
Table of Contents

Section 1 --.....	Introduction	1-1
NETNAT FEATURES	1-1	
PLANNING YOUR INSTALLATION	1-1	
IP ADDRESSES.....	1-2	
NETWORK ADDRESSES.....	1-3	
NETMASK REPRESENTATION	1-4	
TABLES OF NETMASKS.....	1-5	
<i>Netmasks for Large Sub-Networks</i>	1-5	
<i>Netmasks for Smaller Sub-Networks</i>	1-5	
IP ROUTING	1-6	
PACKING LIST.....	1-7	
CONTACTING CUSTOMER SUPPORT	1-8	
Section 2 --.....	NetNAT Hardware	2-1
SETTING UP THE PC.....	2-1	
<i>PC Requirements</i>	2-1	
<i>NetNAT Hardware Components</i>	2-1	
INSTALLING THE NETNAT HARDWARE.....	2-2	
<i>Resolving Hardware Conflicts</i>	2-2	
<i>Installing the Ethernet Cards</i>	2-2	
<i>Finishing Up</i>	2-3	
Section 3 --.....	NetNAT Software	3-1
NETNAT INSTALLATION.....	3-1	
<i>Running the Install Program</i>	3-1	
<i>Setting NetNAT Parameters</i>	3-1	
User Information	3-2	
Public Internet Interface Parameters	3-3	
Private Intranet Interface Parameters	3-3	
Serial Number and Authentication Key Parameters.....	3-4	
Serial Number and Authentication Key Characteristics	3-4	
Section 4 --.....	NetNAT Operations	4-1
STARTING AND STOPPING NETNAT	4-1	
<i>Starting the NetNAT</i>	4-1	
<i>Stopping the NetNAT</i>	4-1	
LIMITATIONS OF SHAREWARE MODE	4-1	
CHANGING THE SETUP PARAMETERS	4-2	
CHANGING THE ADMINISTRATIVE PASSWORD	4-2	
USING THE WEB SERVER	4-2	
<i>Viewing the Online Documentation</i>	4-2	
CONSOLE OPERATIONS.....	4-3	
<i>Multiple Console Windows</i>	4-3	
<i>F8 – Rotate Forward Through Console Windows</i>	4-3	
<i>F7 – Rotate Backward Through Console Windows</i>	4-3	
<i>F10 – Shortcut to Console Command Window</i>	4-3	
<i>F6 – Enable/Disable Window Scrolling</i>	4-3	
<i>Alt-Fx – Direct Switch to a Specific Window</i>	4-3	
COMMAND ABBREVIATION.....	4-3	
CONFIGURING A NEW INTERFACE	4-4	
VIEWING THE ATTACHED INTERFACES.....	4-4	
SETTING A ROUTE TO ANOTHER IP NETWORK	4-5	
VIEWING THE ROUTING TABLE	4-6	
CONTROLLING WHICH USERS GET INTERNET ACCESS	4-7	
<i>An Example</i>	4-7	
ENABLING INTERNAL SERVICES FOR EXTERNAL USE	4-8	

Setting Fixed Service Mapping	4-8
Setting Local Service Mapping	4-8
Setting Port Service Mapping	4-9
Setting Pool Service Mapping	4-10
Setting Subnet Service Mapping	4-11
Subnet Mapping Mode 0	4-11
Subnet Mapping Mode 1	4-11
Subnet Mapping Mode 2	4-11
Subnet Mapping Mode 3	4-11
VIRTUAL PRIVATE NETWORKS	4-12
Security	4-12
PPTP	4-12
Tunneling via IP Encapsulation	4-12
Tunneling via Minimal IP Encapsulation	4-12
Tunneling via IPSEC	4-13
National Security Issues	4-13
USING PPTP THROUGH A NETNAT	4-14
The PPTP Mechanism	4-14
Client Behind NetNAT to Server on the Outside	4-14
Client on the Outside to Server on the Inside	4-14
Monitoring PPTP Sessions	4-14
Section 5 --	NetNAT Directories and Files
	5-1
DIRECTORIES	5-1
The SAFE Directory	5-1
The NetNAT Directory	5-2
Section 6 --	NetNAT Commands
	6-1
Command Description	6-1
Command Abbreviation	6-1
GLOBAL COMMANDS	6-2
INTERFACE COMMANDS	6-2
Interface Naming Conventions	6-2
SERVICE MAPPING COMMANDS	6-3
ROUTE COMMANDS	6-3
SYSLOG SERVICE COMMANDS	6-3
ACCESS	6-4
ACCESS PERMIT	6-6
ACCESS DENY	6-7
ACCESS FTP	6-8
ACCESS DROP	6-9
ACCESS RST	6-10
ARP	6-11
ARP ADD	6-13
ARP DROP	6-14
ARP FLUSH	6-15
ARP PUBLISH	6-16
ATTACH PACKET	6-17
ATTACH ALIAS	6-18
ATTACH VLAN	6-19
ATTACH ASY	6-20
AUTH	6-21
CD	6-22
DELETE	6-23
DHCP	6-24
DHCP ... ENABLE	6-26
DHCP ... DISABLE	6-27
DHCP ... RELEASE	6-28
DHCP ... RENEW	6-29
DIR	6-30
DISCARD	6-31
DOMAIN	6-32
DOMAIN ADDSERVER	6-33

DOMAIN DROPSERVER	6-34
DOMAIN LIST	6-35
ECHO	6-36
EXIT	6-37
GAMING.....	6-39
HOP	6-40
HOP CHECK.....	6-41
HOSTNAME	6-42
ICMP	6-43
IFCONFIG	6-44
IFCONFIG -- IPADDRESS	6-47
IFCONFIG ... NETMASK	6-49
IFCONFIG ... PRIVATE.....	6-50
IFCONFIG ... TRACELIMIT.....	6-51
IFCONFIG ... VLAN.....	6-52
IGMP	6-53
IGMP FORWARD	6-54
IGMP TRACE	6-55
IP	6-56
MEMORY	6-57
MEMORY FREELIST	6-58
MEMORY SIZES	6-59
MEMORY STATUS	6-60
MKDIR.....	6-62
MORE	6-63
PAGE.....	6-64
PING.....	6-65
PPTP	6-66
PRIVATE	6-67
PRIVATE IDLE	6-69
PRIVATE IDLE SERVICE	6-70
PS	6-71
PWD	6-73
RENAME.....	6-74
REPEAT.....	6-75
ROUTE	6-76
ROUTE ADD DEFAULT	6-78
ROUTE ADD	6-79
ROUTE ADDPRIVATE	6-80
ROUTE DROP	6-81
ROUTE FLUSH	6-82
ROUTE LOOKUP.....	6-83
ROUTE TUNNEL	6-84
ROUTE TUNNEL ... I	6-85
ROUTE TUNNEL ... M.....	6-86
ROUTE TUNNEL ... E	6-87
ROUTE TUNNEL ... A	6-88
SCROLLBACK.....	6-89
SECURE	6-90
SECURE ADD	6-92
SECURE GENERATE.....	6-93
SECURE STATUS.....	6-94
SERVICE MAPPING	6-95
SERVICE ... DEFAULT.....	6-96
SERVICE ... FIXED.....	6-98
SERVICE ... LOCAL.....	6-100
SERVICE ... MUX	6-101
SERVICE ... POOL.....	6-103
SERVICE ... PORT	6-104
SERVICE ... SUBNET	6-106
SERVICE ... SUBNET MODE 0.....	6-107
SERVICE ... SUBNET MODE 1	6-108

SERVICE ... SUBNET MODE 2	6-109
SERVICE ... SUBNET MODE 3	6-110
SERVICE ... SUBNET MODE 3 T	6-111
SERVICE ... SUBNET MODE 3 F	6-112
SERVICE ... SUBNET MODE 3 R	6-113
SERVICE ... VOLUME	6-114
SOURCE(B)	6-115
SYSLOG	6-116
SYSLOG FACILITY	6-117
SYSLOG PRIORITY	6-118
SYSLOG REJECT	6-119
TCP	6-120
TRACE	6-121
UDP	6-122
USERS	6-123
VERSION	6-124
VIEW	6-125
WATCHDOG	6-126
WWW	6-127

Section 7 --..... Syslog Event and Volume Logs

7-1

MAPPING EVENT	7-1
DEFAULT MAPPING EVENT	7-2
ACCESS DENIED MAPPING EVENT	7-3
REJECT MAPPING EVENT	7-4
SERVICE MAPPING STATISTICS	7-5
NAT UP MESSAGE	7-6