



Safire

Enterprise Firewall Performance Tester



Safire makes it easy to accurately measure the performance of enterprise firewalls. Using traffic profile that can match the unique traffic pattern in your network, Safire pinpoints performance bottlenecks in simple-to-understand graphs, clearly revealing how features like antivirus, appcontrol, IPS and SSL decryption impact throughput.

Firewalls are designed to improve network security when segmenting corporate LANs. Like most security solutions, the challenge is preventing the added security from impacting LAN performance. Each of the advanced security functions offered by firewalls has a performance penalty. Combined, these features can easily reduce performance 90%! Slowing the network down to 10% of its true potential means frustrated users and reduced business performance.

Up until now there has been no simple, cost-effective solution to this problem. Firewalls are complex devices. Obtaining accurate and standardized performance specifications from firewall vendors can be hard. And as the topology of every LAN is different, and the type of traffic varies dramatically from company to company, IT managers often struggle to accurately characterize the performance of their firewall. This is true both during the initial purchasing process, as well as after the firewall has been deployed. Firmware updates and major infrastructure changes, such as link speed upgrade, network topology modifications and rolling out new applications, will also impact a firewall's performance.

Up until now, the only way to comprehensively address this issue has been to invest in complex and expensive test solutions and consultants that often cost more than the firewall itself.

Features and Benefits

- Automated evaluation and characterization reveal the performance bottleneck of your enterprise firewall.
- Automated traffic profile generation from traffic monitoring logs.
- Abundant library of application traffic with flexibility to match the unique traffic profile in your network.
- Test result analysis help you compare the performance difference under various scenarios.
- Easy-to-understand test reports speed up decision making processes.
- Goodput measurement tells you the number of useful application-level information bits per second delivered by the firewall.
- Security perimeter and internal segmentation network topologies for firewall performance testing.
- SSL deep inspection performance test reveals the performance penalty of enabling SSL decryption.



Technical Specifications

	C-Safire-24PE-10G	C-Safire-24PE-10G-CU
Port Speeds	2 x 10G/1G	2 x 10G/5G/2.5G/1G/100M
Packet Engines	24	24
Non-TLS Performance & Capacities Per Chassis		
UDP Concurrent Flows	12 million	12 million
UDP Flows per second	12 million/s (measured with 2 x 10G ports)	12 million/s (measured with 2 x 10G ports)
TCP Concurrent Connections	12 million	12 million
TCP Connections per second	5 million/s (max) 2.4 million/s (sustained) (measured with 2 x 10G ports, no TCP payload)	5 million/s (max) 2.4 million/s (sustained) (measured with 2 x 10G ports, no TCP payload)
Transactions per second*	2.4 million/s (measured with 2 x 10G ports)	2.4 million/s (measured with 2 x 10G ports)
Non-TLS Throughput**	20 Gbps (measured with 2 x 10G ports)	20 Gbps (measured with 2 x 10G ports)
*measured at 10 transactions per connection **measured with Pattern scenario (1518-byte packet length)		
TLS Performance & Capacities Per Chassis		
TLS Concurrent Connections	480,000	480,000
TLS Connections per second*	4,000/s (measured with no TLS payload)	4,000/s (measured with no TLS payload)
Transactions per second**	30,000/s (measured with no TLS payload)	30,000/s (measured with no TLS payload)
TLS Throughput***	20 Gbps (measured with 2 x 10G ports)	20 Gbps (measured with 2 x 10G ports)
*measured at TLS record size 8KB, 2KB key size, using (C0, 2F) ECDHE_RSA_WITH_AES_128_GCM_SHA256 **measured at 10 transactions per connection ***measured with TCP bidirectional traffic (1518-byte packet length, TLS record size 8KB, 2KB key size, using (C0, 2F) ECDHE_RSA_WITH_AES_128_GCM_SHA256)		

PRODUCTS NUMBERS

C-Safire-24PE-10G

SafireCompact, 1-slot chassis (non-modular, fixed), 24 packet engines, unit controller, AC power, excl. tcvrs. Provides 2 x 2-speed 10GBASE-SR/LR/DAC SFP+ test ports.

C-Safire-24PE-10G-CU

SafireCompact, 1-slot chassis (non-modular, fixed), 24 packet engines, unit controller, AC power, excl. tcvrs. Provides 2 x 5-speed 10000/5000/2500/1000/100 BASE-T RJ45 test ports.

Supported Transceivers

E10GSFPSR - Intel® Ethernet SFP+ SR Optic (1000BASE-SX 1G Ethernet & 10GBASE-SR 10G Ethernet)

E10GSFPLR - Intel® Ethernet SFP+ LR Optic (1000BASE-LX 1G Ethernet & 10GBASE-LR 10G Ethernet)

SPECIFICATIONS

Dimensions (1U)

- W: 19" (483 mm)
- H: 1.75" (44,5 mm)
- D: 9.8" (250 mm)
- Weight 10lbs (4.5 kg)

Power

- Input Voltage: AC 100-240V
- Power requirement: 200W
- Frequency: 50-60Hz

Environmental

- Operating Environment: 10 °C – 35 °C
- Non-Operating Environment: -40 °C – 70 °C
- Operating Humidity: 8% – 90% (non-condensing)

