



# ***5 CRITICAL MISTAKES WHEN EVALUATING A NEXT-GENERATION FIREWALL***

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The firewall is the foundation of enterprise data security. All firewalls are not created equal, though and no two organizations have the same needs, risks and data flow. You need a firewall to protect against today's advanced attacks while preserving the performance and uptime critical to foster innovation and growth. If you're in the market for a new firewall, we'll assume you understand the many benefits of next-generation firewall technology, and that a next-generation firewall is the way to go.

But how can you be sure you're choosing the right next-generation firewall to meet your organization's specific networking, performance and security needs for the present and the future?

### Test It Before You Buy It

Testing a next-generation firewall in your environment – with your traffic and data, and for your particular use cases – will demonstrate whether or not that firewall is the right choice for your organization's unique needs. With that in mind, here are five critical mistakes to avoid when evaluating a new next-generation firewall and selecting the perfect fit:

- 1. Incorrectly Sizing the Firewall.** Avoid relying solely on datasheets and other “performance on paper” summaries as they are inaccurate points of comparison for firewalls. There are fundamental differences in features and offerings from one firewall vendor to the next. For example, one vendor might measure consolidated threat prevention features (e.g., intrusion prevention systems (IPS), antivirus, command and control, URL filtering) in terms of performance impact, while another might highlight performance impact based solely on best-of-breed IPS capabilities in a stand-alone box. To ensure accurate “apples to apples” firewall comparisons, organizations should size capabilities to their real-world environments' requirements (e.g., IPS, application control, advanced malware detection) in addition to their traffic mix. When doing so, it's critical to account for performance impact resulting from enabling other features in the future.

In addition, advanced capabilities, such as SSL decryption, will vary in performance impact depending on processing logistics. Some vendors decrypt using the hardware form factor, while others decrypt using software – each with varying degrees of performance effect. Further, threat response performance should only be compared with all required signatures activated. Carefully read the documentation for out-of-the-box collections of signatures to determine actual coverage. Performance often continues to degrade with the introduction of additional signatures.

- **Avoid trade-offs between security and performance.** You should never have to decide between enabling a feature or signature and crippling your performance.
  - **Accurately map to your requirements for throughput and traffic composition.** It is difficult for anyone to argue against testing the actual traffic to be secured. Simulators can't represent custom applications, real-world usage scenarios or shadow IT.
- 2. Choosing a Firewall in a Silo.** Several teams within IT count on the firewall to effectively and efficiently perform their job functions, all of which have very different needs and priorities:
    - **Networking team** – hassle-free integration with current architecture, ease-of-use/deployment, network uptime
    - **Security team** – seamless integration with existing security controls, better overall security, threat prevention versus detect-and-respond tactics
    - **Security operations team** – single-pane management, automated features and capabilities
    - **Data center team** – automated features and capabilities, scalability to meet evolving needs, single-pane management
    - **Application team** – simple, fast and secure application deployment

In a typical evaluation scenario, the firewall vendor works directly with the networking team to evaluate and implement a firewall. Accounting only for the needs of the networking team is a critical mistake, though – one with potentially dire results for other teams that rely on the firewall. For example, the networking team usually isn't concerned with security and may very well prefer an option that doesn't account for the scope of security your business demands. The security and security operations teams should be engaged early to provide input into the level of threat prevention and other security capabilities required. For the sake of overall business efficiency and success, organizations must account for the varying needs of all key stakeholders when choosing a new firewall.

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**3. Buying In to Roadmap Features and Promises.** Purchasing a firewall based on the promise of future roadmap features is extremely risky. First, there is always high probability that timelines will slip, in turn affecting business development, innovation, and execution of projects and initiatives in progress. Second, there is no guaranteeing the stability, maturity or functionality of upcoming features before significant testing. New features may also require major operation system version upgrades across all firewalls and connected management devices, the complexity of which can outweigh the benefits. Third, the mergers and acquisitions portfolio can largely influence a vendor's product strategy and roadmap, and you may not necessarily be given insight into this.

Instead, you should evaluate your organization's next firewall purchase as part of a trusted and tested platform, verifying that core, required features are available at the time of purchase. Furthermore, you'll benefit from selecting a natively engineered, next-generation firewall that can be easily updated with new, comprehensive threat information, data analysis and signatures. This way, performance and security can be upheld and enforced.

**4. Failing to Account for Ease-of-Integration and Scalability.** A new firewall should enhance your current IT infrastructure without complex integration. It should easily integrate into your current ecosystem without the need to replace additional infrastructure components with products from the same vendor, particularly in cases where integration is still relatively complex even after replacements are made. Often, once you've successfully migrated to a single vendor, there are still management issues and complexities between individual networking and security devices. Avoid the age-old vendor lock-in hook and choose a firewall vendor with a strong community of technology partners to ensure seamless integration into your ecosystem from both networking and security perspectives. In addition, you should not be forced to manage the integration efforts of a new security platform – that should be the vendor's responsibility.

Scalability as business requirements change is also a key factor when choosing a new firewall. A vendor that uses cloud architecture for innovation and design can scale much more quickly without the need to frequently update hardware or the network edge. In addition, the on-demand nature of the cloud inherently provides businesses with greater agility, higher performance and much faster access to innovative technologies. This results in a higher likelihood of compatibility with future technology and new applications, better overall support, and easier integration into your network.

**5. Choosing a Firewall With a Steep Learning Curve and Minimal Support.** Some firewall vendors promise your networking and security teams will be able to "leverage the same skill set" if you switch to their firewall. Unfortunately, this is often not true even when switching between products from the same vendor (e.g., from a stateful inspection firewall to a next-generation firewall). When it comes to networking and security, resources and expertise are often scarce. It's counterproductive to choose a firewall vendor that employs completely different design frameworks and management user interfaces from one product generation to another, complicating deployment and introducing steep learning curves. Avoid the compounding effects of maintaining multiple management interfaces during phased hardware refreshes. This way, if you choose to migrate to a single vendor, integration and management will be easy. If you choose not to, make sure the firewall vendor you choose offers a vast ecosystem of strategic technology partners that can offer expert help in terms of manpower and knowledge.

To maximize performance, security and ROI while avoiding these five critical mistakes, run a proof of concept in your organization. A POC allows you to accurately test next-generation firewalls, and their affiliated services and subscriptions – either on their own or up against one another – in your real-world, operational IT environment, whether physical, virtual or hybrid. A POC gives you tangible proof points and evidence to ensure the firewall you choose will provide your business with the ideal balance of network performance and security. To set up a POC, call your Palo Alto Networks® sales representative today at 866.320.4788.

If you're not ready for a POC, a number of other tools are available for you to get hands-on experience and learn more about our products.

You might also find the following resources helpful:

- [10 Things Your Next Firewall Must Do](#)
- [Customer feedback about real-world deployment of our products](#)



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