

# 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 <sup>(1)</sup>       | Juniper Networks NetScreen-500 <sup>(1)</sup> |
|--|---|---|
| <b>Maximum Performance and Capacity<sup>(1)</sup></b>    |   |   |
| ScreenOS version support                                 | ScreenOS 5.4  |   |
| Firewall performance                                     | 700 Mbps  |   |
| 3DES+ SHA-1 performance                                  | 250 Mbps  |   |
| Concurrent sessions <sup>(2)</sup>                       | 250,000   |   |
| New Sessions/Second                                      | 7,000   |   |
| Policies <sup>(2)</sup>                                  | 20,000  |   |
| Interfaces   | 8 10/100 or mini-GBIC (SX or LX), 4 GBIC (SX or LX) |   |
| <b>Mode of Operation</b>                                 |   |   |
| Layer 2 mode (transparent mode) <sup>(4)</sup>           | 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 <sup>(3)</sup>                                 | 4,096   |   |
| MIP/VIP Grouping   | Yes   |   |
| Users supported  | Unrestricted  |   |
| <b>Firewall</b>  |   |   |
| 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   |   |
| IPS (Deep Inspection) firewall                           | Yes   |   |
| Stateful protocol signatures                             | Yes   |   |
| 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   |   |
| <b>VPN</b>   |   |   |
| Site-to-site VPN tunnels <sup>(2)</sup>                  | up to 5,000   |   |
| Remote access VPN tunnels                                | 10,000 <sup>(3)</sup>                               |   |
| 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   |   |
| <b>Firewall and VPN User Authentication</b>              |   |   |
| Built-in (internal) database – user limit <sup>(2)</sup> | up to 1,500   |   |
| 3rd Party user authentication                            | RADIUS, RSA SecurID, 802.1X and LDAP                |   |
| XAUTH VPN authentication                                 | Yes   |   |
| Web-based authentication                                 | Yes   |   |
| <b>PKI Support</b>                                       |   |   |
| 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   |   |
| <b>Logging/Monitoring</b>                                |   |   |
| 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   |   |
| <b>Virtualization</b>                                    |   |   |
| Maximum number of Virtual Systems <sup>(5)</sup>         | 0 Default, upgradeable to 25                        |   |
| Maximum number of security zones <sup>(5)</sup>          | 8 default, upgradeable to 58                        |   |
| Maximum number of virtual routers <sup>(5)</sup>         | 3 default, upgradeable to 28                        |   |
| Number of VLANs supported                                | 100 per port  |   |
| <b>Routing</b>   |   |   |
| OSPF/BGP dynamic routing <sup>(2)</sup>                  | up to 8 instances each                              |   |
| RIPv1/v2 dynamic routing <sup>(2)</sup>                  | Up to 256 instances                                 |   |
| Static routes  | 8,192   |   |
| Source Based Routing, Source Interface Based Routing     | Yes   |   |
| Equal cost multi-path routing                            | Yes   |   |
| <b>High Availability (HA)</b>                            |   |   |
| 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   |   |
| <b>VoIP</b>  |   |   |
| H.323 ALG  | Yes   |   |
| SIP ALG  | Yes   |   |
| SCCP ALG   | Yes   |   |
| MGCP ALG   | Yes   |   |
| NAT for H.323/SIP/MGCP/SCCP                              | Yes   |   |
| <b>IP Address Assignment</b>                             |   |   |
| Static   | Yes   |   |
| DHCP, PPPoE client                                       | No  |   |
| Internal DHCP server                                     | No  |   |
| DHCP Relay   | Yes   |   |

| Juniper Networks<br>NetScreen-500 <sup>(1)</sup> |                                   |
|--|-----------------------------------|
| <b>RADIUS Accounting</b>                         |                                   |
| RADIUS Start/Stop                                | Yes                               |
| <b>System Management</b>                         |                                   |
| 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                                |
| <b>Administration</b>                            |                                   |
| 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                               |
| <b>Traffic Management</b>                        |                                   |
| Guaranteed bandwidth                             | Yes                               |
| Maximum bandwidth                                | Yes                               |
| Ingress Traffic Policing                         | Yes                               |
| Priority-bandwidth utilization                   | Yes                               |
| DiffServ stamp                                   | Yes                               |
| <b>External Flash</b>                            |                                   |
| PCMCIA (PC Card)                                 | Supports 96, 128, 440, and 512 MB |
| Event logs and alarms                            | Yes                               |
| System config script                             | Yes                               |
| NetScreen ScreenOS software                      | Yes                               |
| <b>Dimensions and Power</b>                      |                                   |
| 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     |
|--|-----------------|
| <b>Juniper Networks NetScreen-500SP Bundles</b>                  |                 |
| 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       |                 |
| <b>Juniper Networks NetScreen-500ES Bundles</b>                  |                 |
| 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 systems running ScreenOS 5.4 and are the measured maximums under ideal testing conditions unless otherwise noted. Actual results may vary based on ScreenOS release and by deployment.
- (2) Shared among all Virtual Systems
- (3) Not available with Virtual Systems
- (4) 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.
- (5) Requires purchase of virtual system key. Every virtual system includes one virtual router and two security zones, usable in the virtual or root system.



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