



Your PDF Guides

You can read the recommendations in the user guide, the technical guide or the installation guide for ZYXEL NBG-460N. You'll find the answers to all your questions on the ZYXEL NBG-460N in the user manual (information, specifications, safety advice, size, accessories, etc.). Detailed instructions for use are in the User's Guide.

User manual ZYXEL NBG-460N
User guide ZYXEL NBG-460N
Operating instructions ZYXEL NBG-460N
Instructions for use ZYXEL NBG-460N
Instruction manual ZYXEL NBG-460N

NBG460N

Wireless N Gigabit Router

User's Guide

Version 3.60
3/2008
Edition 1

DEFAULT LOGIN

IP Address <http://192.168.1.1>
Password 1234

ZyXEL
www.zyxel.com



[You're reading an excerpt. Click here to read official ZYXEL NBG-460N user guide](http://yourpdfguides.com/dref/2368237)
<http://yourpdfguides.com/dref/2368237>

Manual abstract:

· ZyXEL Web Site Please refer to www.zyxel.com for additional support documentation and product certifications. User Guide Feedback Help us help you. Send all User Guide-related comments, questions or suggestions for improvement to the following address, or use e-mail instead. Thank you! The Technical Writing Team, ZyXEL Communications Corp., 6 Innovation Road II, Science-Based Industrial Park, Hsinchu, 300, Taiwan. E-mail: techwriters@zyxel.com.tw NBG460N User's Guide 3 Document Conventions Document Conventions Warnings and Notes These are how warnings and notes are shown in this User's Guide.

Warnings tell you about things that could harm you or your device. Notes tell you other important information (for example, other things you may need to configure or helpful tips) or recommendations. Syntax Conventions · The NBG460N may be referred to as the "NBG460N", the "device", the "product" or the "system" in this User's Guide. · Product labels, screen names, field labels and field choices are all in bold font. · A key stroke is denoted by square brackets and uppercase text, for example, [ENTER] means the "enter" or "return" key on your keyboard.

· "Enter" means for you to type one or more characters and then press the [ENTER] key. "Select" or "choose" means for you to use one of the predefined choices. · A right angle bracket (>) within a screen name denotes a mouse click. For example, Maintenance > Log > Log Setting means you first click Maintenance in the navigation panel, then the Log sub menu and finally the Log Setting tab to get to that screen. · Units of measurement may denote the "metric" value or the "scientific" value.

For example, "k" for kilo may denote "1000" or "1024", "M" for mega may denote "1000000" or "1048576" and so on. · "e.g.," is a shorthand for "for instance", and "i.e.," means "that is" or "in other words". 4 NBG460N User's Guide Document Conventions Icons Used in Figures Figures in this User's Guide may use the following generic icons. The NBG460N icon is not an exact representation of your device. NBG460N Computer Notebook computer Server DSLAM Firewall Telephone Switch Router Modem NBG460N User's Guide 5 Safety Warnings Safety Warnings For your safety, be sure to read and follow all warning notices and instructions. · Do NOT use this product near water, for example, in a wet basement or near a swimming pool.

· Do NOT expose your device to dampness, dust or corrosive liquids. · Do NOT store things on the device. · Do NOT install, use, or service this device during a thunderstorm. There is a remote risk of electric shock from lightning. · Connect ONLY suitable accessories to the device. · Do NOT open the device or unit. Opening or removing covers can expose you to dangerous high voltage points or other risks. ONLY qualified service personnel should service or disassemble this device. Please contact your vendor for further information. · Make sure to connect the cables to the correct ports.

· Place connecting cables carefully so that no one will step on them or stumble over them. · Always disconnect all cables from this device before servicing or disassembling. · Use ONLY an appropriate power adaptor or cord for your device. · Connect the power adaptor or cord to the right supply voltage (for example, 110V AC in North America or 230V AC in Europe). · Do NOT allow anything to rest on the power adaptor or cord and do NOT place the product where anyone can walk on the power adaptor or cord.

· Do NOT use the device if the power adaptor or cord is damaged as it might cause electrocution. · If the power adaptor or cord is damaged, remove it from the power outlet. · Do NOT attempt to repair the power adaptor or cord. Contact your local vendor to order a new one. · Do not use the device outside, and make sure all the connections are indoors.

There is a remote risk of electric shock from lightning. · Do NOT obstruct the device ventilation slots, as insufficient airflow may harm your device. · Antenna Warning! This device meets ETSI and FCC certification requirements when using the included antenna(s). Only use the included antenna(s). · If you wall mount your device, make sure that no electrical lines, gas or water pipes will be damaged. This product is recyclable. Dispose of it properly. 6 NBG460N User's Guide Safety Warnings NBG460N User's Guide 7 Safety Warnings 8 NBG460N User's Guide Contents Overview Contents Overview Introduction ...

.....

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.....

.....

.....

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.....

.....

.....

.....

.....

.....

.....

. 29 Getting to Know Your NBG460N

.....

.....

.....

.....

.....

.....

.....

.....
.....
.....
.....

..... *31 The WPS Button*

.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

..... *35 Introducing the Web Configurator*

.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

..... *37 Connection Wizard*

.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

..... *49 AP Mode*

.....
.....
.....

.....
.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

... *65 Tutorials* ..

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

. *73 Network*

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.. *87 Wireless LAN* ...

.....

.....

.....

.....

.....

.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.. 89 WAN ...
.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
...117 LAN
.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.. 127 DHCP

.....
.....
.....
.....

.....

.....
.....
.....
151 Firewall

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

..... *153 Content Filtering ...*

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

..... *161 IPSec VPN*

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....
.....

209 Universal Plug-and-Play (UPnP)

.....
.....
.....
.....
.....
.....
.....
.....
.....

... 215 Maintenance and Troubleshooting

.....
.....
.....
.....
.....
.....
.....
.....

..... 227 System ..

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

. 229 Logs

.....
.....
.....
.....
.....

.....
.....
.....

.....
.....
.....
.....

.....
259 Language

.....
.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

.....
.....

..... 263 Troubleshooting .

.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

.....
.....

... 265 Appendices and Index ..

.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

.....
... 271 NBG460N User's Guide 9 Contents Overview 10 NBG460N User's Guide Table of Contents Table of Contents About This User's Guide

.....
.....

.....
.....
.....

.....
.....
.....

.....
.....

... 3 Document Conventions.

.....
.....
.....
.....

.....
.....
.....

.....
.....
.....

..... 4 Safety Warnings...

.....
.....
.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

..... 6 Contents Overview ...

.....
.....
.....

.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.. 9 Table of Contents.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

..... 11 List of Figures ..

.....
.....
.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

..... 19 List of Tables.

.....
.....
.....

.....
.....
.....

.....
.....
.....

.....
.....

.....
.....

.. 25 Part I: Introduction.....

.....
.....

.....
.....
.....

.....
.....

... 29 Chapter 1 Getting to Know Your NBG460N.....

.....
.....
.....

.....
.....
.....

.....
.....

..... 31 1.1 Overview

.....
.....
.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

.. 31 1.2 Router Mode

.....
.....

.....
.....
.....

.....
.....
.....

.....
.....
.....
.....

... 31 1.3 AP Mode

.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

32 1.4 Router Features vs. AP Features ...

.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

32 1.5 Ways to Manage the NBG460N

.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

. 33 1.6 Good Habits for Managing the NBG460N ...

.....
.....

.....
.....
.....
.....

.....

.....
.....
..... 33 1.7 LEDs ..

.....
.....
.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

.....
33 Chapter 2 The WPS Button.....

.....
.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

..... 35 2.1 Overview .

.....
.....
.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

.....
.....

35 Chapter 3 Introducing the Web Configurator

.....

.....

.....

.....

.....

.....

.....

.....

... 37 3.1 Web Configurator Overview .

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

. 62 Chapter 5 AP Mode.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.. 65 5.1 AP Mode Overview

.....

.....

.....

.....

.....

.....

.....

.....
.....
.....
.....

... 65 5.2 Setting your NBG460N to AP Mode

.....
.....
.....
.....

.....
.....
.....
.....

... 65 5.3 The Status Screen in AP Mode .

.....
.....
.....
.....

.....
.....
.....
.....

66 5.3.1 Navigation Panel

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

..... 68 5.4 Configuring Your Settings ...

.....
.....
.....

.....
.....
.....
.....

.....
.....

.....
.....
.....
.....
.....
.....
.. 69 5.4.1 LAN Settings .

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

..... 69 5.
4.2 WLAN and Maintenance Settings

.....
.....
.....
.....
.....

.....
.....
.....

..... 71 5.

5 Logging in to the Web Configurator in AP Mode

.....
.....
.....
.....
.....
.....

..... 71 Chapter 6 Tutorials

.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
73 6.1 Wireless Tutorials ...

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

..... 73 12 NBG460N User's Guide Table of Contents 6.
1.1 How to Connect to the Internet from an AP

.....
.....
.....
.....
.....

..... 73 6.
1.2 Configure Wireless Security Using WPS on both your NBG460N and Wireless Client 73 6.1.3 Enable and Configure Wireless Security without WPS on your NBG460N ..

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

.... 76 6.1.4 Configure Your Notebook

.....
.....
.....
.....
.....
.....
.....
.....
.....

..... 78 6.2 Site-To-Site VPN Tunnel Tutorial ..

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

..... 80 6.2.1 Configuring Bob's NBG460N VPN Settings .

.....
.....
.....

.....
.....
.....
.....

.....
.. 81 6.2.2 Configuring Jack's NBG460N VPN Settings .



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<http://yourpdfguides.com/dref/2368237>

.....
.....

.....
.....
.....

.....
.....

. 83 6.2.3 Checking the VPN Connection ..

.....
.....
.....

.....
.....
.....

. 84 Part II: Network....

.....
.....

.....
.....
.....

.....
.....
.....

..... 87 Chapter 7 Wireless LAN..

.....
.....
.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

. 89 7.1 Wireless Network Overview ...

.....
.....

.....
.....
.....

.....
.....
.....
.....

.....
.....
..... 89 7.

2 Wireless Security Overview

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....

..... 90 7.2.1 SSID .

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.. 90 7.2.2 MAC Address Filter

.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
..... 90 7.

2.3 User Authentication

.....
.....

.....
.....
.....

.....
.....
.....
.....

.....
.....
.....

..... 90 7.2.4 Encryption ..

.....
.....
.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

.. 91 7.3 Roaming

.....
.....
.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

..... 92 7.

3.1 Requirements for Roaming

.....
.....
.....

.....
.....
.....

.....
.....
.....

..... 93 7.

4 Quality of Service

.....
.....
.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

.. 93 7.4.1 WMM QoS

.....
.....
.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

... 94 7.5 General Wireless LAN Screen .

.....
.....
.....
.....

.....
.....
.....

.....
.....
.....

. 94 7.5.1 No Security

.....
.....
.....

.....
.....
.....

.....
.....
.....
.....

. 96 7.5.2 WEP Encryption ..

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

... 96 7.5.3 WPA-PSK/WPA2-PSK

.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

. 98 7.5.4 WPA/WPA2 ..

.....
.....
.....

.....
.....
.....

.....
.....
.....
.....

.....
.....
.....

.....
.....
.....
.....

..... 99 7.6 MAC Filter

.....
.....
.....

.....
.....

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

..... 101 7.7 Wireless LAN Advanced Screen .

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

..... 102 7.8 Quality of Service (QoS) Screen ...

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

.... 103 7.8.1 Application Priority Configuration

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

... 105 7.9 WiFi Protected Setup

.....
.....
.....
.....
.....
.....
.....
.....

.....
.....
.....
.....

..... 106 7.
9.1 WPS Screen

.....
.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

106 7.9.2 WPS Station Screen

.....
.....
.....

.....
.....
.....

.....
.....
.....

..... 107 7.
9.3 Scheduling

.....
.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

.. 107 7.10 iPod Touch Web Configurator

.....
.....
.....

.....

.....
.....
.....
.....
.....
.....
.....

... 108 7.10.1 Login Screen

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

. 109 7.10.2 System Status

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

*.....110 7.10.
3 WPS in Progress*

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

.112 7.10.4 Port Forwarding

.....
.....
.....

.....
.....
.....
.....
.....
.....
.....
.....

.....113 NBG460N User's Guide 13 Table of Contents 7.11 Accessing the iPod Touch Web Configurator ...

.....
.....
.....
.....
.....
.....
.....

114 7.11.1 Accessing the iPod Touch Web Configurator ...

.....
.....
.....
.....
.....

115 Chapter 8 WAN.....

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

. 117 8.1 WAN Overview

.....
.....
.....
.....
.....

.....
.....
.....
.....

.....117 8.2 WAN MAC Address ..

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....

.117 8.3 Multicast ...

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....

..117 8.4 Internet Connection

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.....

.118 8.4.1 Ethernet Encapsulation ..

.....
.....

.....
.....
.....

.....
.....
.....

.....
.....

.118 8.4.2 PPPoE Encapsulation ..

.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

...119 8.4.3 PPTP Encapsulation

.....
.....
.....

.....
.....
.....

.....
.....
.....

. 122 8.5 Advanced WAN Screen

.....
.....
.....

.....
.....
.....

.....
.....
.....

... 125 Chapter 9 LAN..

.....
.....

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

127 9.1 LAN Overview

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

..... 127 9.1.1 IP Pool Setup ..

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

.. 127 9.1.2 System DNS Servers ..

.....
.....
.....
.....
.....
.....

.....
.....
.....

... 127 9.2 LAN TCP/IP

.....
.....
.....
.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

... 127 9.2.1 Factory LAN Defaults

.....
.....
.....
.....

.....
.....
.....

.....
.....
.....

127 9.2.2 IP Address and Subnet Mask

.....
.....
.....

.....
.....
.....

.....
.....
.....

..... 128 9.2.3 Multicast ...

.....
.....
.....
.....

.....
.....
.....

.....

.....

.....

.....

.....

.....

.....

.....

.. 128 9.2.4 Any IP

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

... 128 9.3 LAN IP Screen

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.... 130 9.

4 LAN IP Alias

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....
.....
.. 130 9.5 Advanced LAN Screen ..
.....

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

131 Chapter 10 DHCP.....

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

.....
.... 133 10.
1 DHCP

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

. 133 10.2 DHCP General Screen

.....
.....

.....
.....
.....
.....
.....
.....
.....
.....

.. 133 10.3 DHCP Advanced Screen

.....
.....
.....
.....
.....
.....
.....
.....

..... 134 10.4 Client List Screen ..

.....
.....
.....
.....
.....
.....
.....
.....

..... 135 Chapter 11 Network Address Translation (NAT)....

.....
.....
.....
.....
.....
.....
.....
.....

137 11.1 NAT Overview

.....
.....
.....
.....

.....
.....
.....

.....
.....
.....

.....
.. 137 11.2 Using NAT ..

.....
.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

.....
... 137 11.2.

1 Port Forwarding: Services and Port Numbers

.....

.....
.....
.....

.....
. 137 11.2.2 Configuring Servers Behind Port Forwarding Example ..

.....
.....

.....
.....
.....

..... 138 11.3 General NAT Screen

.....
.....
.....

.....
.....
.....

.....
.....
.....

.....

138 11.4 NAT Application Screen

.....
.....
.....
.....
.....
.....
.....
.....
.....

*... 139 14 NBG460N User's Guide Table of Contents 11.4.
1 Game List Example*

.....
.....
.....
.....
.....
.....
.....
.....

..... 141 11.5 Trigger Port Forwarding ...

.....
.....
.....
.....
.....
.....
.....
.....

..... 142 11.5.1 Trigger Port Forwarding Example ..

.....
.....
.....
.....
.....
.....
.....
.....

... 142 11.5.2 Two Points To Remember About Trigger Ports

.....
.....
.....

.....
.....
.....
..... 143 11.
6 NAT Advanced Screen

.....
.....
.....

.....
.....
.....

.....
.....
.....

. 143 Chapter 12 Dynamic DNS

.....
.....
.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

. 147 12.1 Dynamic DNS Introduction

.....
.....
.....

.....
.....
.....

.....
.....
.....

..... 147 12.1.1 DynDNS Wildcard ...

.....
.....
.....

.....
.....
.....

.....
.....
.....
.....

147 12.2 Dynamic DNS Screen

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....

..... 147 Part III: Security....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....

151 Chapter 13 Firewall.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

. 153 13.1 Introduction to ZyXEL's Firewall

.....
.....
.....
.....

.....
.....

.....
.....

..... 153 13.1.1 What is a Firewall? ..

.....
.....
.....

.....
.....
.....

.....
.....
.....

..... 153 13.1.2 Stateful Inspection Firewall ...

.....
.....
.....

.....
.....
.....

.....
.....
.....

. 153 13.1.3 About the NBG460N Firewall

.....
.....
.....

.....
.....
.....

.....
.....
.....

.... 153 13.1.4 Guidelines For Enhancing Security With Your Firewall

.....
.....
.....

..... 154 13.2 Triangle Routes .

.....
.....
.....

.....
.....
.....

.....
.....
.....
.....
.....
.....
.....

154 13.2.1 Triangle Routes and IP Alias

.....
.....
.....
.....
.....
.....
.....
.....

.... 154 13.3 General Firewall Screen

.....
.....
.....
.....
.....
.....
.....
.....
.....

155 13.4 Services Screen

.....
.....
.....
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.....

156 13.4.1 The Add Firewall Rule Screen

.....
.....
.....
.....
.....

.....
.....
.....

.....
. 157 Chapter 14 Content Filtering

.....
.....

.....
.....
.....
.....

.....
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.....

.....
.....
.....
.....

..... *161 14.1 Introduction to Content Filtering ...*

.....
.....
.....

.....
.....
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.....
.....
.....

... 161 14.2 Restrict Web Features

.....
.....
.....

.....
.....
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.....
.....
.....

161 14.3 Days and Times

.....
.....

.....
.....
.....
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.....

.....
.....
.....
.....
.....

..... 161 14.4 Filter Screen ..

.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.... 161 14.5 Schedule

.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

..... 163 14.6 Customizing Keyword Blocking URL Checking ..

.....
.....
.....

.....
.....
.....
.....

. 164 14.6.1 Domain Name or IP Address URL Checking ..

.....
.....
.....

.....
.....
.....
.....

.....
164 14.6.2 Full Path URL Checking ...

.....
.....

.....
.....
.....

.....
.....
.....

.....
. 164 14.6.3 File Name URL Checking ..

.....
.....

.....
.....
.....

.....
.....
.....

.....
164 Chapter 15 IPSec VPN.....

.....
.....

.....
.....
.....

.....
.....
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.....
.....

.....
.....

. 165 NBG460N User's Guide 15 Table of Contents 15.1 IPSec VPN Overview ...

.....
.....

.....
.....
.....

.....
.....
.....

.....
.....

.....
.....

165 15.1.1 What You Can Do in the IPSec VPN Screens

.....
.....
.....

.....
.....

..... 165 15.1.

2 What You Need To Know About IPSec VPN

.....
.....
.....

.....
.....

..... 166 15.1.

3 IKE SA (IKE Phase 1) Overview

.....
.....
.....

.....
.....

.....
.....

.....
.....

. 166 15.1.4 IPSec SA (IKE Phase 2) Overview ..

.....

.....
.....

.....
.....

.....
.....

..... 167 15.2 The General Screen .

.....
.....

.....
.....

.....
.....

.....
.....

.....
.....

.....
.....

... 167 15.2.

1 VPN Rule Setup (Basic)

.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
..... 168 15.
2.2 VPN Rule Setup (Advanced)

.....
.....
.....
.....

.....
.....
.....
.....

..... 173 15.2.
3 VPN Rule Setup (Manual)

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

..... 179 15.3 *The SA Monitor Screen ...*

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

. 183 15.4 VPN and Remote Management ...

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....

.....
..... 184 15.

5 IPSec VPN Technical Reference

.....
.....
.....
.....
.....
.....
.....
.....
.....

185 Part IV: Management.....

.....
.....
.....
.....
.....
.....
.....

..... 193 Chapter 16 Static Route Screens

.....
.....
.....
.....
.....
.....
.....
.....
.....

.....
..... 195 16.

1 Static Route Overview

.....
.....
.....
.....
.....
.....
.....
.....
.....

..... 195 16.2 IP Static Route Screen ...

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

..... 195 16.2.1 Static Route Setup Screen .

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

.. 196 Chapter 17 Bandwidth Management.....

.....
.....
.....
.....
.....
.....
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.....
.....
.....
.....
.....
.....
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.....
.....

199 17.1 Bandwidth Management Overview

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

..... 199 17.2 Application-based Bandwidth Management ..

.....
.....
.....

.....
.....
.....
.....

. 199 17.3 Subnet-based Bandwidth Management ...

.....
.....
.....
.....

.....
.....
.....
.....

. 199 17.4 Application and Subnet-based Bandwidth Management

.....
.....
.....

.....
.....
.....

. 200 17.5 Bandwidth Management Priorities

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....

200 17.6 Predefined Bandwidth Management Services

.....
.....
.....
.....
.....

.....
.....
.....

. 201 17.6.1 Services and Port Numbers

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....

. 201 17.7 Default Bandwidth Management Classes and Priorities ...

.....
.....
.....
.....

..... 202 17.8 Bandwidth Management General Configuration ..

.....
.....
.....
.....
.....

..... 202 17.

9 Bandwidth Management Advanced Configuration

.....
.....
.....
.....
.....

..... 203 17.9.

1 Rule Configuration with the Pre-defined Service 17.10 Bandwidth Management Monitor

.....
.....
.....
.....

..... 205 .

.....
.....
.....

..... 205 17.9.2 Rule Configuration: User Defined Service Rule Configuration .

.....
.....
.....
.....
.....
.....

.....
.....

.... 206 Chapter 18 Remote Management.

.....
.....
.....
.....
.....
.....
.....

.....
.....
.....
.....

..... 209 18.1 Remote Management Overview ..

.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.... 209 18.1.1 Remote Management Limitations

.....
.....
.....

.....
.....
.....
.....

.....
.....
.....

209 16 NBG460N User's Guide Table of Contents 18.1.2 Remote Management and NAT

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....

210 18.1.3 System Timeout ...

.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....

.. 210 18.2 WWW Screen

.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

.....
.....
... 210 18.
3 Telnet

.....
.....
.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

...211 18.4 Telnet Screen

.....
.....
.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

211 18.5 FTP Screen

.....
.....
.....

.....
.....
.....

.....
.....
... 215 19.1.
2 NAT Traversal

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

... 215 19.1.3 Cautions with UPnP ...

.....
.....
.....
.....
.....
.....
.....
.....
.....

. 215 19.2 UPnP and ZyXEL ...

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

216 19.3 UPnP Screen

.....
.....
.....
.....
.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.... 229 20.3 Time Setting Screen

.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....

.... 230 Chapter 21 Logs .

.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.... 233 21.1 View Log

.....
.....
.....

.....
.....
.....
.....

.....

.....
253 22.2.3 Back to Factory Defaults ..

.....
.....

.....
.....
.....

.....
.....
.....

.....
254 22.3 Restart Screen ...

.....
.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

..... 254 22.4 Wake On LAN

.....
.....
.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

255 NBG460N User's Guide 17 Table of Contents Chapter 23 Configuration Mode

.....
.....
.....

.....
.....
.....

.....
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.....
.....

.....
.....
.....
257 Chapter 24 Sys Op Mode

.....
.....
.....
.....

.....
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.....
.....
.....

. 259 24.1 Overview

.....
.....
.....
.....

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.....
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.....
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.....
.....

.... 259 24.1.1 Router

.....
.....
.....
.....

.....
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.....
.....
.....
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.....
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.....
.....

.. 259 24.1.2 AP

.....
.....
.....
.....

.....
.....
.....
.....

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.....
.....
.....

.....
.....
.....

..... 259 24.2 *Selecting System Operation Mode ...*

.....
.....
.....
.....

.....
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.....
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.....
.....

.... 260 *Chapter 25 Language .*

.....
.....
.....
.....
.....

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.....

.....
.....
.....

..... 263 25.1 *Language Screen ...*

.....
.....
.....
.....

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.....
.....
.....

.....
.....
263 Chapter 26 Troubleshooting.....
.....

.....
.....
.....
.....

.....
.....
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.....

.....
.....
.....
.....

.....
. 265 26.1 Power, Hardware Connections, and LEDs ...
.....

.....
.....
.....
.....
.....

.....
.....
.....

.. 265 26.2 NBG460N Access and Login
.....

.....
.....
.....
.....
.....
.....
.....

.....
.....
.....

.... 266 26.3 Internet Access
.....

.....
.....
.....
.....
.....
.....

.....
.....
.....

..... 279 Appendix C IP Addresses and Subnetting .

.....
.....
.....

.....
.....
.....
.....

.....
.....
.....

.... 285 Appendix D Setting up Your Computer's IP Address

.....
.....
.....
.....

.....
.....
.....

... 293 26.6.1 Verifying Settings

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.... 308 Appendix E Wireless LANs

.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.. 309 26.6.2 WPA(2)-PSK Application Example .

.....
.....
.....

.....
.....
.....
.....

.....
.....

..... 318 26.6.3 WPA(2) with RADIUS Application Example .

.....
.....
.....
.....

.....
.....
.....

..... 318 Appendix F Services ..

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.....

. 321 Appendix G Legal Information....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....

325 Appendix H Customer Support.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....

... 329 Index.....

.....
.....
.....
.....

.....
.....
.....
.....
.....
.....
.....
.....

..... 335 18 NBG460N User's Guide List of Figures List of Figures Figure 1 Secure Wireless Internet Access in Router Mode ..

.....
.....
.....
.....
.....
.....

31 Figure 2 Wireless Internet Access in AP Mode

.....
.....
.....
.....
.....

32 Figure 3 Front Panel

.....
.....
.....
.....
.....
.....

.. 33 Figure 4 Change Password Screen ...

.....
.....

.....
.....
.....
.....
.....
.....
.....
.....
.....

. 38 Figure 5 Selecting the setup mode

.....
.....
.....
.....
.....
.....
.....

.... 39 Figure 6 Web Configurator Status Screen .

.....
.....
.....
.....
.....
.....
.....

.. 40 Figure 7 Any IP Table ...

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

. 44 Figure 8 Summary: BW MGMT Monitor

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.....
.....
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..... 45 Figure 9 Summary: DHCP Table ..

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. 45 Figure 10 Summary: Packet Statistics .



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<http://yourpdfguides.com/dref/2368237>

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.....

.....

..... 46 Figure 11 Summary: VPN Monitor

.....

.....

.....

.....

.....

.....

. 47 Figure 12 Summary: Wireless Association List

.....

.....

.....

.....

.....

..... 47 Figure 13 Select Wizard or Advanced Mode ...

.....

.....

.....

.....

.....

..... 49 Figure 14 Select a Language ...

.....

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50 *Figure 15 Welcome to the Connection Wizard*

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..... 50 *Figure 16 Wizard Step 1: System Information* ...

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.....
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.....
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.....
.....

..... 51 *Figure 17 Wizard Step 2: Wireless LAN*

.....
.....
.....
.....
.....
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.....
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.....
.....
.....
.....
.....
.....
.....

.. 52 *Figure 18 Wizard Step 2: Basic (WEP) Security*

.....
.....
.....
.....
.....

.....
.....
.....

..... 53 Figure 19 Wizard Step 2: Extend (WPA-PSK or WPA2-PSK) Security ...

.....
.....
.....
.....

... 54 Figure 20 Wizard Step 3: ISP Parameters. .

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....

.. 55 Figure 21 Wizard Step 3: Ethernet Connection

.....
.....
.....
.....

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.....
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.....
.....

... 55 Figure 22 Wizard Step 3: PPPoE Connection ..

.....
.....
.....
.....

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.....
.....
.....

.....
.....
.....

. 56 Figure 23 Wizard Step 3: PPTP Connection

.....
.....
.....
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.....

. 57 Figure 24 Wizard Step 3: Your IP Address

.....

.....

.....

.....

.....

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.....

.... 58 Figure 25 Wizard Step 3: WAN IP and DNS Server Addresses .

.....

.....

.....

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60 Figure 26 Wizard Step 3: WAN MAC Address

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.....

.....

.....

.....

.....

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.....

.....

... 61 Figure 27 Wizard Step 4: Bandwidth Management ..

.....

.....

.....

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.....

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.....

.....

..... 62 Figure 28 Connection Wizard Save ...

.....

.....

.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....

63 Figure 29 Connection Wizard Complete

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....

..... 63 Figure 30 Wireless Internet Access in AP Mode ...

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....

65 Figure 31 Maintenance > Sys OP Mode > General

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....

66 Figure 32 Status: AP Mode

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

..... 75 Figure 37 Example WPS Process: PIN Method ..

.....
.....
.....

.....
.....
.....

.....
.....
.....

... 76 Figure 38 Network > Wireless LAN > General

.....
.....
.....

.....
.....
.....

.....
.....
.....

77 NBG460N User's Guide 19 List of Figures Figure 39 Status: AP Mode

.....
.....
.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

..... 78 Figure 40 Connecting a Wireless Client to a Wireless Network t ...

.....
.....
.....

.....
.....
.....

..... 79 Figure 41 Security Settings

.....

.....

.....

.....

.....

.....

.....

... 80 Figure 45 Property ..

.....

.....

.....

.....

.....

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... 81 Figure 46 Local Policy

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..... 81 Figure 47 Remote Policy ...

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.....
.....

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.....
.....

... 83 Figure 52 Local Policy

.....
.....
.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

..... 83 Figure 53 Remote Policy ...

.....
.....
.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

..... 83 Figure 54 Authentication Method ...

.....
.....
.....

.....
.....
.....

.....
.....
.....

84 Figure 55 IPSec Algorithm

.....
.....
.....

.....
.....
.....

.....
.....
.....

... 84 Figure 56 VPN Summary ..

.....
.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

... 84 Figure 57 Pinging Jack's Local IP Address ..

.....
.....

.....
.....
.....

.....
.....
.....

.....
.....

85 Figure 58 SA Monitor

.....
.....

.....
.....
.....
.....

. 96 Figure 63 Network > Wireless LAN > General: Static WEP

.....
.....
.....
.....

..... 97 Figure 64 Network > Wireless LAN > General: WPA-PSK/WPA2-PSK ..

.....
.....
.....
.....

... 98 Figure 65 Network > Wireless LAN > General: WPA/WPA2 ..

.....
.....
.....
.....

... 100 Figure 66 Network > Wireless LAN > MAC Filter

.....
.....
.....
.....

.... 102 Figure 67 Network > Wireless LAN > Advanced .

.....
.....
.....
.....
.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....113 Figure 76 Port Forwarding .

.....
.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....114 Figure 77 Login Screen

.....
.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....115 Figure 78 Network > WAN > Internet Connection: Ethernet Encapsulation ...

.....
.....

.....
.....
.....

.....118 Figure 79 Network > WAN > Internet Connection: PPPoE Encapsulation

.....
.....
.....
.....

..... 120 Figure 80 Network > WAN > Internet Connection: PPTP Encapsulation ...

.....
.....
.....
.....

.....
.....
.. 123 Figure 81 Network > WAN > Advanced

.....
.....
.....
.....
.....
.....
.....
.....
.....

..... 125 20 NBG460N User's Guide List of Figures Figure 82 Any IP Example ...

.....
.....
.....
.....
.....
.....
.....
.....
.....

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.....
.....
.....

.....
.....
.....

... 129 Figure 83 Network > LAN > IP

.....
.....
.....
.....

.....
.....
.....
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.....
.....
.....
.....

.. 130 Figure 84 Network > LAN > IP Alias ...

.....
.....

.....
.....
.....
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.....

.....
.....

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.....
.....

... 143 Figure 94 Network > NAT > Advanced ..

.....
.....

.....
.....
.....

.....
.....
.....

.....
.....

.... 144 Figure 95 Dynamic DNS.

.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

.....
.....

... 148 Figure 96 Using IP Alias to Solve the Triangle Route Problem ..

.....

.....
.....
.....

.....
.....

... 155 Figure 97 Security > Firewall > General I ..

.....

.....
.....
.....

.....
.....
.....

.....
.....
.....
. 155 Figure 98 Security > Firewall > Services

.....
.....
.....

.....
.....
.....

.....
.....
.....

.... 156 Figure 99 Security > Firewall > Services > Adding a Rule

.....
.....
.....

.....
.....
.....

158 Figure 100 Security > Content Filter > Filter

.....
.....
.....

.....
.....
.....

.....
.....
.....

..... 162 Figure 101 Security > Content Filter > Schedule ..

.....
.....
.....

.....
.....
.....

.....
.....
.....

163 Figure 102 IPSec VPN: Overview

.....
.....
.....

.....

.....
.....
.....
.....
.....
.....

.... 165 Figure 103 VPN: IKE SA and IPSec SA

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

..... 166 Figure 104 Security > VPN > General ..

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

. 167 Figure 105 IPSec Fields Summary

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

..... 169 Figure 106 Security > VPN > General > Rule Setup: IKE (Basic) ...

.....
.....
.....
.....
.....
.....

... 169 Figure 107 Security > VPN > General > Rule Setup: IKE (Advanced)

.....
.....
.....
.....

.. 174 Figure 108 Security > VPN > General > Rule Setup: Manual ...

.....
.....
.....
.....
.....

.... 180 Figure 109 Security > VPN > SA Monitor .

.....
.....
.....
.....
.....

.. 183 Figure 110 VPN for Remote Management Example ...

.....
.....
.....
.....
.....
.....
.....

... 184 Figure 111 IKE SA: Main Negotiation Mode, Steps 1 - 2: IKE SA Proposal

.....
.....
.....

.... 185 Figure 112 IKE SA: Main Negotiation Mode, Steps 3 - 4: DH Key Exchange .

.....
.....
.....

... 185 Figure 113 IKE SA: Main Negotiation Mode, Steps 5 - 6: Authentication

.....
.....
.....
.....

.....
.....

... 196 Figure 119 Management > Static Route > IP Static Route: Static Route Setup

.....
.....
.....

..... 197 Figure 120 Subnet-based Bandwidth Management Example .

.....
.....
.....
.....
.....
.....

.. 200 Figure 121 Management > Bandwidth MGMT > General

.....
.....
.....
.....
.....

.. 202 Figure 122 Management > Bandwidth MGMT > Advanced ...

.....
.....
.....
.....
.....
.....

. 203 Figure 123 Bandwidth Management Rule Configuration: Pre-defined Service

.....
.....
.....

..... 205 Figure 124 Management > Bandwidth MGMT > Advanced: User-defined Service Rule Configuration 206 NBG460N User's Guide 21 List of Figures
Figure 125 Management > Bandwidth MGMT > Monitor ...

.....
.....
.....
.....
.....
.....

..... 207 Figure 126 Management > Remote MGMT > WWW

.....
.....
.....
.....
.....

.....

.....

.....

.... 210 *Figure 127 Management > Remote MGMT > Telnet .*

.....

.....

.....

.....

.....

.....

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.....

.....211 *Figure 128 Management > Remote MGMT > FTP*

.....

.....

.....

.....

.....

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... 212 *Figure 129 Management > Remote MGMT > DNS*

.....

.....

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.....

213 *Figure 130 Management > UPnP > General*

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.....

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.....

.....

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.....

..... 216 *Figure 131 Add/Remove Programs: Windows Setup: Communication ...*

.....

.....

.....

.....

.....

.....

..... 217 *Figure 132 Add/Remove Programs: Windows Setup: Communication: Components*

.....
.....
.....

. 218 Figure 133 Network Connections

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

..... 218 Figure 134 Windows Optional Networking Components Wizard

.....
.....
.....

.....
.....
.....
.....

.... 219 Figure 135 Networking Services

.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....

. 219 Figure 136 Network Connections

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

..... 220 Figure 137 Internet Connection Properties

.....

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

..... 221 Figure 138 Internet Connection Properties: Advanced Settings

.....
.....
.....
.....
.....
.....
.....

..... 222 Figure 139 Internet Connection Properties: Advanced Settings: Add

.....
.....
.....
.....
.....
.....

..... 222 Figure 140 System Tray Icon

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

.. 223 Figure 141 Internet Connection Status ...

.....
.....
.....
.....
.....
.....
.....

.... 223 Figure 142 Network Connections

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..... 224 *Figure 143 Network Connections: My Network Places* .

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. 225 *Figure 144 Network Connections: My Network Places: Properties: Example*

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..... 225 *Figure 145 Maintenance > System > General* .

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.... 229 *Figure 146 Maintenance > System > Time Setting*

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.. 230 *Figure 147 Maintenance > Logs > View Log ...*

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..... 233 Figure 148 Maintenance > Logs > Log Settings .

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. 235 Figure 149 Maintenance > Tools > Firmware

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..... 251 Figure 150 Upload Warning ...

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. 252 Figure 151 Network Temporarily Disconnected .



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252 Figure 152 Upload Error Message

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..... 252 Figure 153 Maintenance > Tools > Configuration ..

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... 253 Figure 154 Configuration Restore Successful ..

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.... 254 Figure 155 Temporarily Disconnected .

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.. 254 Figure 156 Configuration Restore Error

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..... 254 Figure 157 Maintenance > Tools > Restart ...

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..... 255 Figure 158 Maintenance > Tools > Wake On LAN ...

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255 Figure 159 Maintenance > Config Mode > General

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. 257 Figure 160 LAN and WAN IP Addresses in Router Mode

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..... 259 Figure 161 IP Address in AP Mode .

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. 260 Figure 162 Maintenance > Sys OP Mode > General

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..... 260 Figure 163 Maintenance > Sys Op Mode > General: Router

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..... 260 Figure 164 Maintenance > Sys Op Mode > General: AP .

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... 261 Figure 165 Language ..

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. 263 *Figure 166 Wall-mounting Example*

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... 277 *Figure 167 Masonry Plug and M4 Tap Screw*

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278 22 *NBG460N User's Guide List of Figures Figure 168 Pop-up Blocker*

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..... 279 *Figure 169 Internet Options: Privacy*

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..... 280 Figure 170 Internet Options: Privacy

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281 Figure 171 Pop-up Blocker Settings

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..... 281 Figure 172 Internet Options: Security

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..... 282 Figure 173 Security Settings - Java Scripting

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.. 283 Figure 174 Security Settings - Java

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.... 283 Figure 175 Java (Sun) .

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. 284 Figure 176 Network Number and Host ID

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... 286 Figure 177 Subnetting Example: Before Subnetting ..

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... 288 *Figure 178 Subnetting Example: After Subnetting*

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... 289 *Figure 179 WIndows 95/98/Me: Network: Configuration*

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... 294 *Figure 180 Windows 95/98/Me: TCP/IP Properties: IP Address*

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. 295 *Figure 181 Windows 95/98/Me: TCP/IP Properties: DNS Configuration*

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.. 296 *Figure 182 Windows XP: Start Menu ...*

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..... 297 Figure 183 Windows XP: Control Panel ...

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.. 297 Figure 184 Windows XP: Control Panel: Network Connections: Properties

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... 298 Figure 185 Windows XP: Local Area Connection Properties ..

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. 298 Figure 186 Windows XP: Internet Protocol (TCP/IP) Properties

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.... 299 Figure 187 Windows XP: Advanced TCP/IP Properties .

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..... 300 Figure 188 Windows XP: Internet Protocol (TCP/IP) Properties

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... 301 Figure 189 Macintosh OS 8/9: Apple Menu

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... 302 Figure 190 Macintosh OS 8/9: TCP/IP

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302 Figure 191 Macintosh OS X: Apple Menu

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.. 303 Figure 192 Macintosh OS X: Network

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304 Figure 193 Red Hat 9.0: KDE: Network Configuration: Devices

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..... 305 *Figure 194 Red Hat 9.0: KDE: Ethernet Device: General .*

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. 306 *Figure 195 Red Hat 9.0: KDE: Network Configuration: DNS ...*

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306 *Figure 196 Red Hat 9.0: KDE: Network Configuration: Activate*

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... 307 *Figure 197 Red Hat 9.0: Dynamic IP Address Setting in ifconfig-eth0 .*

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..... 307 *Figure 198 Red Hat 9.0: Static IP Address Setting in ifconfig-eth0 Figure 199 Red Hat 9.0: DNS Settings in resolv.conf*

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... 308 *Figure 200 Red Hat 9.0: Restart Ethernet Card .*

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..... 308 *Figure 201 Red Hat 9.0: Checking TCP/IP Properties ...*

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.... 308 *Figure 202 Peer-to-Peer Communication in an Ad-hoc Network .*

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. 309 *Figure 203 Basic Service Set*

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..... 310 *Figure 204 Infrastructure WLAN ...*

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.....311 Figure 205 RTS/CTS

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..... 312 Figure 206 WPA(2)-PSK Authentication ..

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... 318 NBG460N User's Guide 23 List of Figures 24 NBG460N User's Guide List of Tables List of Tables Table 1 Features Available in Router Mode vs. AP Mode

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... 32 Table 2 Front Panel LEDs ..

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. 33 Table 3 Status Screen Icon Key

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40 Table 4 Web Configurator Status Screen

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. 40 Table 5 Screens Summary

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..... 42 Table 6 Summary: DHCP Table ...

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. 45 *Table 7 Summary: Packet Statistics*

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..... 46 *Table 8 Summary: Wireless Association List ..*

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..... 47 *Table 9 Summary: Wireless Association List ...*

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..... 48 *Table 10 Wizard Step 1: System Information*

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..... 51 Table 11 Wizard Step 2: Wireless LAN

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... 52 Table 12 Wizard Step 2: Basic (WEP) Security

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..... 53 Table 13 Wizard Step 2: Extend (WPA-PSK or WPA2-PSK) Security ..

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.... 54 Table 14 Wizard Step 3: ISP Parameters .

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... 55 Table 15 Wizard Step 3: PPPoE Connection

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.. 56 Table 16 Wizard Step 3: PPTP Connection

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... 57 Table 17 Wizard Step 3: Your IP Address

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..... 58 Table 18 Private IP Address Ranges ...

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..... 58 Table 19 Wizard Step 3: WAN IP and DNS Server Addresses ..

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60 Table 20 Example of Network Properties for LAN Servers with Fixed IP Addresses

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..... 61 Table 21 Wizard Step 3: WAN MAC Address ..

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..... 61 Table 22 Wizard Step 4: Bandwidth Management

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..... 62 Table 23 Web Configurator Status Screen Table 25 Network > LAN > IP ...

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..... 67 Table 24 Screens Summary ..

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... 70 Table 26 Site-To-Site VPN Tunnel Settings ..

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.... 80 Table 27 Types of Encryption for Each Type of Authentication .

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91 Table 28 WMM QoS Priorities

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..... 94 Table 29 Network > Wireless LAN > General

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.... 95 Table 30 Wireless No Security

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..... 96 Table 31 Network > Wireless LAN > General: Static WEP

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... 97 Table 32 Network > Wireless LAN > General: WPA-PSK/WPA2-PSK

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... 99 Table 33 Network > Wireless LAN > General: WPA/WPA2

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..... 100 Table 34 Network > Wireless LAN > MAC Filter ..

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102 Table 35 Network > Wireless LAN > Advanced

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... 103 Table 36 Network > Wireless LAN > QoS ..

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104 Table 37 WPS

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..... 106 Table 38 WPS Station .

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. 107 NBG460N User's Guide 25 List of Tables Table 39 Scheduling

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..... 108 Table 40 Login Screen

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..... 109 Table 41 System Status screen

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.....111 Table 42 Port Forwarding

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.114 Table 43 Network > WAN > Internet Connection: Ethernet Encapsulation

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....119 Table 44 Network > WAN > Internet Connection: PPPoE Encapsulation

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... 121 Table 45 Network > WAN > Internet Connection: PPTP Encapsulation ..

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.... 123 Table 46 WAN > Advanced

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..... 125 Table 47 Network > LAN > IP ..

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... 130 Table 48 Network > LAN > IP Alias ..

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..... 131 Table 49 Network > LAN > Advanced .

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..... 132 Table 50 Network > DHCP > General ...

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133 Table 51 Network > DHCP > Advanced

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.... 134 Table 52 Network > DHCP > Client List .

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.... 136 Table 53 Network > NAT > General

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..... 139 Table 54 NAT Application

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. 140 Table 55 Network > NAT > Advanced

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..... 144 Table 56 Dynamic DNS .

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..... 148 Table 57 Security > Firewall > General ..

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.... 155 Table 58 Security > Firewall > Services .

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.... 156 Table 59 Security > Firewall > Services > Adding a Rule .

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..... 158 Table 60 Security > Content Filter > Filter ...

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..... 162 Table 61 Security > Content Filter > Schedule ..

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.. 163 Table 62 Security > VPN > General

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... 168 Table 63 SECURITY > VPN > Rule Setup: IKE (Basic)

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... 170 Table 64 Security > VPN > Rule Setup: IKE (Advanced) ..

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. 175 Table 65 Security > VPN > Rule Setup: Manual

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... 180 Table 66 Security > VPN > SA Monitor ..

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.... 184 Table 67 VPN Example: Matching ID Type and Content .

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..... 186 Table 68 VPN Example: Mismatching ID Type and Content ..

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. 187 Table 69 Management > Static Route > IP Static Route

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. 196 Table 70 Management > Static Route > IP Static Route: Static Route Setup

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.... 197 Table 71 Application and Subnet-based Bandwidth Management Example .

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..... 200 Table 72 Bandwidth Management Priorities ..

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..... 200 Table 73 Media Bandwidth Management Setup: Services

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.. 201 Table 74 Bandwidth Management Priority with Default Classes

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..... 202 Table 75 Management > Bandwidth MGMT > General .

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203 Table 76 Management > Bandwidth MGMT > Advanced

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.....211 Table 81 Management > Remote MGMT > FTP

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..... 212 26 NBG460N User's Guide List of Tables Table 82 Management > Remote MGMT > DNS ...

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... 213 Table 83 Management > UPnP > General ..

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.... 216 Table 84 Maintenance > System > General .

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.. 229 Table 85 Maintenance > System > Time Setting ...
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..... 231 Table 86 Maintenance > Logs > View Log ..

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..... 234 Table 87 Maintenance > Logs > Log Settings .

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.... 235 Table 88 System Maintenance Logs

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.... 237 Table 89 System Error Logs .

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... 239 Table 93 ICMP Logs .

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... 239 Table 94 CDR Logs ..

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... 240 Table 95 PPP Logs

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..... 240 Table 96 UPnP Logs .

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... 240 *Table 97 Content Filtering Logs*

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240 *Table 98 Attack Logs*

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... 241 *Table 99 IPSec Logs*

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..... 242 Table 100 IKE Logs ...

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.. 242 Table 101 PKI Logs

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..... 245 Table 102 802.1X Logs ..

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..... 246 Table 103 ACL Setting Notes ..

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..... 247 Table 104 ICMP Notes ..

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..... 247 Table 105 Syslog Logs .

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..... 248 Table 106 RFC-2408 ISAKMP Payload Types .

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... 249 Table 107 Maintenance > Tools > Firmware

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. 251 Table 108 Maintenance Restore Configuration

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.... 253 Table 109 Maintenance > Tools > Wake On LAN .

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.... 255 Table 110 Maintenance > Config Mode > General Table 112 Maintenance > Sys OP Mode > General

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..... 261 *Table 111 Advanced Configuration Options*

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.... 258 *Table 113 Hardware Features*

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... 273 *Table 114 Firmware Features*

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... 274 *Table 115 Feature Specifications* ..

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..... 275 Table 116 Standards Supported ..

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.... 276 Table 117 Subnet Mask - Identifying Network Number .

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..... 286 Table 118 Subnet Masks

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... 287 Table 119 Maximum Host Numbers

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... 290 Table 123 Subnet 3 ..

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..... 290 Table 124 Subnet 4 .

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..... 290 NBG460N User's Guide 27 List of Tables Table 125 Eight Subnets

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... 290 Table 126 24-bit Network Number Subnet Planning

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..... 291 Table 127 16-bit Network Number Subnet Planning .

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..... 291 Table 128 IEEE 802.11g

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.... 313 Table 129 Comparison of EAP Authentication Types

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..... 316 Table 130 Wireless Security Relational Matrix ..

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.. 319 Table 131 Examples of Services

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.. 321 28 NBG460N User's Guide PART I Introduction Getting to Know Your NBG460N (31) The WPS Button (35) Introducing the Web Configurator (37) Connection Wizard (49) AP Mode (65) Tutorials (73) 29 30 CHAPTER This chapter introduces the main features and applications of the NBG460N. 1 Getting to Know Your NBG460N 1.1 Overview The NBG460N acts as either an access point (AP) or a secure broadband router for all data passing between the Internet and your local network.

In both AP and Router Mode you can set up a wireless network with other IEEE 802.11b/g/n compatible devices. In Router Mode a number of services such as a firewall, IPSec VPN and content filtering are also available. You can use media bandwidth management to efficiently manage traffic on your network. Bandwidth management features allow you to prioritize time-sensitive or highly important applications such as Voice over the Internet (VoIP). The NBG460N also uses MIMO (Multiple-Input, Multiple-Output) antenna technology and Gigabit Ethernet ports to deliver high-speed wireless networking. 1.2 Router Mode Select Router Mode if you need to route traffic between your network and another network such as the Internet, and require important network services such as a firewall or bandwidth management. The following figure shows computers in a WLAN connecting to the NBG460N (A), which has a DSL connection to the Internet. The NBG460N is set to Router Mode and has router features such as a built-in firewall (B).

Figure 1 Secure Wireless Internet Access in Router Mode A B NBG460N User's Guide 31 Chapter 1 Getting to Know Your NBG460N 1.3 AP Mode Select AP Mode if you already have a router or gateway on your network which provides network services such as a firewall or bandwidth management. The following figure shows computers in a WLAN connecting to the NBG460N, which acts as an access point (A). The NBG460N allows the wireless computers to share the same Internet access as the other computers connected to the router (B) on the same network. Figure 2 Wireless Internet Access in AP Mode A B 1.4 Router Features vs. AP Features The following table shows which features are available in Router or AP Mode. Table 1 Features Available in Router Mode vs. AP Mode FEATURE ROUTER MODE AP MODE NO YES DHCP This allows individual clients to obtain IP addresses at startup from a DHCP server. Firewall This establishes a network security barrier, protecting your network from attacks and controlling access between your network and the Internet. Bandwidth Management This allows you to allocate network bandwidth to specific applications and or subnets. Any IP This allows a computer to access the NBG460N when the IP addresses of the computer and the NBG460N are not in the same subnet.) VPN A virtual private network (VPN) provides secure communications between sites without the expense of leased site-to-site lines. Wireless This allows two or more devices to communicate without wires, based on IEEE 802.11 wireless standards.

YES NO YES NO YES NO YES NO YES YES 32 NBG460N User's Guide Chapter 1 Getting to Know Your NBG460N 1.5 Ways to Manage the NBG460N Use any of the following methods to manage the NBG460N. · Web Configurator. This is recommended for everyday management of the NBG460N using a (supported) web browser. · Command Line Interface.

Line commands are mostly used for troubleshooting by service engineers. · FTP. Use File Transfer Protocol for firmware upgrades and configuration backup/restore. 1.6 Good Habits for Managing the NBG460N Do the following things regularly to make the NBG460N more secure and to manage the NBG460N more effectively. · Change the password. Use a password that's not easy to guess and that consists of different types of characters, such as numbers and letters. · Write down the password and put it in a safe place. · Back up the configuration (and make sure you know how to restore it). Restoring an earlier working configuration may be useful if the device becomes unstable or even crashes.

If you forget your password, you will have to reset the NBG460N to its factory default settings. If you backed up an earlier configuration file, you would not have to totally re-configure the NBG460N. You could simply restore your last configuration. 1.7 LEDs Figure 3 Front Panel The following table describes the LEDs. Table 2 Front Panel LEDs LED POWER COLOR Green STATUS On Off DESCRIPTION The NBG460N is receiving power and functioning properly. The NBG460N is not receiving power. NBG460N User's Guide 33 Chapter 1 Getting to Know Your NBG460N Table 2 Front Panel LEDs (continued) LED LAN 1-4 COLOR Green STATUS On Blinking Amber On Blinking Off WAN Green On Blinking Amber On Blinking Off WLAN Green On Blinking Off WPS Green On DESCRIPTION The NBG460N has a successful 10/100MB Ethernet connection.



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The NBG460N is sending/receiving data. The NBG460N has a successful 1000MB Ethernet connection.

The NBG460N is sending/receiving data. The LAN is not connected. The NBG460N has a successful 10/100MB WAN connection. The NBG460N is sending/receiving data. The NBG460N has a successful 1000MB Ethernet connection.

The NBG460N is sending/receiving data. The WAN connection is not ready, or has failed. The NBG460N is ready, but is not sending/receiving data through the wireless LAN. The NBG460N is sending/receiving data through the wireless LAN. The wireless LAN is not ready or has failed.

WPS (WiFi Protected Setup) is configured on your device. The NBG460N is attempting to connect with another wireless devices using WPS. WPS is disabled on your device. Blinking Off 34 NBG460N User's Guide CHAPTER 2.1 Overview 2 The WPS Button Your NBG460N supports WiFi Protected Setup (WPS), which is an easy way to set up a secure wireless network. WPS is an industry standard specification, defined by the WiFi Alliance. WPS allows you to quickly set up a wireless network with strong security, without having to configure security settings manually. Each WPS connection works between two devices. Both devices must support WPS (check each device's documentation to make sure). Depending on the devices you have, you can either press a button (on the device itself, or in its configuration utility) or enter a PIN (a unique Personal Identification Number that allows one device to authenticate the other) in each of the two devices.

When WPS is activated on a device, it has two minutes to find another device that also has WPS activated. Then, the two devices connect and set up a secure network by themselves. For more information on using WPS, see Section 6.1.2 on page 73. NBG460N User's Guide 35 Chapter 2 The WPS Button 36 NBG460N User's Guide CHAPTER 3 Introducing the Web Configurator This chapter describes how to access the NBG460N web configurator and provides an overview of its screens. 3.1 Web Configurator Overview The web configurator is an HTML-based management interface that allows easy setup and management of the NBG460N via Internet browser. Use Internet Explorer 6.0 and later or Netscape Navigator 7.

0 and later versions or Safari 2.0 or later versions. The recommended screen resolution is 1024 by 768 pixels. In order to use the web configurator you need to allow: · Web browser pop-up windows from your device. Web pop-up blocking is enabled by default in Windows XP SP (Service Pack) 2.

· JavaScripts (enabled by default). · Java permissions (enabled by default). Refer to the Troubleshooting chapter to see how to make sure these functions are allowed in Internet Explorer. 3.2 Accessing the Web Configurator 1 Make sure your NBG460N hardware is properly connected and prepare your computer or computer network to connect to the NBG460N (refer to the Quick Start Guide).

2 Launch your web browser. 3 Type "http://192.168.1.1" as the website address. Your computer must be in the same subnet in order to access this website address. · In Router Mode enable the DHCP Server. The NBG460N assigns your computer an IP address on the same subnet. · In AP Mode the NBG460N does not assign an IP address to your computer, so you should check it's in the same subnet. See Section 5.

5 on page 71 for more information. NBG460N User's Guide 37 Chapter 3 Introducing the Web Configurator 4 Type "1234" (default) as the password and click Login. In some versions, the default password appears automatically - if this is the case, click Login. 5 You should see a screen asking you to change your password (highly recommended) as shown next. Type a new password (and retype it to confirm) and click Apply or click Ignore. Figure 4 Change Password Screen The management session automatically times out when the time period set in the Administrator Inactivity Timer field expires (default five minutes). Simply log back into the NBG460N if this happens. 6 Select the setup mode you want to use. · Click Go to Wizard Setup to use the Configuration Wizard for basic Internet and Wireless setup. · Click Go to Basic Setup if you want to view and configure basic settings that are not part of the wizard setup. Not all Web Configurator screens are available in this mode. See Chapter 23 on page 257 for more information. · Click Go to Advanced Setup to view and configure all the NBG460N's settings. · Select a language to go to the basic web configurator in that language. To change to the advanced configurator see Chapter 23 on page 257.

38 NBG460N User's Guide Chapter 3 Introducing the Web Configurator Figure 5 Selecting the setup mode 3.3 Resetting the NBG460N If you forget your password or IP address, or you cannot access the web configurator, you will need to use the RESET button at the back of the NBG460N to reload the factory-default configuration file. This means that you will lose all configurations that you had previously saved, the password will be reset to "1234" and the IP address will be reset to "192.168.1.

1". 3.3.1 Procedure to Use the Reset Button 1 Make sure the power LED is on. 2 Press the RESET button for five seconds or until the power LED begins to blink and then release it. When the power LED begins to blink, the defaults have been restored and the NBG460N restarts. 3.4 Navigating the Web Configurator The following summarizes how to navigate the web configurator from the Status screen in Router Mode and AP Mode. 3.5 The Status Screen in Router Mode Click on Status.

The screen below shows the status screen in Router Mode. (For information on the status screen in AP Mode see Chapter 5 on page 66.) NBG460N User's Guide 39 Chapter 3 Introducing the Web Configurator Figure 6 Web Configurator Status Screen The following table describes the icons shown in the Status screen. Table 3 Status Screen Icon Key ICON DESCRIPTION Click this icon to open the setup wizard. Click this icon to view copyright and a link for related product information. Click this icon at any time to exit the web configurator. Select a number of seconds or None from the drop-down list box to refresh all screen statistics automatically at the end of every time interval or to not refresh the screen statistics. Click this button to refresh the status screen statistics.

The following table describes the labels shown in the Status screen. Table 4 Web Configurator Status Screen LABEL Device Information System Name Firmware Version This is the System Name you enter in the Maintenance > System > General screen.

It is for identification purposes. This is the firmware version and the date created. DESCRIPTION 40 NBG460N User's Guide Chapter 3 Introducing the Web Configurator Table 4 Web Configurator Status Screen (continued) LABEL WAN Information - MAC Address - IP Address - IP Subnet Mask - DHCP LAN Information - MAC Address - IP Address - IP Subnet Mask - DHCP WLAN Information - MAC Address - Status - Name (SSID) - Channel - Operating Channel - Security Mode - 802.



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11 Mode - WPS This shows the wireless adapter MAC Address of your device. This shows the current status of the Wireless LAN - On, Off or Off by scheduler. This shows a descriptive name used to identify the NBG460N in the wireless LAN. This shows the channel number which you select manually. This shows the channel number which the NBG460N is currently using over the wireless LAN. This shows the level of wireless security the NBG460N is using. This shows the wireless standard.

This displays Configured when the WPS has been set up. This displays Unconfigured if the WPS has not been set up. Click the status to display Network > Wireless LAN > WPS screen. This is the total time the NBG460N has been on. This field displays your NBG460N's present date and time. This displays what percentage of the NBG460N's processing ability is currently used. When this percentage is close to 100%, the NBG460N is running at full load, and the throughput is not going to improve anymore. If you want some applications to have more throughput, you should turn off other applications (for example, using bandwidth management. This shows what percentage of the heap memory the NBG460N is using. Heap memory refers to the memory that is not used by ZyNOS (ZyXEL Network Operating System) and is thus available for running processes like NAT and the firewall.

This shows whether the firewall is active or not. This shows whether UPnP is active or not. This shows whether the advanced screens of each feature are turned on (Advanced) or not (Basic). This displays the NBG460N port types. The port types are: WAN, LAN and WLAN. This shows the LAN Ethernet adapter MAC Address of your device. This shows the LAN port's IP address. This shows the LAN port's subnet mask. This shows the LAN port's DHCP role - Server or None. This shows the WAN Ethernet adapter MAC Address of your device.

This shows the WAN port's IP address. This shows the WAN port's subnet mask. This shows the WAN port's DHCP role - Client or None. DESCRIPTION System Status System Up Time Current Date/Time System Resource - CPU Usage - Memory Usage System Setting - Firewall - UPnP - Configuration Mode Interface Status Interface - Bandwidth Management This shows whether the bandwidth management is active or not. NBG460N User's Guide 41 Chapter 3 Introducing the Web Configurator Table 4 Web Configurator Status Screen (continued) LABEL Status DESCRIPTION For the LAN and WAN ports, this field displays Down (line is down) or Up (line is up or connected).

For the WLAN, it displays Up when the WLAN is enabled or Down when the WLAN is disabled. For the LAN ports, this displays the port speed and duplex setting or N/A when the line is disconnected. For the WAN port, it displays the port speed and duplex setting if you're using Ethernet encapsulation and Idle (line (ppp) idle), Dial (starting to trigger a call) and Drop (dropping a call) if you're using PPPoE or PPTP encapsulation. This field displays N/A when the line is disconnected. For the WLAN, it displays the maximum transmission rate when the WLAN is enabled and N/A when the WLAN is disabled. Use this screen to view details of IP addresses assigned to devices not in the same subnet as the NBG460N. Use this screen to view the NBG460N's bandwidth usage and allotments. Use this screen to view current DHCP client information. Use this screen to view port status and packet specific statistics. Use this screen to view the active VPN connections. Use this screen to view the wireless stations that are currently associated to the NBG460N. Rate Summary Any IP Table BW MGMT Monitor DHCP Table Packet Statistics VPN Monitor WLAN Station Status 3.5.1 Navigation Panel Use the sub-menus on the navigation panel to configure NBG460N features. The following table describes the sub-menus.

Table 5 Screens Summary LINK Status TAB FUNCTION This screen shows the NBG460N's general device, system and interface status information. Use this screen to access the wizard, and summary statistics tables. General MAC Filter Use this screen to configure wireless LAN. Use the MAC filter screen to configure the NBG460N to block access to devices or block the devices from accessing the NBG460N. This screen allows you to configure advanced wireless settings. Use this screen to configure Wi-Fi Multimedia Quality of Service (WMM QoS). WMM QoS allows you to prioritize wireless traffic according to the delivery requirements of individual services. Use this screen to configure WPS. Use this screen to add a wireless station using WPS. Use this screen to schedule the times the Wireless LAN is enabled.

This screen allows you to configure ISP parameters, WAN IP address assignment, DNS servers and the WAN MAC address. Use this screen to configure other advanced properties. Network Wireless LAN Advanced QoS WPS WPS Station Scheduling WAN Internet Connection Advanced 42 NBG460N User's Guide Chapter 3 Introducing the Web Configurator Table 5 Screens Summary LINK LAN TAB IP IP Alias Advanced DHCP Server General Advanced FUNCTION Use this screen to configure LAN IP address and subnet mask. Use this screen to partition your LAN interface into subnets. Use this screen to enable other advanced properties.

Use this screen to enable the NBG460N's DHCP server. Use this screen to assign IP addresses to specific individual computers based on their MAC addresses and to have DNS servers assigned by the DHCP server. Use this screen to view current DHCP client information and to always assign an IP address to a MAC address (and host name). Use this screen to enable NAT. Use this screen to configure servers behind the NBG460N.

Use this screen to change your NBG460N's port triggering settings. Use this screen to set up dynamic DNS. Use this screen to activate/deactivate the firewall. This screen shows a summary of the firewall rules, and allows you to edit/add a firewall rule. Use this screen to block certain web features and sites containing certain keywords in the URL. Use this screen to set the days and times for the NBG460N to perform content filtering. Use this screen to configure VPN connections and view the rule summary. Use this screen to display and manage active VPN connections. Use this screen to configure IP static routes. Use this screen to enable bandwidth management.

Use this screen to set the upstream bandwidth and edit a bandwidth management rule. Use this screen to view the NBG460N's bandwidth usage and allotments. Use this screen to configure through which interface(s) and from which IP address(es) users can use HTTP to manage the NBG460N. Use this screen to configure through which interface(s) and from which IP address(es) users can use Telnet to manage the NBG460N. Use this screen to configure through which interface(s) and from which IP address(es) users can use FTP to access the NBG460N. Use this screen to configure through which interface(s) and from which IP address(es) users can send DNS queries to the NBG460N.



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Use this screen to enable UPnP on the NBG460N. Client List NAT General Application Advanced DDNS Security Firewall General Services Content Filter Filter Schedule VPN General SA Monitor Management Static Route Bandwidth MGMT IP Static Route General Advanced Monitor Remote MGMT WWW General Telnet FTP DNS UPnP Maintenance General NBG460N User's Guide 43 Chapter 3 Introducing the Web Configurator Table 5 Screens Summary LINK System TAB General Time Setting Logs View Log Log Settings Tools Firmware Configuration Restart Wake On LAN Config Mode Sys OP Mode Language General General FUNCTION Use this screen to view and change administrative settings such as system and domain names, password and inactivity timer. Use this screen to change your NBG460N's time and date. Use this screen to view the logs for the categories that you selected.

Use this screen to change your NBG460N's log settings. Use this screen to upload firmware to your NBG460N. Use this screen to backup and restore the configuration or reset the factory defaults to your NBG460N. This screen allows you to reboot the NBG460N without turning the power off. Use this screen to remotely turn on a device on the network.

This screen allows you to display or hide the advanced screens or features. This screen allows you to select whether your device acts as a Router or a Access Point. This screen allows you to select the language you prefer. 3.5.

2 Summary: Any IP Table This screen displays the IP address of each computer that is using the NBG460N via the any IP feature. Any IP allows computers to access the Internet through the NBG460N without changing their network settings when NAT is enabled. To access this screen, open the Status screen (see Section 3.5 on page 39), and click (Details...) next to Any IP Table. Figure 7 Any IP Table 3.5.3 Summary: Bandwidth Management Monitor Select the BW MGMT Monitor (Details).

..) hyperlink in Status screen. View the bandwidth usage of the WAN configured bandwidth rules. This is also shown as bandwidth usage over the bandwidth budget for each rule. The gray section of the bar represents the percentage of unused bandwidth and the blue color represents the percentage of bandwidth in use. 44 NBG460N User's Guide Chapter 3 Introducing the Web Configurator Figure 8 Summary: BW MGMT Monitor 3.5.4 Summary: DHCP Table DHCP (Dynamic Host Configuration Protocol, RFC 2131 and RFC 2132) allows individual clients to obtain TCP/IP configuration at start-up from a server. You can configure the NBG460N's LAN as a DHCP server or disable it.

When configured as a server, the NBG460N provides the TCP/IP configuration for the clients. If DHCP service is disabled, you must have another DHCP server on that network, or else the computer must be manually configured. Click the DHCP Table (Details...

) hyperlink in the Status screen. Read-only information here relates to your DHCP status. The DHCP table shows current DHCP client information (including IP Address, Host Name and MAC Address) of all network clients using the NBG460N's DHCP server. Figure 9 Summary: DHCP Table The following table describes the labels in this screen. Table 6 Summary: DHCP Table LABEL # IP Address Host Name MAC Address DESCRIPTION This is the index number of the host computer.

This field displays the IP address relative to the # field listed above. This field displays the computer host name. This field shows the MAC address of the computer with the name in the Host Name field. Every Ethernet device has a unique MAC (Media Access Control) address which uniquely identifies a device.

@@Click Refresh to renew the screen. Refresh NBG460N User's Guide 45 Chapter 3 Introducing the Web Configurator 3.5.5 Summary: Packet Statistics Click the Packet Statistics (Details...

) hyperlink in the Status screen. Read-only information here includes port status, packet specific statistics and the "system up time". The Poll Interval(s) field is configurable and is used for refreshing the screen. Figure 10 Summary: Packet Statistics The following table describes the labels in this screen. Table 7 Summary: Packet Statistics LABEL Port Status DESCRIPTION This is the NBG460N's port type. For the LAN ports, this displays the port speed and duplex setting or Down when the line is disconnected. For the WAN port, it displays the port speed and duplex setting if you're using Ethernet encapsulation and Idle (line (ppp) idle), Dial (starting to trigger a call) and Drop (dropping a call) if you're using PPPoE or PPTP encapsulation. This field displays Down when the line is disconnected. For the WLAN, it displays the maximum transmission rate when the WLAN is enabled and Down when the WLAN is disabled. This is the number of transmitted packets on this port.

This is the number of received packets on this port. This is the number of collisions on this port. This displays the transmission speed in bytes per second on this port. This displays the reception speed in bytes per second on this port. This is the total amount of time the line has been up.

This is the total time the NBG460N has been on. Enter the time interval for refreshing statistics in this field. Click this button to apply the new poll interval you entered in the Poll Interval(s) field. Click Stop to stop refreshing statistics. TxPkts RxPkts Collisions Tx B/s Rx B/s Up Time System Up Time Poll Interval(s) Set Interval Stop 46 NBG460N User's Guide Chapter 3 Introducing the Web Configurator 3.

5.6 Summary: VPN Monitor Click the VPN Monitor (Details...) hyperlink in the Status screen. This screen displays read-only information about the active VPN connections. Click the Refresh button to update the screen. A Security Association (SA) is the group of security settings related to a specific VPN tunnel.

Figure 11 Summary: VPN Monitor The following table describes the labels in this screen. Table 8 Summary: Wireless Association List LABEL # Name Encapsulation IPSec Algorithm DESCRIPTION This is the security association index number.

This field displays the identification name for this VPN tunnel. This field displays Tunnel or Transport mode. This field displays the security protocols used for an SA. Both AH and ESP increase NBG460N processing requirements and communications latency (delay). Click this button to update the screen's statistics immediately. Refresh 3.5.7 Summary: Wireless Station Status Click the WLAN Station Status (Details...

) hyperlink in the Status screen. View the wireless stations that are currently associated to the NBG460N in the Association List. Association means that a wireless client (for example, your network or computer with a wireless network card) has connected successfully to the AP (or wireless router) using the same SSID, channel and security settings. Figure 12 Summary: Wireless Association List NBG460N User's Guide 47 Chapter 3 Introducing the Web Configurator

The following table describes the labels in this screen.



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Table 9 Summary: Wireless Association List LABEL # MAC Address Association Time Refresh DESCRIPTION This is the index number of an associated wireless station.

This field displays the MAC address of an associated wireless station. This field displays the time a wireless station first associated with the NBG460N's WLAN network. Click Refresh to reload the list. 48 NBG460N User's Guide CHAPTER 4.1 Wizard Setup 4 Connection Wizard This chapter provides information on the wizard setup screens in the web configurator.

The web configurator's wizard setup helps you configure your device to access the Internet. Refer to your ISP (Internet Service Provider) checklist in the Quick Start Guide to know what to enter in each field. Leave a field blank if you don't have that information. 1 After you access the NBG460N web configurator, click the Go to Wizard setup hyperlink. You can click the Go to Basic setup or Go to Advanced setup hyperlink to skip this wizard setup and configure basic or advanced features accordingly. Figure 13 Select Wizard or Advanced Mode 2 Choose a language by clicking on the language's button. The screen will update. Click the Next button to proceed to the next screen. NBG460N User's Guide 49 Chapter 4 Connection Wizard Figure 14 Select a Language 3 Read the on-screen information and click Next. Figure 15 Welcome to the Connection Wizard 4.

2 Connection Wizard: STEP 1: System Information System Information contains administrative and system-related information. 4.2.1 System Name System Name is for identification purposes. However, because some ISPs check this name you should enter your computer's "Computer Name". · In Windows 95/98 click Start, Settings, Control Panel, Network. Click the Identification tab, note the entry for the Computer Name field and enter it as the System Name. · In Windows 2000, click Start, Settings and Control Panel and then double-click System. Click the Network Identification tab and then the Properties button. Note the entry for the Computer name field and enter it as the System Name.

· In Windows XP, click Start, My Computer, View system information and then click the Computer Name tab. Note the entry in the Full computer name field and enter it as the NBG460N System Name. 50 NBG460N User's Guide Chapter 4 Connection Wizard 4.2.2 Domain Name The Domain Name entry is what is propagated to the DHCP clients on the LAN.

If you leave this blank, the domain name obtained by DHCP from the ISP is used. While you must enter the host name (System Name) on each individual computer, the domain name can be assigned from the NBG460N via DHCP. Click Next to configure the NBG460N for Internet access. Figure 16 Wizard Step

1: System Information The following table describes the labels in this screen. Table 10 Wizard Step 1: System Information LABEL System Name DESCRIPTION System Name is a unique name to identify the NBG460N in an Ethernet network.

Enter a descriptive name. This name can be up to 30 alphanumeric characters long. Spaces are not allowed, but dashes "-" and underscores "_" are accepted. Type the domain name (if you know it) here. If you leave this field blank, the ISP may assign a domain name via DHCP. The domain name entered by you is given priority over the ISP assigned domain name. Click Back to display the previous screen. Click Next to proceed to the next screen. Click Exit to close the wizard screen without saving. Domain Name Back Next Exit 4.

3 Connection Wizard: STEP 2: Wireless LAN Set up your wireless LAN using the following screen. NBG460N User's Guide 51 Chapter 4 Connection Wizard Figure 17 Wizard Step 2: Wireless LAN The following table describes the labels in this screen. Table 11 Wizard Step 2: Wireless LAN LABEL Name (SSID) DESCRIPTION Enter a descriptive name (up to 32 printable 7-bit ASCII characters) for the wireless LAN. If you change this field on the NBG460N, make sure all wireless stations use the same SSID in order to access the network. Select a Security level from the drop-down list box. Choose Auto (WPA2-PSK) to have the NBG460N generate a pre-shared key automatically. After you click Next a screen pops up displaying the generated preshared key. Write down the key for use later when connecting other wireless devices to your network. Click OK to continue. Choose None to have no wireless LAN security configured. If you do not enable any wireless security on your NBG460N, your network is accessible to any wireless networking device that is within range. If you choose this option, skip directly to Section 4.4 on page 54. Choose Basic (WEP) security if you want to configure WEP Encryption parameters. If you choose this option, go directly to Section 4.

3.1 on page 53. This option is only available if WPS is not enabled. Choose Extend (WPA-PSK or WPA2-PSK) security to configure a Pre-Shared Key. Choose this option only if your wireless clients support WPA-PSK or WPA2-PSK respectively.

If you choose this option, skip directly to Section 4.3.2 on page 54. The range of radio frequencies used by IEEE 802.11b/g/n wireless devices is called a channel. The device will automatically select the channel with the least interference. Click Back to display the previous screen. Click Next to proceed to the next screen. Click Exit to close the wizard screen without saving. Security Channel Selection Back Next Exit The wireless stations and NBG460N must use the same SSID, channel ID and WEP encryption key (if WEP is enabled), WPA-PSK (if WPA-PSK is enabled) or WPA2-PSK (if WPA2-PSK is enabled) for wireless communication.

52 NBG460N User's Guide Chapter 4 Connection Wizard 4.3.1 Basic (WEP) Security Choose Basic (WEP) to setup WEP Encryption parameters. Figure 18 Wizard Step 2: Basic (WEP) Security The following table describes the labels in this screen. Table 12 Wizard Step 2: Basic (WEP) Security LABEL Passphrase WEP Encryption DESCRIPTION Type a Passphrase (up to 32 printable characters) and click Generate. The NBG460N automatically generates a WEP key. Select 64-bit WEP or 128-bit WEP to allow data encryption. ASCII Select this option in order to enter ASCII characters as the WEP keys. HEX

Select this option to enter hexadecimal characters as the WEP keys. The preceding "0x" is entered automatically.

Key 1 to Key 4 The WEP keys are used to encrypt data. Both the NBG460N and the wireless stations must use the same WEP key for data transmission. If you chose 64-bit WEP, then enter any 5 ASCII characters or 10 hexadecimal characters ("0-9", "A-F"). If you chose 128-bit WEP, then enter 13 ASCII characters or 26 hexadecimal characters ("0-9", "A-F"). You must configure at least one key, only one key can be activated at any one time.

The default key is key 1. Click Back to display the previous screen. Back NBG460N User's Guide 53 Chapter 4 Connection Wizard Table 12 Wizard Step 2: Basic (WEP) Security LABEL Next Exit DESCRIPTION Click Next to proceed to the next screen.



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