

Naxsi performance measurement

Performance of a whitelist WAF

Lutz Engels Dennis Pellikaan

University of Amsterdam
System and Network Engineering

March 26, 2013



Outline

- 1 Naxsi
- 2 Research questions



What is a WAF?

- Web Application Firewall
-

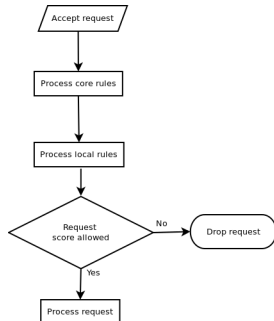


What is a naxsi?

- It's a WAF for nginx
- Nginx Anti Xss & Sql Injection
-



Naxsi request flow

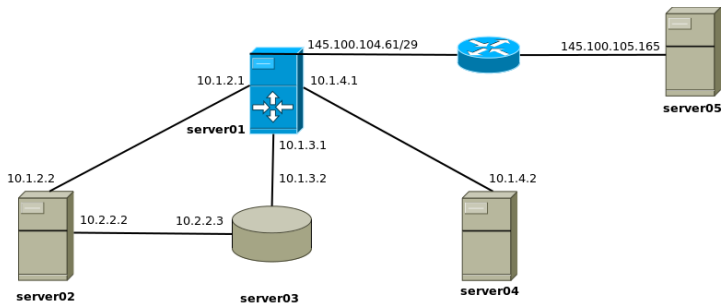


- Oui!
- Sis is mooi sjrafiek

Whitelist processing



Experimental setup

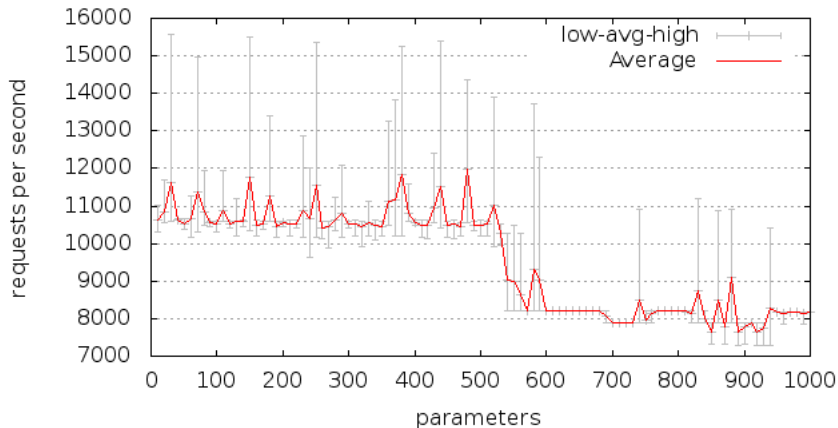


Approach

- Naxsi isolation
 - Baseline performance measurement (HTTP 200 OK)
 - URL parameter increments
- Real-life scenario
 - Baseline performance measurement
 - Normal usage case



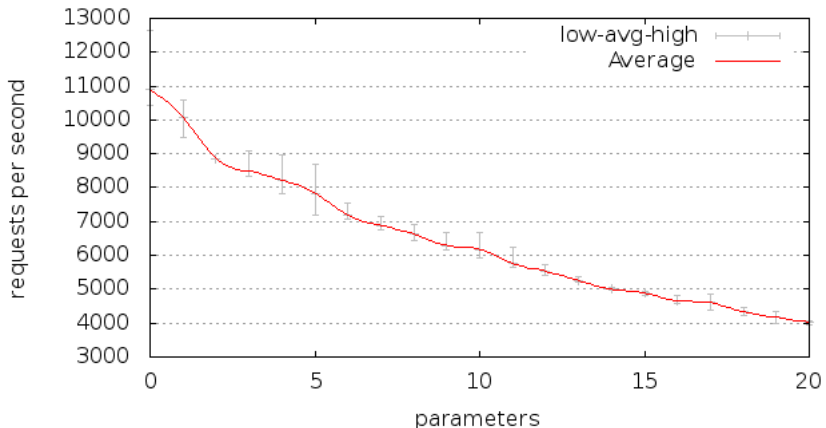
HTTP 200 OK: baseline performance measurement



HTTP 200 OK: Incrementing allowed URL parameters

`http://example.com/?foo1=bar1`

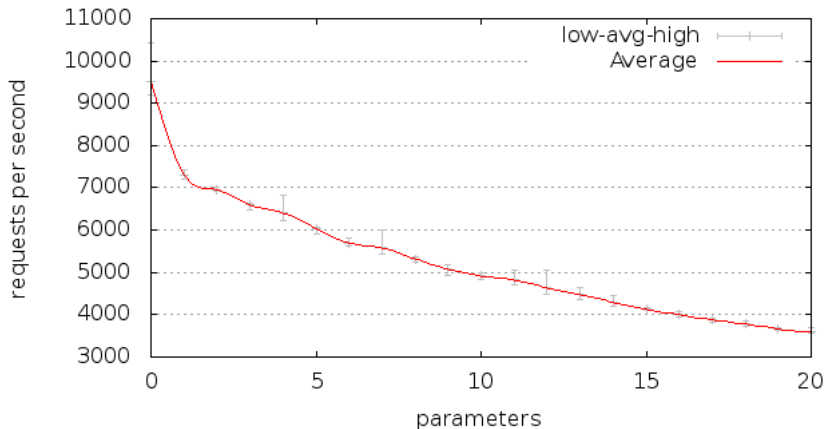
`http://example.com/?foo1=bar1&foo2=bar2`



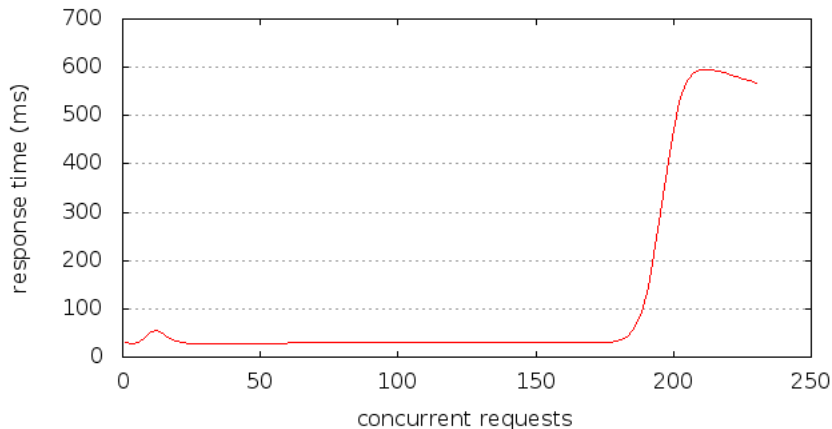
HTTP 200 OK: Incrementing disallowed URL paramters

`http://example.com/?../`

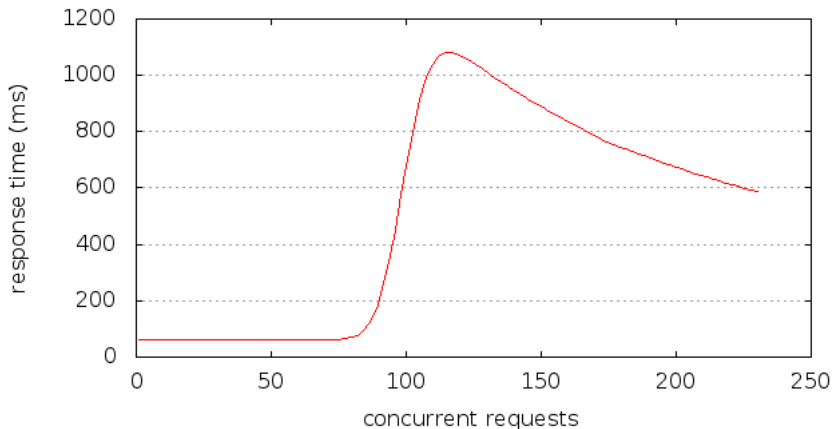
`http://example.com/?foo1=bar1&../`



Wordpress baseline performance measurement



Wordpress with Naxsi



Conclusion

- Naxsi has a low overhead

