



Juniper Networks NetScreen-5000 Series

Product Description

The NetScreen-5000 Series firewall/VPN is ideally suited for large enterprise network backbones, including:

- Departmental or campus segmentation
- Enterprise data centers for securing high-density server environments
- Carrier-based managed services or core infrastructure

Offering excellent scalability and flexibility while providing high levels of security, the NetScreen-5000 Series is differentiated by its chassis configuration for fans, power supplies, and number of slots for modules. Both the NetScreen-5200 and NetScreen-5400 support secure port modules that offer different throughput and interface options for deployment flexibility. All chassis are designed with hot-swappable, redundant fans and power supplies. This enables businesses to maximize device uptime and meet stringent government and industry certifications, such as the rigorous Network Equipment Building System criteria, the requirement for equipment used in the central office in the North American Public Switched Network.

Employing a switch fabric for data exchange and separate multi-bus channel for control information, the NetScreen-5000 Series can scale up to 30 Gbps firewall and 15 Gbps 3DES/AES VPN. It provides low-latency performance for all packet sizes and is ideal for multimedia, voice over IP (VoIP), and other streaming media applications.

Juniper Networks delivers all the components necessary to build and secure a highly available infrastructure. Redundant links for full-mesh topologies, sub-second stateful fail-over, path monitoring, and a secured control protocol all join to provide complete resilience for the security layer. The NetScreen-5000 series also supports Juniper Networks virtual systems capability, with capacity up to 500 virtual systems. Virtual systems allow a single security device to be partitioned logically into multiple security domains, each with a unique virtual router, policy set, address book, and administrative login. Virtual systems can be used with physical interfaces, as well as VLAN tagged interfaces bound to any interface, with multiple security zones supported within each virtual system.

Whether the requirement is high-capacity session/tunnel aggregation, high-performance small-packet throughput, a high degree of system virtualization or a high degree of physical segmentation, the NetScreen-5000 is the ideal platform for large enterprise and carrier grade networks. The additional benefits associated with lower total cost of ownership and the ability to meet future service or application requirements make the NetScreen-5000 Series firewall/VPN the clear choice for network security operations.

The Juniper Networks NetScreen-5000 series is a line of purpose-built, high-performance security systems designed for large enterprise, carrier, and data center networks. Architected with both existing and future network design in mind, the NetScreen-5000 series consists of two platforms: the 2-slot NetScreen-5200 and the 4-slot NetScreen-5400. Integrating firewall, VPN, traffic management functionality, Denial of Service (DoS) and Distributed Denial of Service (DDoS) protection in a low profile modular chassis, the NetScreen-5000 series delivers scalable performance for the most demanding network environments.

Features and Benefits

Feature	Feature Description	Benefit
Purpose-built platform	Modular, chassis-based security systems.	Delivers the high performance and configuration flexibility required to protect large enterprise and carrier environments.
High performance	ASIC based architecture employs a switch fabric for data exchange and a separate multi-bus channel for control information.	Ensures scalable performance and low latency in sensitive applications such as VoIP and streaming media.
Advanced network segmentation	Security zones, virtual LANs and virtual routers allow administrators to deploy security policies to isolate guests, regional servers, or databases.	Prevents unauthorized access, contains any attacks that may occur, and facilitates regulatory compliance.
System and network resiliency	Hardware component redundancy and full mesh configurations enable redundant physical paths in the network.	Provides the reliability required for high-speed network deployments.
High availability (HA)	Active/passive, Active/active and Active/active full mesh HA configurations using dedicated high availability interfaces.	Achieve maximum availability and ensure synchronization for sub-second failover between interfaces or devices.
Interface flexibility	Modular architecture enables deployment with a wide variety of interface options, including SFP (SX, LX, TX) and XFP 10 gigabit (SR or LR).	Simplifies network integration and helps reduce the cost of future network upgrades.
Robust routing engine	The NetScreen-5000 series routing engine supports OSPF, BGP, RIP v1/2, transparent Layer 2 operation, NAT and Route mode.	Facilitates the deployment of the NetScreen-5000 series as a combined security and LAN routing device, lowering operational and capital expenditures.
Virtual system support	Supports up to 500 virtual firewalls – each with a unique set of administrators, policies, VPNs, and address books.	Reduces the number of physical units and allows the partitioning of the network into separate administrative domains.
World-class professional services	From simple lab testing to major network implementations, Juniper Networks Professional Services will collaborate with your team to identify goals, define the deployment process, create or validate the network design, and manage the deployment.	Transforms the network infrastructure to ensure that it is secure, flexible, scalable, and reliable.

Product Options

Option	Option Description	Applicable Products
Integrated IPS (Deep Inspection)	Prevents application level attacks from flooding the network using a combination of stateful signatures and protocol anomaly detection mechanisms. IPS is annually licensed.	NetScreen-5200 and NetScreen-5400
Web filtering (redirect)	Block access to malicious Web sites using a Web filtering redirect solution such as SurfControl or Websense technology.	NetScreen-5200 and NetScreen-5400
Virtual systems	Supports up to 500 virtual firewalls – each with a unique set of administrators, policies, VPNs, and address books.	NetScreen-5200 and NetScreen-5400

Specifications

	Juniper Networks NetScreen-5200	Juniper Networks NetScreen-5400
Maximum Performance and Capacity⁽¹⁾		
Minimum ScreenOS version support	ScreenOS 6.0 r2	ScreenOS 6.0 r2
Firewall performance (Large packets) ⁽²⁾	10/8 Gbps	30/24 Gbps
Firewall performance (Small packets)	4 Gbps	12 Gbps
Firewall Packets Per Second (64 byte)	6 M PPS	18 M PPS
AES256+SHA-1 VPN performance ⁽²⁾	5/4 Gbps	15/12 Gbps
3DES+SHA-1 VPN performance ⁽²⁾	5/4 Gbps	15/12 Gbps
Maximum concurrent sessions ⁽³⁾	1,000,000	2,000,000 ⁽⁹⁾
New sessions/second	20,000	20,000
Maximum security policies	40,000	40,000
Maximum users supported	Unrestricted	Unrestricted
Network Connectivity		
Fixed I/O	0	0
Interface expansion slots	2 (1 x Management, 1 x SPM)	4 (1 x Management, 3 x SPM)
LAN interface options	8 mini-GBIC (SX, LX or TX), or 2 XFP 10Gig (SR or LR)	8 mini-GBIC (SX, LX or TX), or 2 XFP 10Gig (SR or LR)
Firewall		
Network attack detection	Yes	Yes
Denial of Service (DoS) and Distributed Denial of Service (DDoS) protection	Yes	Yes
TCP reassembly for fragmented packet protection	Yes	Yes
Brute force attack mitigation	Yes	Yes
SYN cookie protection	Yes	Yes
Zone-based IP spoofing	Yes	Yes
Malformed packet protection	Yes	Yes
Unified Threat Management / Content Security⁽⁴⁾		
IPS (Deep Inspection firewall)	Yes	Yes
Protocol anomaly detection	Yes	Yes
Stateful protocol signatures	Yes	Yes
IPS/Deep Inspection attack pattern obfuscation	Yes	Yes
External URL filtering ⁽⁵⁾	Yes	Yes
Voice over IP (VoIP) Security		
H.323 ALG	Yes	Yes
SIP ALG	Yes	Yes
MGCP ALG	Yes	Yes
SCCP ALG	Yes	Yes
NAT for VoIP protocols	Yes	Yes
IPSec VPN		
Concurrent VPN tunnels ⁽³⁾	Up to 25,000	Up to 25,000
Tunnel interfaces ⁽³⁾	Up to 4,095	Up to 4,095
DES (56-bit), 3DES (168-bit) and AES encryption	Yes	Yes
MD-5 and SHA-1 authentication	Yes	Yes
Manual key, IKE, PKI (X.509)	Yes	Yes
Perfect forward secrecy (DH Groups)	1,2,5	1,2,5
Prevent replay attack	Yes	Yes
Remote access VPN	Yes	Yes
L2TP within IPSec	Yes	Yes
IPSec NAT traversal	Yes	Yes
Redundant VPN gateways	Yes	Yes

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User Authentication and Access Control

Built-in (internal) database - user limit ⁽³⁾	Up to 50,000	Up to 50,000
Third-party user authentication	RADIUS, RSA SecurID, and LDAP	RADIUS, RSA SecurID, and LDAP
RADIUS Accounting	Yes - start/stop	Yes - start/stop
XAUTH VPN authentication	Yes	Yes
Web-based authentication	Yes	Yes
802.1X authentication	Yes	Yes
Unified access control enforcement point	Yes	Yes

PKI Support

PKI Certificate requests (PKCS 7 and PKCS 10)	Yes	Yes
Automated certificate enrollment (SCEP)	Yes	Yes
Online Certificate Status Protocol (OCSP)	Yes	Yes
Certificate Authorities supported	VeriSign, Entrust, Microsoft, RSA Keon, iPlanet (Netscape) Baltimore, DoD PKI	VeriSign, Entrust, Microsoft, RSA Keon, iPlanet (Netscape) Baltimore, DoD PKI
Self-signed certificates	Yes	Yes

Virtualization⁽⁶⁾

Maximum number of virtual systems	0 default, upgradeable to 500	0 default, upgradeable to 500
Maximum number of security zones	16 default, upgradeable to 1,016	16 default, upgradeable to 1,016
Maximum number of virtual routers	3 default, upgradeable to 503	3 default, upgradeable to 503
Maximum number of VLANs	4,000	4,000

Routing

BGP instances	128	128
BGP peers	256	256
BGP routes	20,000	20,000
OSPF instances	Up to 8	Up to 8
OSPF routes	20,000	20,000
RIP v1/v2 instances	Up to 512	Up to 512
RIP v2 routes	20,000	20,000
Dynamic routing	Yes	Yes
Static routes	20,000	20,000
Source-based routing	Yes	Yes
Policy-based routing	Yes	Yes
ECMP	Yes	Yes
Multicast	Yes	Yes
Reverse Path Forwarding (RPF)	Yes	Yes
IGMP (v1, v2)	Yes	Yes
IGMP Proxy	Yes	Yes
PIM SM	Yes	Yes
PIM SSM	Yes	Yes
Multicast inside IPsec tunnel	Yes	Yes

IPv6

Dual stack IPv4/IPv6 firewall and VPN	Yes	Yes
IPv4 to/from IPv6 translations and encapsulations	Yes	Yes
Virtualization (VSY, Security Zones, VR, VLAN)	Yes	Yes
RIPng	Yes	Yes

Mode of Operation

Layer 2 (transparent) mode ⁽⁷⁾	Yes	Yes
Layer 3 (route and/or NAT) mode	Yes	Yes

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Address Translation

Network Address Translation (NAT)	Yes	Yes
Port Address Translation (PAT)	Yes	Yes
Policy-based NAT/PAT	Yes	Yes
Mapped IP (MIP) ^(S)	10,000	10,000
Virtual IP (VIP)	64 per VSYS	64 per VSYS
MIP/VIP Grouping	Yes	Yes

IP Address Assignment

Static	Yes	Yes
DHCP, PPPoE client	No, No	No, No
Internal DHCP server	Yes	Yes
DHCP relay	Yes	Yes

Traffic Management Quality of Service (QoS)

Guaranteed bandwidth	No	No
Maximum bandwidth	Yes – per physical interface only	Yes – per physical interface only
Ingress traffic policing	No	No
Priority-bandwidth utilization	No	No
DiffServ marking	Yes – per policy	Yes – per policy
Jumbo Frames	Yes	Yes
Link aggregation up to 4 ports	8G2 SPM only	8G2 SPM only

High Availability (HA)

Active/Active	Yes	Yes
Active/Passive	Yes	Yes
Redundant interfaces	8G2 SPM only	8G2 SPM only
Configuration synchronization	Yes	Yes
Session synchronization for firewall and VPN	Yes	Yes
Session failover for routing change	Yes	Yes
Device failure detection	Yes	Yes
Link failure detection	Yes	Yes
Authentication for new HA members	Yes	Yes
Encryption of HA traffic	Yes	Yes
LDAP and RADIUS server failover	Yes	Yes

System Management

WebUI (HTTP and HTTPS)	Yes	Yes
Command line interface (console)	Yes	Yes
Command line interface (telnet)	Yes	Yes
Command line interface (SSH)	Yes	Yes
NetScreen-Security Manager	Yes	Yes
All management via VPN tunnel on any interface	Yes	Yes
Rapid deployment	Yes	Yes

Administration

Local administrator database size	8 MB	8 MB
External administrator database support	RADIUS/LDAP/SecurID	RADIUS/LDAP/SecurID
Restricted administrative networks	6	6
Root Admin, Admin and Read Only user levels	Yes	Yes
Software upgrades	Yes	Yes
Configuration rollback	Yes	Yes

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Logging/Monitoring

Syslog (multiple servers)	Yes	Yes
Email (two addresses)	Yes	Yes
NetIQ WebTrends	Yes	Yes
SNMP (v2)	Yes	Yes
SNMP full/custom MIB	Yes	Yes
Traceroute	Yes	Yes
VPN tunnel monitor	Yes	Yes

External Flash

Additional log storage	Supports 128 or 512 MB Industrial-Grade SanDisk	Supports 128 or 512 MB Industrial-Grade SanDisk
Event logs and alarms	Yes	Yes
System configuration script	Yes	Yes
ScreenOS Software	Yes	Yes

Dimensions and Power

Dimensions (WXHxD)	17.5 X 3.4 X 20 in (44.5 X 8.6 X 50.8 cm)	17.5 X 8.6 X 14 in (44.5 X 21.8 X 35.6 cm)
Weight	37 lbs/17 kg	45 lbs/20 kg
Rack mountable	Yes, 2 U's	Yes, 5 U's
Power supply (AC)	Yes, redundant, 100-240 VAC	Yes, redundant, 100-240 VAC
Power supply (DC)	Yes, redundant, -36 to -60 VDC	Yes, redundant, -36 to -60 VDC
Maximum thermal output	472 BTU/Hour (W)	943 BTU/Hour (W)

Certifications

Safety certifications	UL, CUL, CSA, CB, Austel, NEBS Level 3	UL, CUL, CSA, CB, Austel, NEBS Level 3
EMC certifications	FCC class A, CE class A, C-Tick, VCCI class A	FCC class A, CE class A, C-Tick, VCCI class A
NEBS	Yes	Yes
MTBF (Bellcore model)	7.9 years	7.0 years

Security Certifications

Common Criteria: EAL4 and EAL4+	Pending	Pending
FIPS 140-2: Level 2	Pending	Pending
ICSA Firewall and VPN	Yes	Yes

Operating Environment

Operating temperature	32° to 105° F, 0° to 45° C	32° to 105° F, 0° to 45° C
Non-operating temperature	- 4° to 158° F, -20° to 70° C	- 4° to 158° F, -20° to 70° C
Humidity	10 to 90% non-condensing	10 to 90% non-condensing

(1) Performance, capacity and features listed are based upon systems running ScreenOS 6.0 r2 and are the measured maximums under ideal testing conditions unless otherwise noted. Actual results may vary based on ScreenOS release and by deployment.

(2) Listed first, higher performance numbers are achieved with 2XGE, lower numbers with the 8G2 Secure Port Modules.

(3) Shared among all virtual systems.

(4) IPS/Deep Inspection is delivered by annual subscriptions purchased separately from Juniper Networks. Annual subscriptions provide signature updates and associated support.

(5) Redirect Web filtering sends traffic to a secondary server and therefore entails purchasing a separate Web filtering license from either Websense or SurfControl.

(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) NAT, PAT, policy based NAT, virtual IP, mapped IP, virtual systems, virtual routers, VLANs, OSPF, BGP, RIPv2, Active/Active HA, and IP address assignment are not available in layer 2 transparent mode.

(8) Not available with virtual systems.

(9) 2 million sessions requires at least 2 Secure Port Modules (8G2 or 2XGE).

Ordering Information

Juniper Networks NetScreen-5200 System Part Number

NS-5200 System, No SPM or MGT modules, includes Fan Tray, Dual AC power supply, 19" Rack Mount, 0 VSYS	NS-5200
NS-5200 System, No SPM or MGT modules, includes Fan Tray, Dual DC power supply, 19" Rack Mount, 0 VSYS	NS-5200-DC

Note: Add MGT2 and SPM Modules to build complete systems

Juniper Networks NetScreen-5400 System Part Number

NS-5400 System, No SPM or MGT modules, includes Fan Tray, 3 x AC power supply, 19" Rack Mount, 0 VSYS	NS-5400
NS-5400 System, No SPM or MGT modules, includes Fan Tray, 3 x DC power supply, 19" Rack Mount, 0 VSYS	NS-5400-DC

Note: Add MGT2 and SPM Modules to build complete systems

Juniper Networks NetScreen-5000 Series - Components needed to build complete systems Part Number

Management Module 2	NS-5000-MGT2
2 x 10GigE Secure Port Module (SPM) – Does NOT include transceivers	NS-5000-2XGE
8 x GigE Secure Port Module 2 (SPM) – Includes 8 x transceivers (SX)	NS-5000-8G2
8 x GigE Secure Port Module 2 TX (SPM) – Includes 8 x Gig Copper Transceivers	NS-5000-8G2-TX

Juniper Networks NetScreen-5000 Series - Virtual System Upgrades Part Number

VSYS upgrade 0 to 5	NS-5000-VSYS-5
VSYS upgrade 5 to 25	NS-5000-VSYS-25
VSYS upgrade 25 to 50	NS-5000-VSYS-50
VSYS upgrade 50 to 100	NS-5000-VSYS-100
VSYS upgrade 100 to 250	NS-5000-VSYS-250
VSYS upgrade 250 to 500	NS-5000-VSYS-500
VSYS upgrade 0 to 500	NS-5000-VSYS

Juniper Networks NetScreen-5000 Series – Accessories Part Number

SX transceiver (mini-GBIC)	NS-SYS-GBIC-MSX
LX transceiver (mini-GBIC)	NS-SYS-GBIC-MLX
XFP 10GigE transceiver Short Range (SR) (300m)	NS-SYS-GBIC-MXSR
XFP 10GigE transceiver Long Range (LR) (10km)	NS-SYS-GBIC-MXLR

Juniper Networks NetScreen-5200 Series – Components Part Number

NetScreen-5200 Chassis	NS-5200-CHA
NetScreen-5200 AC Power Supply	NS-5200-PWR-AC
NetScreen-5200 DC Power Supply	NS-5200-PWR-DC
NetScreen-5200 Fan Assembly	NS-5200-FAN

Juniper Networks NetScreen-5400 Series – Components Part Number

NetScreen-5400 Chassis	NS-5400-CHA
NetScreen-5400 AC Power Supply	NS-5400-PWR-AC
NetScreen-5400 DC Power Supply	NS-5400-PWR-DC
NetScreen-5400 Fan Assembly	NS-5400-FAN

About Juniper Networks

Juniper Networks, Inc. is the leader in high-performance networking. Juniper offers a high-performance network infrastructure that creates a responsive and trusted environment

for accelerating the deployment of services and applications over a single network. This fuels high-performance businesses. Additional information can be found at www.juniper.net.



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