

# ISAFIRE

- Story ○
- Applications ○
- Hardware ○
- Software ○
- Key features ○
- Roadmap ○
- Summary ○



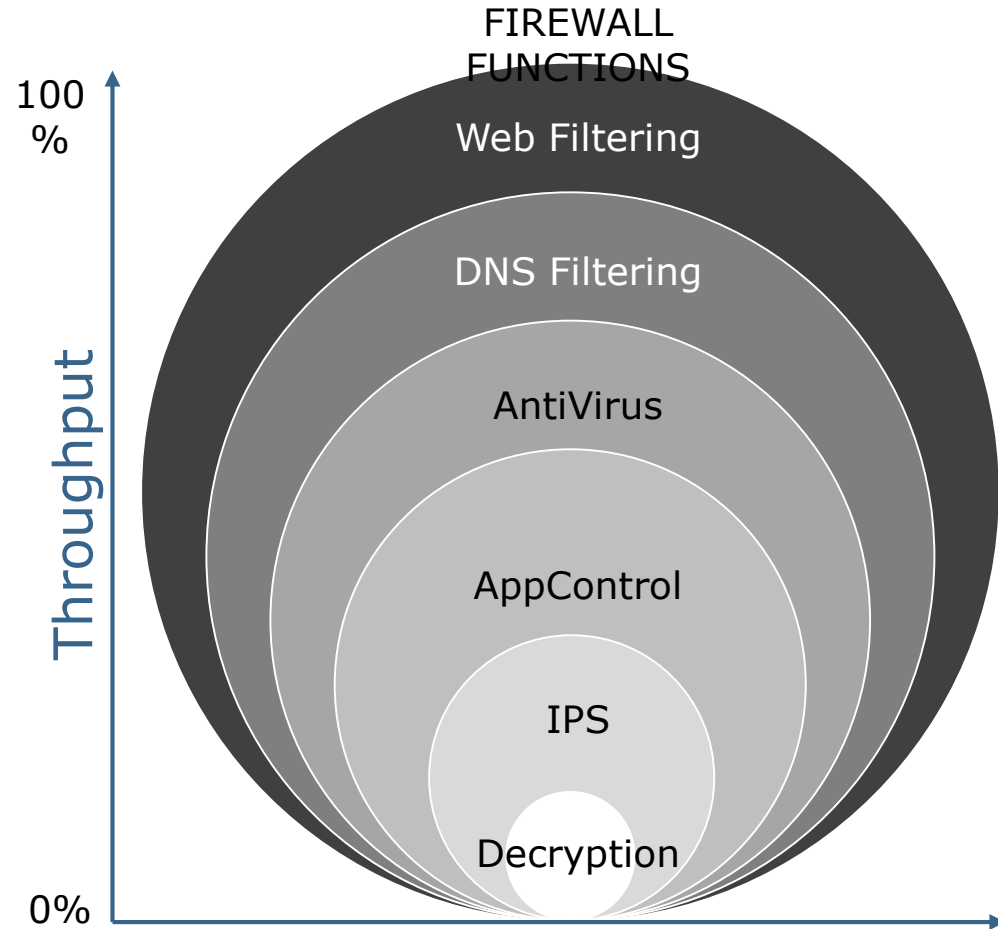
# Story

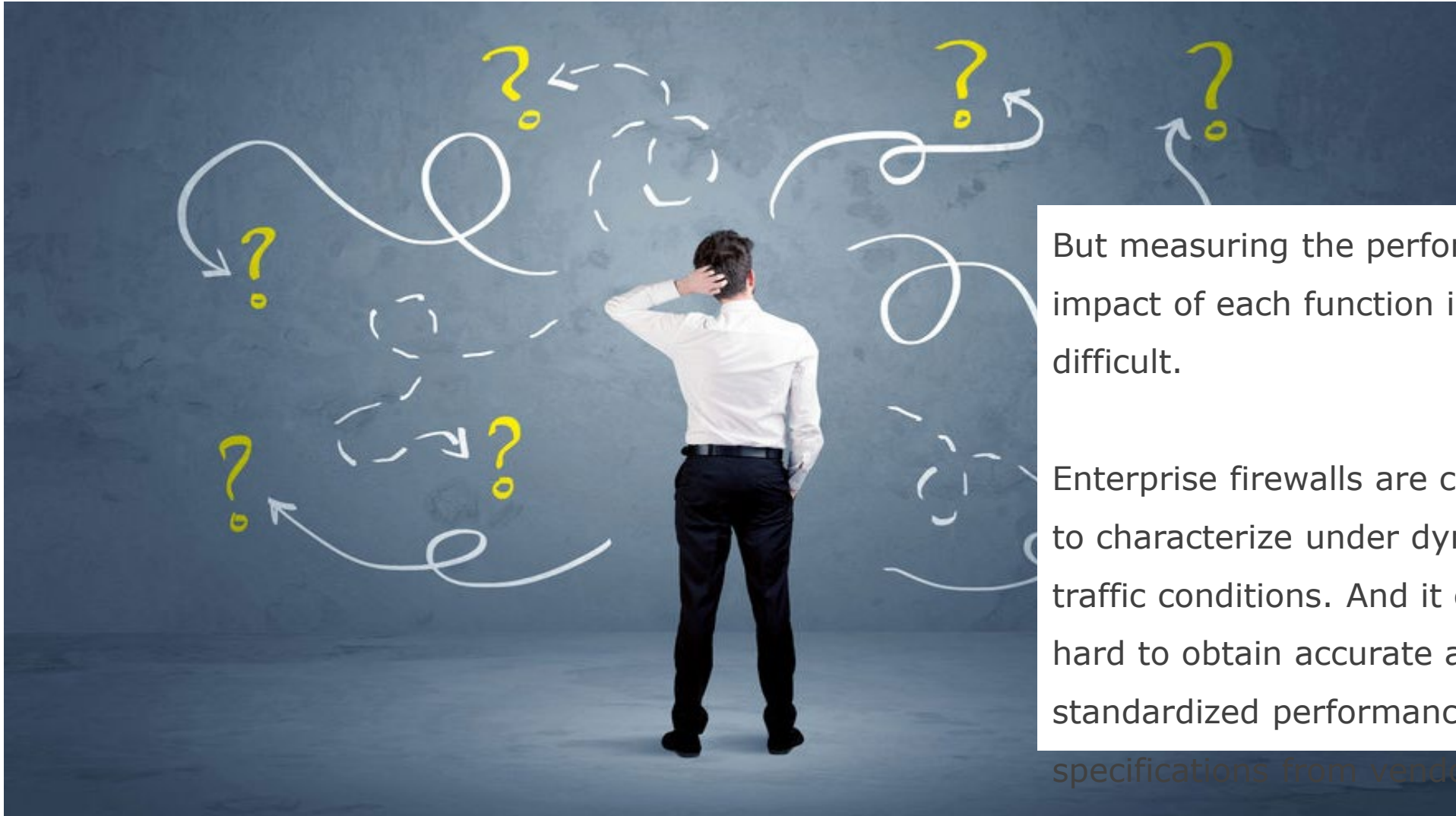
Today's enterprise-grade firewalls have highly advanced function and feature sets, that make them ideal for segmenting enterprise LANs to secure the internal network, as well as the perimeter.



The downside of all these functions is the negative impact they have on performance – which often exceeds 90% of bandwidth capacity.

This is a serious issue given the high cost of such firewalls, and the critical importance of network performance.





But measuring the performance impact of each function is difficult.

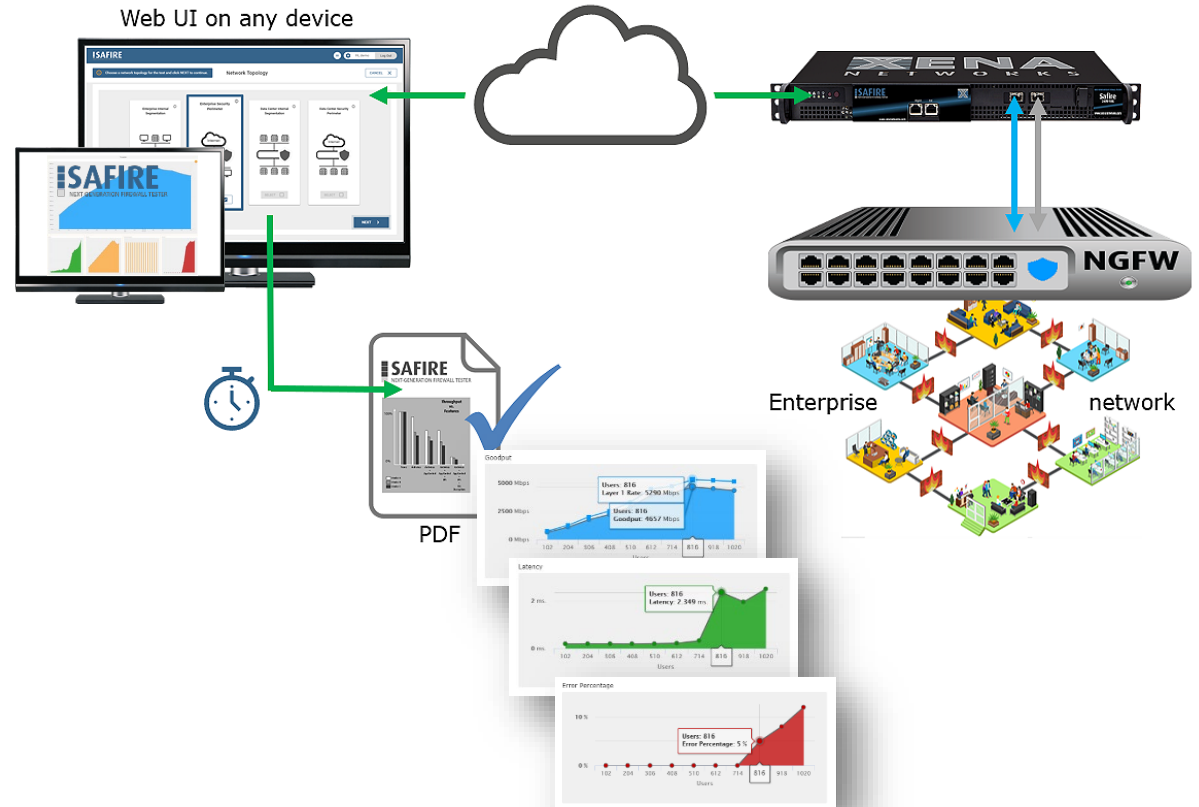
Enterprise firewalls are complex to characterize under dynamic traffic conditions. And it can be hard to obtain accurate and standardized performance specifications from vendors.



Up until now, the only solution has been to invest in complex test solutions and consultants that often cost more than the firewall itself.

Meet **Safire** - Xena's Enterprise Firewall Performance Tester.

Safire makes it easy to quickly measure the performance of firewalls under unique traffic conditions, automatically measure the **firewall's bottleneck**, and generate a PDF containing all the results and key conclusions.

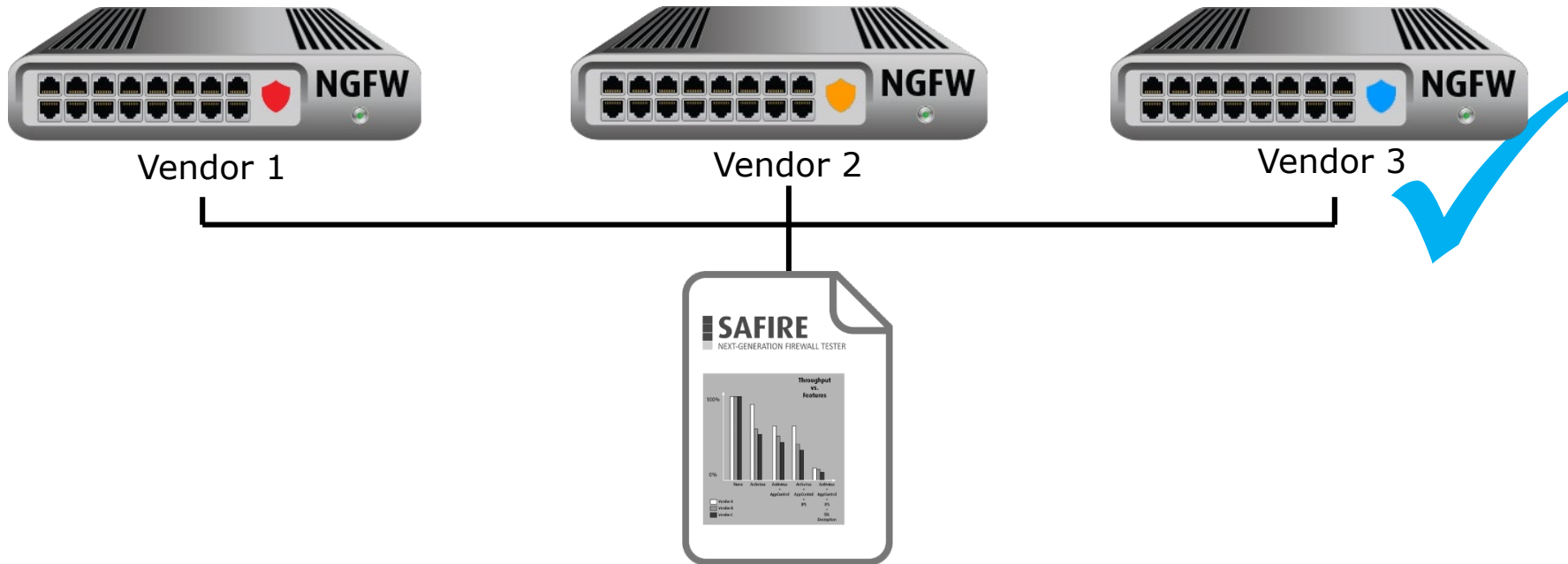




# Applications



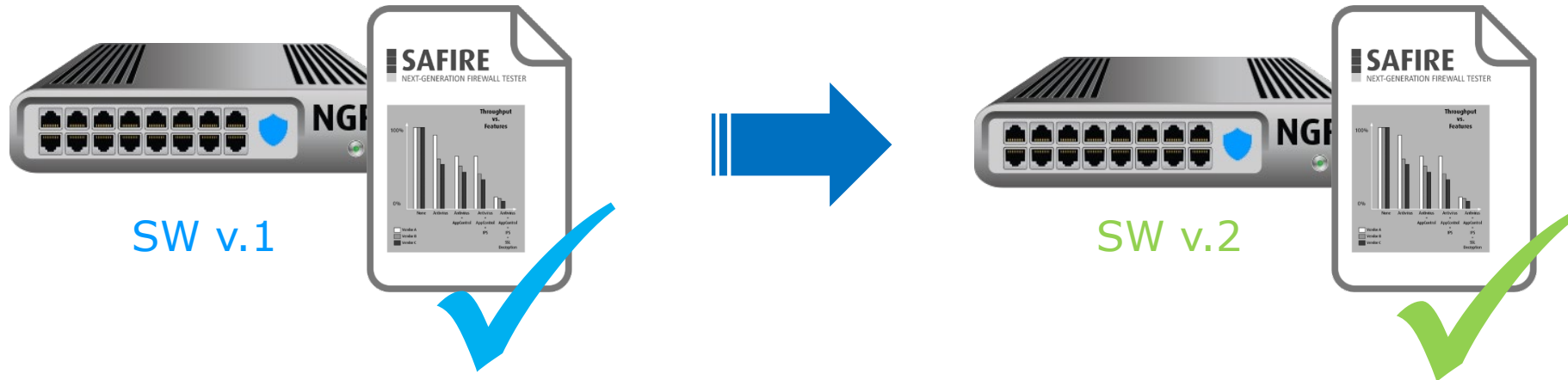
Compare performance of different firewalls during purchasing process



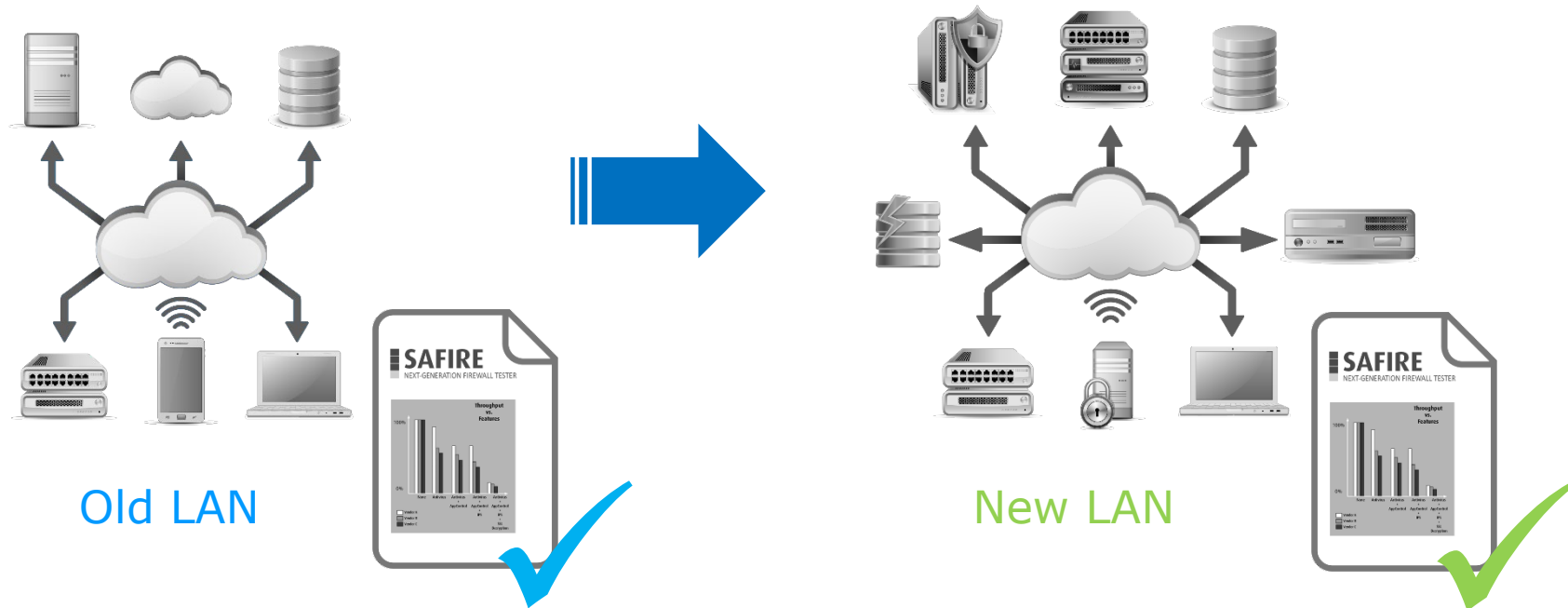
## Validating performance of firewall prior to installation



Check performance after firewall firmware upgrades and patches



## Verifying performance following any significant LAN changes



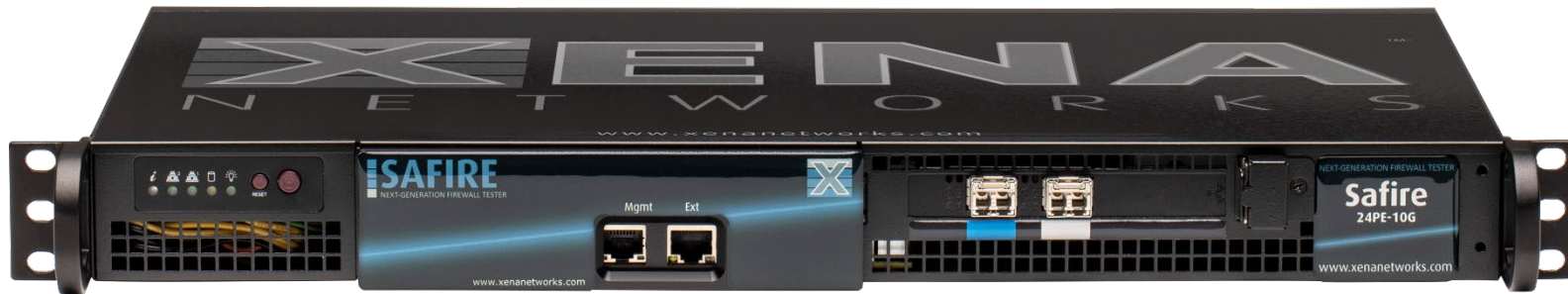
## Measuring performance impact of new application scenarios





# Hardware

## SafireCompact Compact Enterprise Firewall Performance Tester



Safire makes it easy to accurately measure the performance of enterprise firewalls. Using traffic that can match the unique traffic profile 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.

### 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 4-speed 10000/5000/2500/1000/100 BASE-T RJ45 test ports.

Coming soon

### C-Safire-24PE-25G

SafireCompact, 1-slot chassis (non-modular, fixed), 24 packet engines, unit controller, AC power, excl. tcvrs. Provides 2 x 3-speed 25GBASE/SR/LR/DAC SFP28 test ports.

Coming soon



# Software



Safire's Web UI makes it easy for you to configure and run tests.

**1**

**2**

**3**

**ISAFIRE** Hi, admin Log Out

Dashboard

Test Cases Test Progress Traffic Profiles Reports

OPEN OPEN OPEN OPEN

Hi, admin Log Out

Choose a network topology for the test and click NEXT to continue. Network Topology

Enterprise Internal Segmentation Enterprise Security Perimeter Data Center Internal Segmentation Data Center Security Perimeter

SELECT SELECTED SELECT SELECT

NEXT

Safire Demo

SELECT MIX CUSTOMIZE SEQUENCE

Iterations On

Demo Safire

Users per app

Total Users 800

MySQL: 50 WeTransfer Download: 20 FTP Download: 20 Microsoft Office 365: 100 SSH Download: 50 WeTransfer Upload: 10 FTP Upload: 30 SSH Upload: 50 AWS S3 Upload: 50 Microsoft Outlook: 150 AWS S3 Download: 50

Goodput

5000 Mbps

4000 Mbps

3000 Mbps

2000 Mbps

1000 Mbps

0 Mbps

80 100 120 140 160 180 200 220 240 260 280 300 320 340 360 380 400 420 440 460 480 500 520 540 560 580 600 620 640 660 680 700 720 740 760 780 800 820 840 860 880 900 920 940 960

607.715423 967.992200 1173.452791 1103.668152 1762.335096 1100.000000 2337.348824 2780.521895 3237.980146 3703.743856 4198.178543 4636.823285 4658.544966 5347.60905 5359.939587 5021.190000 4328.515000

Latency Sessions Threat Blocking Rate Error rate

**XENA NETWORKS**

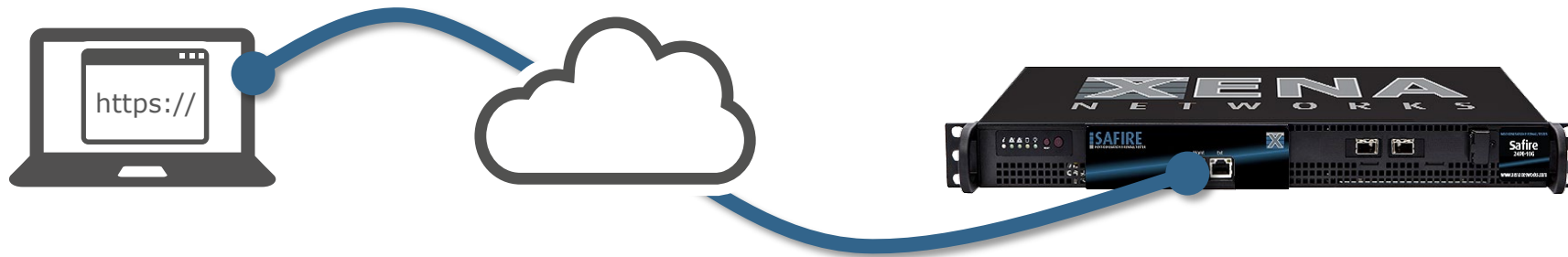
**XENA NETWORKS**

## Connect your PC to Safire

Default IP address on the MGT interface: 192.168.1.190

Make sure you have connection between your PC and the chassis

Visit <https://192.168.1.190/> in your web browser



TIP: Submit this form to try Xena's live demo:

<https://xenanetworks.com/live-demo/#safireform>

### Dashboard

The dashboard is divided into four main sections: Test Cases, Test Progress, Traffic Profiles, and Reports. Each section has an 'OPEN' button. A settings gear icon in the top right is circled with a blue line and labeled '5'. The 'Test Progress' section shows a gauge and the text 'No Test In Progress', with a blue circle around the text labeled '2'. The 'Test Cases' section has an 'OPEN' button labeled '1'. The 'Traffic Profiles' section has an 'OPEN' button labeled '3'. The 'Reports' section has an 'OPEN' button labeled '4'.

1. Test Case
2. Test Progress
3. Traffic Profile
4. Report
5. Settings

Choose a network topology for the test and click NEXT to continue.

### Network Topology

CANCEL X

The screen displays four network topology options, each with a diagram and a selection button:

- Enterprise Internal Segmentation:** Shows a central firewall icon with three desktop computer icons on either side. The selection button is labeled "SELECT" with an unchecked checkbox.
- Enterprise Security Perimeter:** Shows an "Internet" cloud icon at the top, connected to a central firewall icon, which is then connected to three desktop computer icons. The selection button is labeled "SELECTED" with a checked checkbox. This option is highlighted with a blue border.
- Data Center Internal Segmentation:** Shows a central firewall icon with three server rack icons on either side. The selection button is labeled "SELECT" with an unchecked checkbox.
- Data Center Security Perimeter:** Shows an "Internet" cloud icon at the top, connected to a central firewall icon, which is then connected to three server rack icons. The selection button is labeled "SELECT" with an unchecked checkbox.

NEXT >

1. Enterprise internal segmentation
2. Enterprise security perimeter
3. Data center internal segmentation
4. Data center security perimeter

Describe firewall interface addresses, firewall model, and features enabled. Firewall Description CANCEL X

1. Firewall interface address

2. Firewall Model

3. Interface Speed

4. Functions enabled on firewall

5. Functions enabled on firewall

ADD ADVANCED DESCRIPTION

Describe the features enabled on the firewall by switch on the following options:

- AntiVirus
- Anti-Spyware
- Application Control
- Web Filtering
- Data Leak Prevention
- IPS/IDS
- SSL Outbound Inspection

Describe the transparent proxies enabled on the firewall by switch on the following options:

- HTTP Proxy
- FTP Proxy Not Supported Yet
- SMTP Proxy Not Supported Yet
- POP3 Proxy Not Supported Yet
- IMAP Proxy Not Supported Yet
- DNS Proxy Not Supported Yet

< NETWORK TOPOLOGY NEXT >

1. Firewall interface address
2. Firewall model
3. Interface speed
4. Functions enabled on firewall
5. Functions enabled on firewall

BACK TO TEST CONFIGURATIONS

EIS - Palo Alto PA-3060

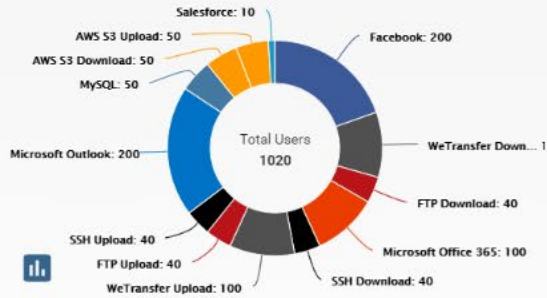
SELECT MIX CUSTOMIZE ITERATIONS

Iterations On

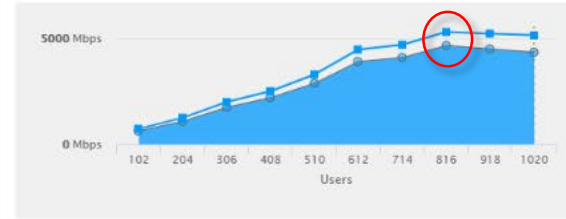
Internal Segmentation - 10G

Total Bandwidth 9.8Gbps From 10G

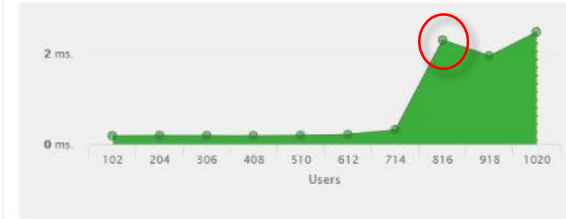
Users per app



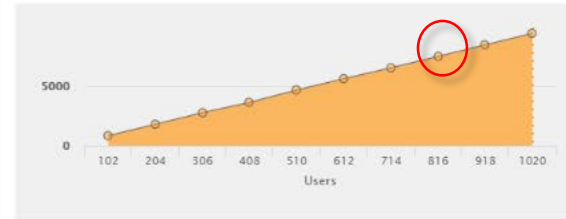
Goodput



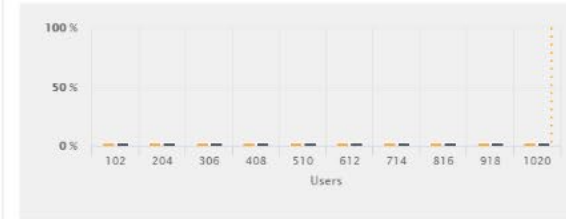
Latency



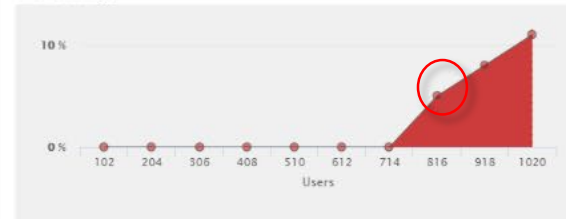
Concurrent Sessions



Malware Blocking Percentage



Error Percentage



Firewall CPU Usage





# Key Features

### Smart test result analysis

Quickly compare different test results for a smart analysis on how different firewalls perform with the same features enabled, or how the same firewall performs when different features and policies are enabled.

### SSL deep inspection performance test

Run tests with the latest standardized TLS encryption to identify the impact of enabling SSL deep inspection policy on your firewalls.

### Check goodput and throughput

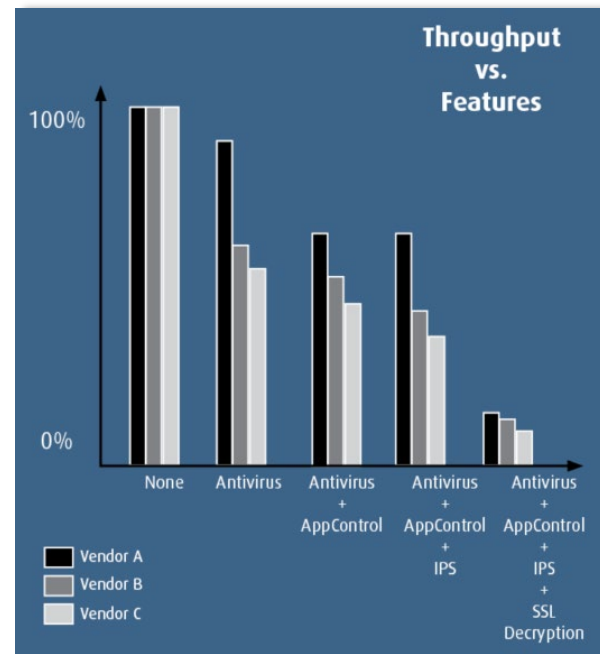
Safire documents goodput, which is the application-level throughput (i.e. the number of useful information bits delivered by the network to a specific destination per unit of time). It also measures Layer 1 throughput with different concurrent sessions, traffic profiles, and traffic characteristics in easy-to-understand graphs.

### Security perimeter and internal segmentation

Test with asymmetric or symmetric traffic patterns and different mixes on various firewall deployment topologies. Security perimeter firewalls protect enterprise against inbound traffic. Internal segmentation firewalls protect internal LAN network segments, where the demand for performance is much higher than those at the edge.

### Easy-to-understand reports

Safire produces attractive PDF reports that highlight important performance indicators for efficient decision-making.



**ISAFIRE** NEXT-GENERATION FIREWALL TESTER **XENA NETWORKS**

## FIREWALL TEST REPORT

**SUMMARY**

- Goodput (Mbps): 6743
- Latency (ms): 0.147
- Error Percentage: 0%
- Malware Blocking Percentage: 0%
- Number of Users: 1020

**NETWORK TOPOLOGY** **FIREWALL FUNCTIONS ENABLED**

Firewall model: Palo Alto PA-3060

Enterprise Internal Segmentation

Date: 20-Dec-2018  
Time Start: 12:15:34  
Time Stop: 06:24:04  
Duration: (18:08:29)  
Safire: Development





# Roadmap



## Future features releases:

Stay up to date  
follow <https://xenanetworks.com/comingsoon>

**COMING SOON**



# Summary

## What?

Enterprise firewall performance tester

## For who?

- Cyber security distributor
- System integrator
- Enterprise IT/network department

## Top issues Safire solves:

- Automatically measure and characterize enterprise firewall performance
- Assist network and security manager to quickly assess the negative impact of firewall security functions
- Smart analysis of performance test results across various firewall models

## Why Safire?

- Compact and cost-efficient
- Abundant and flexible application/protocol library to match the unique traffic profile
- Save time and money

# Thank you



[sales@xenanetworks.com](mailto:sales@xenanetworks.com)



[www.xenanetworks.com](http://www.xenanetworks.com)



[linkedin.com/company/xena-networks](https://www.linkedin.com/company/xena-networks)



[@XenaNetworks](https://twitter.com/XenaNetworks)