1. DLINK

1.1 Product Description

The following are device specific configuration settings for the D-Link Router. Navigation through the management screens will be similar but may vary across specific products in this vendor's family of routers. See the vendor's website for more information about wireless configuration at <u>http://www.dlink.com/tutorial/wireless/</u>. The following equipment was used in the test case:

Device:	D-Link DI-624 AirPlus Xtreme-G Router
Firmware:	Version 2.42
Firmware Release Date:	March 31, 2004

1.2 Configuration of Recommended Security Policies

Use layer 2 or 3 encryption with AES 2.3.1.010 The model tested does not support AES but can be configured to allow VPN pass-through by clicking on the **Tools** tab and selecting the **Misc.** button. DI-624 Advanced Status Home Tools Help Ping Test Ping Test is used to send "Ping" packets to test if a computer is on the Internet. Admin Host Name or IF Ping address VPN Pass-Through System Allows VPN connections to work through the DI-624. PPTP Firmware IPSec DDNS WAN select to 10/100 Mbps C 100Mbps C 10Mbps @ 10/100Mbps Auto Misc. Cable Test C 83 Apply Cancel Help Figure 1-1. Dlink: VPN Pass-through Settings

2.3.1.020	Choose products that support a network level security management solution.
Not tested	

2.3.1.030	Disable management ports on network devices when not in use.
- Select the 7	Fools tab and then the Admin button

Select the **Tools** tab and then the **Admin** button -

Select **Disabled** in the Remote Management area

Note: If remote management is enabled, do NOT enter/allow the wildcard * in the IP address field as shown below. Instead, use one of the higher software port numbers.

124	-				
	Home	Advanced	Tools	Status	Help
	Administrator Administrators	Settings can change their logir	ı password.		
Admin	Administrator (T	'he Login Name is "ad	dmin")		
Time	New	Password 🏎	olok		
	Confirm	Password Management	iskolok		
	User (The Login	name is "user")			
	New	Password 📟	lakotok		
	Confirm	Password	alalak		
	Remote Mana	gement			
		- Contraction of the second se	ed 🖲 Disabled		
	IF	PAddress *			
		Port 8080 -			
		80 5 88		S	63
		1080		Analy	Cancel He

Figure 1-2. Dlink: Disabling Remote Management

2.3.1.040	Use OOB management across a specially configured VLAN for network administration/management		
This feature is not available on the DI-624			

2.3.1.050	WLAN must have session timeout capability and must be set to 15 min or less					
This feature is	This feature is not available on the DI-624					

2.3.1.060 Set AP transmit power to lowest possible to attain signal strength required Navigate to the Advanced tab **Performance** button as shown below

Navigate to the Advanced tab, Performance button as shown below.
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		ed 2.4GHz W		
-624 Ho	me Advanced	Tools	Status	Help
	ss Performance			
	re the Wireless Performance	features for the AF	P(Access Point) P	ortion.
I Server	TX Rate : Auto 💌	(Mbps)		
	Transmit Power : 12.5%			
ns	Beacon interval : 100	 (msec, range:20~1	1000 dofoult:100)	
_		(range: 1~2346, de	2 D	
		••••••••••••••••••••••••••••••••••••••		0 77
	Fragmentation : 2346	(range: 256~2346,		n number only)
	DTIM interval : 1	(range: 1~255, def		
	Preamble Type : 💿 Sho		ng Preamble	
	SSID Broadcast : O Ena			
8	02.11g Only Mode : O Ena			
	CTS Mode : O Non			
	Super G Mode : Super	G with Dynamic Tur	rbo 💌	
			S	<u>6</u> 3 🔂
-			Apply	Cancel Help
ce l				

2.3.1.070	Password-prote	ect AP and bridges	s beyond	l manufa	acturer's	default setti	ing
Select Tools tal	b and then the \mathbf{A}	dmin button to ma	nage th	is setting	<u>z</u> .		
	D-Link Building Networks for People		Air P ed 2.4GHz	Plus FAEME Wireless Ro	G		
	DI-624	Home Advanced	Tools	Status	Help		
		Administrator Settings Administrators can change their logi	n password.				
	Admin	Administrator (The Login Name is "a	dmin")				
	Time	New Password					
		Confirm Password					
	System	New Password	****				
	Firmware	Confirm Password	AND A				
		Remote Management C Enabl	ed 🖲 Disabled				
	DDNS	IP Address *					
	Misc.	Port 8080 - 80 - 88		0	63 🔂		
		1080 8080		Appl	y Cancel Help		
	Cable Test						
	Figure 1	1-4. Dlink: Sett	ing Adr	nin Pass	sword		

2.3.1.080	Change default SSID
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- Select the Home tab and then the Wireless button
- Enter an SSID in the **SSID** field

Note: The size of the field allows for a full 32 character SSID. The display does not show the full field width but will scroll when necessary. The visible portion of the display below is an example of a random character string used for SSID.

HO	ome	Advanced	Tools	Status	Help
Wirele	ess Setting	js			
These	are the wir	eless settings for th	ne AP(Access Po	int)Portion.	
		adio 💿 On 🔿 C SID : 02Az#\$c(=dE			
s		22			
		nnel : 🛛 🔽 🔲 Au			
-		The second s		d Key O WPA @	WPA-PSK
	Authentical	The second s		d Key O WPA @	WPA-PSK
	Authenticat	tion : O Open Sy		d Key C WPA @	WPA-PSK
	Authenticat	tion : O Open Sy Passphrase :		d Key C WPA @	

Figure 1-5. Dlink: Changing the SSID

2.3.1.090	Disable SSID broadcast mode
- Select the A	Advanced tab and then the Performance button.
- Select Disa	bled in the SSID Broadcast option
	•
	DI-624
	Home Advanced Tools Status Help
	Wireless Performance
	These are the Wireless Performance features for the AP(Access Point) Portion.
	Virtual Server TX Rate : Auto 🔽 (Mbps)
	Transmit Power : 12.5% 💌
	Applications Beacon interval : 100 (msec, range:20~1000, default:100)
	RTS Threshold : 2346 (range: 1~2346, default:2346)
	Filters Fragmentation : 2346 (range: 256~2346, default:2346, even number only)
	DTIM interval : 1 (range: 1~255, default: 1)
	Parental Control Preamble Type : Short Preamble C Long Preamble
	SSID Broadcast: C Enabled
	802.11g Only Mode : C Enabled @ Disabled
	Firewall CTS Mode : C None C Always @ Auto
	Super G Mode : Super G with Dynamic Turbo 💌
	DMZ 🔗 👩 😷
	Apply Cancel Help
	Performance
	Figure 1-6. Dlink: Disabling SSID Broadcast

2.3.1.100 Enable M	AC address filter	ring				
- Select the Advanced t		0	itton.			
- Change the setting from	m the default set	ting (IP F	Filters) to I	MAC Filter	s. This must	be
changed before the ma		-				
- Select the option for C	0				d below to a	access
the network	J					
DI-624			The second s			
8		lvanced	Tools	Status	Help	
	Filters Filters are used to allow	v or deny LAN	users from acces	sing the Internet.		
Virtual Server	C IP Filters	MAC Filters		6.50		
		Minor Incoro				
Applications	MAC Filters					
	Use MAC address to al	low or deny co	mputers access	to the network.		
Filters	C Disabled MAC Filte	rs				
k	Only allow compute				2254.233.237.23	
Parental Control	C Only deny compute	ers with MAC a		low to access the ne	twork	
	Name		Clear			
	MAC Address			-		
Firewall	DHCP Client	Clone				
				-	00	
DMZ	MAC FILM			V		
	MAC Filter List Name	MAC Addres	88	Apply	Cancel Help	
Performance						
	17 Disalar Fa					

Figure 1-7. Dlink: Enabling MAC Address Filtering

An additional setting available on the D-Link DI-624 AP/Router which we recommend setting will force the static assignment of all DHCP addresses by limiting the IP Address Range to cover just those devices for which a MAC address is available. This will also prevent the AP from serving up DHCP addresses for unknown MAC addresses. In the example below, the **Starting IP Address** and the **Ending IP Address** are the same. At the bottom of the screen, there is one entry for "MyPersonalLaptop", and no room in the DHCP configuration for any others.

DI-624	
	Home Advanced Tools Status Help
	DHCP Server The DI-624 can be setup as a DHCP Server to distribute IP addresses to the LAN
Wizard	network. DHCP Server I Enabled C Disabled
	Starting IP Address 192, 168, 249, 100
Wireless	Ending IP Address 192 . 168 . 249 . 100
WAN	Lease Time 1 Hour
WAN	Static DHCP
LAN	Static DHCP is used to allow DHCP server to assign same IP address to specific MAC address.
	€ Enabled ⊂ Disabled
DHCP	Name
	IP 192.168.249.
	MAC Address
	💋 🙆 🔂
	Apply Cancel Help
	Static DHCP Client List
	Host Name IP Address MAC Address ✓ MyPersonalLaptop 192.168.249.100 02-60-8C-2B-93-2A ∎∭
Figure 1-8.	Dlink: MAC Address Filtering-Static DHCP
In the example below – only	one IP address is allowed to pass through the AP, so that only the
single assigned IP address ca	· · ·
6 6	
The Tee State	
D ⁻ Link Building Networks for People	AirPlus TREMEG
	High-Speed 2.4GHz Wireless Router
DI-624	
	Home Advanced Tools Status Help
	Filters Filters are used to allow or deny LAN users from accessing the Internet.
Virtual Server	26 The second seco
	C IP Filters
Applications	MAC Filters
	Use MAC address to allow or deny computers access to the network.
Filters	Disabled MAC Filters
	O Only allow computers with MAC address listed below to access the network
Parental Control	O Only deny computers with MAC address listed below to access the network
	Name
Concession of the local division of the loca	MAC Address
Firewall	DHCP Client Clone
DMZ	
UMZ	MAC Filter List Apply Cancel Help
Construction of the local division of the lo	Name MAC Address
Performance	
	Dlink: MAC Address Filtering-Network Access

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2.3.1.110	Backup system configuration settings
Configuration	Not tested

2.3.1.130	Enable and configure logging
Configuration	Not tested