Naxsi performance

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1 Introduction

More and more people will have access to the internet [1] and they will have access to many web applications. Commercial companies have access to an ever growing market, but also criminals become more intelligent on how to reach end-users and abuse the web services users are accessing on a daily basis. According to the web survey held by Netcraft in february 2013 [2], the majority of web servers is running Apache and it is followed by Microsoft. However, Nginx is gaining more popularity and it is not only used as a standard web server, but also as a reverse proxy for load balancing purposes. Naxsi (*Nginx Anti Xss & Sql Injection*) is developed as a response to common attacks that often occur on the internet. Naxsi is a firewall designed to work with Nginx. It works as a DROP-by-default firewall, and rules should be added to ACCEPT certain traffic. This concept is also known as whitelisting. Our research will focus on the performance of an Naxsi-Nginx server when it is under heavy load and it has to deal with different attacks.

1.1 Research question

How will a webserver perform with the use of Naxsi as the front-end firewall compared to a webserver without a Naxsi firewall?

2 Scope

Naxsi can be run in learning mode and production mode. Within our research we will focus on the performance of Naxsi in production mode. This means that we will have to find a good learning set for Naxsi to use, which fits are production environment. For our research we will look at a setup as can often be seen by blog hosters:

- MySQL database

[1] `http://data.worldbank.org/indicator/IT.NET.USER.P2/countries?display=graph`
[2] `http://news.netcraft.com/archives/category/web-server-survey/`, February 2013

- Naxsi-Nginx web server
- Wordpress 3.5.1

3 Approach

- Setup test enviroment
- Gather learning information for Naxsi
- Pre-test functionality
- Performance test with firewall enabled
- Performance test without firewall enabled
- Analyze the data
- Draw conclusions

4 Planning

Week 1	Literature study
Week 2	Performance testing
Week 3	Data analysis
	Fine tuning performance test
Week 4	Writing report
	Preparing presentation

References

A Acronyms and abbreviations