

Juniper Networks NetScreen-500



The NetScreen-500 is a purpose-built, security system designed to provide a flexible, high performance solution for medium and large enterprise central sites and service providers. The NetScreen-500 security system integrates firewall, DoS, VPN and traffic management functionality in a low-profile, modular chassis. It provides high levels of total throughput for firewall and VPN plus support for virtual systems and security zones. Combined with a flexible and resilient hardware architecture incorporating modular physical interfaces, redundant power supplies, fans and high availability interfaces, the NetScreen-500 exceeds most enterprises' typical traffic conditions. It is well suited to match the peak load and strong deterrence requirements of the most demanding environments.

	Juniper Networks NetScreen-500 ⁽¹⁾	Juniper Networks NetScreen-500 ⁽¹⁾
Maximum Performance and Capacity⁽²⁾		
ScreenOS version support	ScreenOS 5.3	
Firewall performance	700 Mbps	
3DES performance	250 Mbps	
Deep Inspection performance	300 Mbps	
Concurrent sessions ⁽³⁾	250,000	
New Sessions/Second	7,000	
Policies ⁽³⁾	20,000	
Interfaces	8 10/100 or mini-GBIC (SX or LX), 4 GBIC (SX or LX)	
Mode of Operation		
Layer 2 mode (transparent mode) ⁽⁵⁾	Yes	
Layer 3 mode (route and/or NAT mode)	Yes	
NAT (Network Address Translation)	Yes	
PAT (Port Address Translation)	Yes	
Policy-based NAT	Yes	
Virtual IP	4	
Mapped IP ⁽⁴⁾	4,096	
MIP/VIP Grouping	Yes	
Users supported	Unrestricted	
Firewall		
Number of network attacks detected	31	
Network attack detection	Yes	
DoS and DDoS protections	Yes	
TCP reassembly for fragmented packet protection	Yes	
Malformed packet protections	Yes	
Deep Inspection (DI) firewall	Yes	
Protocol anomaly	Yes	
Stateful protocol signatures	Yes	
Deep Inspection (DI) signature packs	Yes	
Deep Inspection (DI) Protocols supported	43 ⁽⁷⁾	
Content Inspection	Yes	
Embedded antivirus	No	
Malicious Web filtering	up to 48 URLs	
External Web filtering (Websense or SurfControl)	Yes	
Integrated Web filtering	No	
Brute force attack mitigation	Yes	
Deep Inspection (DI) attack pattern obfuscation	Yes	
SYN cookie	Yes	
Zone-based IP spoofing	Yes	
VPN		
Site-to-site VPN tunnels ⁽⁸⁾	up to 5,000	
Remote access VPN tunnels	10,000 ⁽⁸⁾	
Tunnel interfaces	up to 1,024	
DES (56-bit), 3DES (168-bit) and AES encryption	Yes	
MD-5 and SHA-1 authentication	Yes	
Manual Key, IKE, PKI (X.509)	Yes	
Perfect forward secrecy (DH Groups)	1,2,5	
Prevent replay attack	Yes	
Remote access VPN	Yes	
L2TP within IPSec	Yes	
Dead Peer Detection	Yes	
IPSec NAT Traversal	Yes	
Redundant VPN gateways	Yes	
VPN tunnel monitor	Yes	
Firewall and VPN User Authentication		
Built-in (internal) database – user limit ⁽³⁾	up to 1,500	
3rd Party user authentication	RADIUS, RSA SecurID, and LDAP	
XAUTH VPN authentication	Yes	
Web-based authentication	Yes	
PKI Support		
PKI Certificate requests (PKCS 7 and PKCS 10)	Yes	
Automated certificate enrollment (SCEP)	Yes	
Online Certificate Status Protocol (OCSP)	Yes	
Self Signed Certificates	Yes	
Certificate Authorities Supported		
Verisign	Yes	
Entrust	Yes	
Microsoft	Yes	
RSA Keon	Yes	
iPlanet (Netscape)	Yes	
Baltimore	Yes	
DOD PKI	Yes	
Logging/Monitoring		
Syslog (multiple servers)	External, up to 4 servers	
E-mail (2 addresses)	Yes	
NetIQ WebTrends	External	
SNMP (v1, v2)	Yes	
Standard and custom MIB	Yes	
Traceroute	Yes	
Virtualization		
Maximum number of Virtual Systems ⁽⁶⁾	0 Default, upgradeable to 25	
Maximum number of security zones ⁽⁶⁾	8 default, upgradeable to 58	
Maximum number of virtual routers ⁽⁶⁾	3 default, upgradeable to 28	
Number of VLANs supported	100 per port	
Routing		
OSPF/BGP dynamic routing ⁽⁹⁾	up to 8 instances each	
RIPv1/v2 dynamic routing ⁽⁹⁾	Up to 256 instances	
Static routes	8,192	
Source Based Routing, Source Interface Based Routing	Yes	
Equal cost multi-path routing	Yes	
High Availability (HA)		
Active/Active	Yes	
Active/Passive	Yes	
Redundant Interfaces	Yes	
Configuration synchronization	Yes	
Session synchronization for firewall and VPN	Yes	
Device failure detection	Yes	
Link failure detection	Yes	
Authentication for new HA members	Yes	
Encryption of HA traffic	Yes	
LDAP and RADIUS server failover	Yes	
VoIP		
H.323 ALG	Yes	
SIP ALG	Yes	
MGCP ALG	Yes	
NAT for H.323/SIP	Yes	
IP Address Assignment		
Static	Yes	
DHCP, PPPoE client	No	
Internal DHCP server	No	
DHCP Relay	Yes	

Juniper Networks NetScreen-500 ⁽¹⁾	
RADIUS Accounting	
RADIUS Start/Stop	Yes
System Management	
WebUI (HTTP and HTTPS)	Yes
Command Line Interface (console)	Yes
Command Line Interface (telnet)	Yes
Command Line Interface (SSH)	Yes, v1.5 and v2.0 compatible
NetScreen-Security Manager	Yes
All management via VPN tunnel on any interface	Yes
SNMP Full Custom MIB	Yes
Rapid deployment	No
Administration	
Local administrators database	20
External administrator database	RADIUS/LDAP/SecurID
Restricted administrative networks	6
Root Admin, Admin, and Read Only user levels	Yes
Software upgrades	TFTP/WebUI/SCP/NSM
Configuration Roll-back	Yes
Traffic Management	
Guaranteed bandwidth	Yes
Maximum bandwidth	Yes
Ingress Traffic Policing	Yes
Priority-bandwidth utilization	Yes
DiffServ stamp	Yes
External Flash	
PCMCIA (PC Card)	Supports 96, 128, 440, and 512 MB
Event logs and alarms	Yes
System config script	Yes
NetScreen ScreenOS software	Yes
Dimensions and Power	
Dimensions (H/W/L)	3.5/17.5/17 inches
Weight	27 lbs.
Rack mountable	19" standard, 23" optional
Power Supply (AC)	90 to 264 VAC, 100 watts
Power Supply (DC)	-36 to -72 VDC, 100 watts

Licensing Options: The NetScreen-500 is available with two licensing options to provide two different levels of functionality and capacity.

Advanced Models: The Advanced software license provides all of the features and capacities listed within this specsheet.

Baseline Models: The Baseline software license provides an entry-level solution for customer environments where features such as Deep Inspection™, OSPF and BGP dynamic routing, advanced High Availability, and full capacity are not critical requirements. The following table shows the features and capacities that are different than the Advanced models:

NetScreen-500 Baseline	
Sessions	128,000
Concurrent VPN tunnels	1,000
Deep Inspection Firewall	N/A
OSPF/BGP	N/A
High Availability (HA)	Active/Passive only
NetScreen Security Manager	Supported

Certifications

Safety Certifications

UL, CUL, CSA, CB

EMC Certifications

FCC class A, BSMI Class A, CE class A, C-Tick, VCCI class A

Environment

Operational temperature: 32° to 122° F, 0° to 50° C

Non-operational temperature: -4° to 158° F, -20° to 70° C

Humidity: 10 to 90% non-condensing

MTBF (Bellcore model)

6.5 years

Security Certifications (Advanced models only)

Common Criteria: EAL4

FIPS 140-2: Level 2

ICSA Firewall and VPN

Ordering Information

Product	Part Number
Juniper Networks NetScreen-500SP Bundles	
NetScreen-500 System SX GBIC, AC power	NS-500SP-GB1-AC
NetScreen-500 System SX GBIC, DC power	NS-500SP-GB1-DC
NetScreen-500 System SX dual-GBIC, AC power	NS-500SP-GB2-AC
NetScreen-500 System SX dual-GBIC, DC power	NS-500SP-GB2-DC
SP Systems include 25 Virtual Systems and 2 power supplies	
Juniper Networks NetScreen-500ES Bundles	
NetScreen-500 System 2 SX GBIC modules, 2 AC power supplies	NS-500ES-GB1-AC
NetScreen-500 System 2 SX GBIC modules, 2 DC power supplies	NS-500ES-GB1-DC
NetScreen-500 System 2 SX dual-GBIC modules, 2 AC power supplies	NS-500ES-GB2-AC
NetScreen-500 System 2 SX dual-GBIC modules, 2 DC power supplies	NS-500ES-GB2-DC
NetScreen-500 System 3 dual-10/100 modules, 2 AC power supplies	NS-500ES-FE1-AC
NetScreen-500 System 3 dual-10/100 modules, 2 DC power supplies	NS-500ES-FE1-DC
NetScreen-500 System 2 dual-10/100 modules, 1 AC power supply	NS-500ES-FE2-AC
NetScreen-500 System 2 dual-10/100 modules, 1 DC power supply	NS-500ES-FE2-DC
ES Systems include 0 Virtual Systems.	

Juniper Networks NetScreen-500 Baseline Systems

NetScreen-500 System 2 dual-10/100 modules, 1 AC power supply	NS-500B-FE2
NetScreen-500 System 2 SX GBIC modules, 1 AC power supply	NS-500B-GB1

Juniper Networks NetScreen-500 Virtual System Upgrades

Upgrade to 5 Virtual Systems	NS-500-VSYS-5
Upgrade from 5 to 10 Virtual Systems	NS-500-VSYS-10
Upgrade from 10 to 25 Virtual Systems	NS-500-VSYS-25

Every Virtual System includes one virtual router and 2 security zones, usable in the virtual or root system.

- (1) Performance, capacity and features listed are based upon the Advanced feature set running ScreenOS 5.3 and may vary with other ScreenOS releases. The Baseline model licensing option provides a subset of features as described in the table below. Actual throughput for Advanced and Baseline products may vary based upon packet size and enabled features.
- (2) Performance and capacity provided are the measured maximums under ideal testing conditions and may vary by deployment.
- (3) Shared among all Virtual Systems
- (4) Not available with Virtual Systems
- (5) The following features are not supported in Layer 2 (transparent mode): NAT, PAT, policy based NAT, virtual IP, mapped IP, virtual systems, virtual routers, VLANs, OSPF, BGP, RIPv2, Active/Active HA, and IP address assignment.
- (6) Requires purchase of virtual system key. Every virtual system includes one virtual router and two security zones, usable in the virtual or root system.
- (7) Changelog, DHCP, Discard, DNS, Echo, Finger, FTP, Gopher, HTTP, ICMP, IDENT, IKE, IM, IMAP, IRC, LDAP, LPR, MS-RPC, MS SQL, NetBIOS, NFS, NNTP, NTP, P2P, PortMapper, POP, Radius, Rexec, rlogin, SunRPC, RSH, RTSP, Rusers, SMTP, SNMP, SQL, SSH, SSL, Syslog, Telnet, TFTP, VNC, Whois



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