not as important (for example, in real-time video and audio transmission). The IP component of TCP/IP provides data routability, meaning that data packets contain the destination station and network addresses, enabling TCP/IP messages to be sent to multiple networks within the LAN or in the WAN.

UDP

(User Datagram Protocol) is a protocol within TCP/IP that is used to transport

information when accurate delivery isn't necessary (for example, real-time video and audio where packets can be dumped as there is no time for retransmitting the data).

Virtual Servers

Virtual servers are client servers (such as Web servers) that share resources with other virtual servers (i.e., it is not a dedicated server).

WAN

WAN (Wide Area Network) is a communications network that covers a wide geographic area such as a country (contrasted with a LAN, which covers a small area such as a company building).