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Response Time analysis for Apache Web server versions based on 32 or 64 bit Architecture

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***Abstract*—** response time (RT) has a significant feature in both of traditionally response time (TRT) with physical (face-to-face) Businesses, and Automated response time (ART) with web-based businesses. The TRT is very primitive in physical (face-to-face) business and depended on human activity with devices reliability as well. TRT is very changeable from one person to another person and very complicate to calculate results of response time analysis due to that the TRT very manually and far from using of modern technologies. Nevertheless in ART the response time depended on web technology components, one of the web technology components is software web server that is between frontend (presentation) and backend (database). Web server in any ART by Web-based response time (WRT) is more advanced than TRT. The example of open source web server is apache web server. In this paper the evaluation of response time for different versions of apache web servers which is compatibility with different PhpMyadmin-EasyPhp. Thus, each version of Easyphp is with different version of Apache, Mysql, Php (AMP). The versions of apache web servers which tested are: 1) EasyPhp1.7 with apache 1.3.27, 2) EasyPhp1.8 with apache1.3.33, 3) EasyPhp3 with apache 2.2.11 4) EasyPhp5.6.3.0 with apache 1.3.27, and 5) EasyPhp12.1 with apache 2.4.2. All those versions of apache web server will be test it by simple search engine for Page Generated in Seconds with 32-bit computer Architecture and 64-bits computer Architecture. Web server is one of the mostly important tiered architecture in web technology components that communicate between client side and server side. There are plenty of different versions of web servers with Phpmyadmin-Easyphp. In this paper, the response time of the best apache web server will be found out over either computer architecture 32-bit or 64-bit. Finally the relation between computer architecture and internet architecture became one of our aims. The only suitable methodology for this paper that related and followed is the waterfall model because it's appropriate than the other methodologies.

***Keywords*—** Web Technlogy components; Web response time; EasyPHP; search engine; apache web server.

I. INTRODUCTION *(HEADING 1)*

Since all modification in computer software and hardware occurred from past until now is create new generation [2]. Thus; the internet as software becomes a popular aspect after years 1992 and every (face-to-face) businesses modified to automated business also the TRT was changed to Web-based response time [1]. In this paper make importance for response time accuracy by Apache Web server in real time solution for performance analysis and help society for better service and enhanced speed. In web technology The important generation factors-changed are cost, time, and security results of TRT are in very low level, also accurately and reliability are very primitive as well. WP stands for "Web Performance" this term used to discuss the speed of web technologies that are related on during the design and developments, as the faster website shown to enhance visitor attentions loyalty and satisfaction [3]. Apache is currently the most popular web server software [4]. The setup used for our experiments consists of a server running Apache versions 1.3.27 [5] in (EasyPHP 1.7 Versions), Apache 1.3.33[6] in (EasyPHP 1.8 Versions), Apache 2.2.11 in (EasyPHP 3.0 Versions), Apache 2.2.17 in (EasyPHP 5.3.6.0 Versions), 2.4.2 in (EasyPHP 12.1Versions). All EasyPHP is compatible with Mysql, apache, and PHP (MAP) over a window platform that called (WAMP). All different versions of apache web server from past until now created new web server generation. This paper evaluate the best response of version

A client connected via an Ethernet local area network. The components and the structure of this experimental setup are illustrated in Fig. 1.

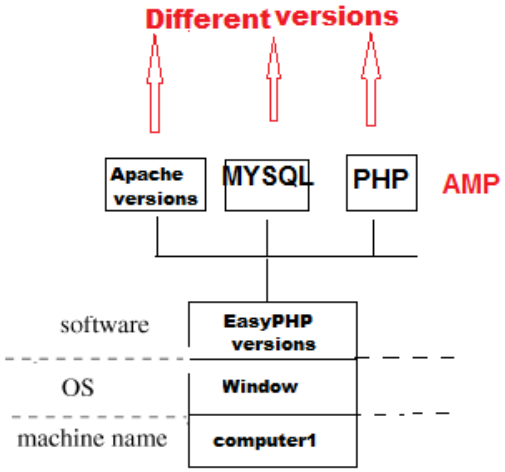

Fig. 1 The components and the structure of this experimental setup

The component structure in figure 1 shows a single computer (hardware) by name of computer1. The operating system (software) installed is Window 2007. At the top of the operating system is EasyPHP and all software will be WAMP (window apache MYSQL PHP) that run on OS in the computer1. The different versions of EasyPHP are complementing different versions of apache and MYSQL and PHP. The only tested consider are only all types of apache in tested in same hardware in different time. Each version of apache web server is run on same hardware specification and same operating system. Thus, the operating system and computer architecture are fixed, but the EsayPHP is changeable especially apache-web server.

II. BACKGROUND

The first version of Apache, based on the NCSA http Web server, was developed in 1995. Core development of the Apache Web server is performed by a group of about 20 volunteer programmers, called the *Apache Group*. However, because the source code is freely available, anyone can adapt the server for specific needs, and there is a large public library of Apache add-ons. In many respects, development of Apache is similar to development of the Linux operating system [5]. All structure declarations of Apache are incomplete [6], and that is one reason to test performance of apache web server in order to select suitable version. Also, each apache new generation (or each apache new version) is a fault solution of pervious apache version.

Apache is HTTP web server software [5], the most commonly used on the internet [7]. As mentioned in last section, it is regularly used with the LAMP bundle, which stands for "Linux, Apache, MySQL, Perl/PHP/Python." As the name suggests, the majority of Apache web servers (in fact, the majority of servers, period) run on Linux [6].

The concept of Open-Source is that software should have the source code available to the user, When a program is "open-source," its source code is available to the public. Open source means that all the internal programming is available to anyone who wants it, to modify and improve. So, all sorts of people work on improving Linux and it is still free! [8].

III. SYSTEM REQUIRMENT

In order to implemention and test our propsed system. We need to have two different computers hardware and several diffrents type of software.

1. Software Requirements:
   All softwares and applications that used for designing proposed system:

   1.1
   Language: EasyPHP
   Windows7 platform,
   A for Apache HTTP server, in different versions
   M for MySQL,
   P for PHP, and P for Perl. [9]
   Database: MYSQL.connector
   Operating System: Windows7
   Application Notepad++

   1.2

   Hardware Requirements:

   All computer hardware architectures that used for testing the proposed system, which are three different Architectures

   1.2.1
   Sony Vaio VGN-NS2.0j, Laptop
   Processor: Pentum (R) Dual Core, CPU 2.00 GHZ, RAM 3GB (2.87 GB.usable),
   System type 32 bit

   1.2.2
   Sony Vaio VGN-NS2.0j, Laptop
   Processor: Pentum (R) Dual Core, CPU 2.00 GHZ, RAM 3GB (2.87 GB.usable),
   System type 64 bit

The computers in both investigations are working individually, thus same test on different computer architecture.

The two tables below table1 and table2 show all results and the best and least page generated in seconds.

The operating system is window 7 and became (WAMP) with different computer architecture and different apache web server. The apache web server and computer architecture are variable. Computer architecture is either 32 BITs or 64BITs, but the apache web servers are five different versions and run over both 32 bits and 64 bits individually.

Easy PHP Versions	Apache Versions	Page Generated in Seconds with Windows 7 Ultimate 32-bit
1.7	1.3.27	0.0027
1.8	1.3.33	0.0033
3.0	2.2.11	0.0048
5.3.6.0	2.2.17	1.0294
12.1	2.4.2	1.0429

TABLE 1: WINDOW APACHE MYSQL PHP (WAMP) With 32 Bit Architecture

Easy PHP Versions	Apache Versions	Page Generated in Seconds with Windows 7 Ultimate 64-bit
1.7	1.3.27	0.0016
1.8	1.3.33	0.0033
3.0	2.2.11	0.0073
5.3.6.0	2.2.17	1.0081
12.1	2.4.2	1.0587

TABLE 2: WINDOW APACHE MYSQL PHP (WAMP) With 64 Bit Architecture

IV. RESULTS AND DISCUSSION:

The evaluating of the proposed system was took place in the private teaching hall at Computer Department in Sulamani University, with attended all authors members in this research group. There are two different types of investigation, the first investigation is hardware (computer) with 32 bits architecture and records all tests and showed in table1; thus different EasyPhp visions came with apaches versions over fixed operating system. However, the second investigation is same hardware (computer) before with extended another 32 BITS and becomes 64 BITS architecture that installed same operating system before and run different EasyPhp versions that came with apaches versions. And records all tests and showed in table2.

After running and testing our proposed system namely search engine with different web server's versions. There are same fixes parameters for example; operating systems and computer hardware Architecture (once 32 bits and the others is 64 bits), the tables 3 below shows differences between wamp 32 bits & wamp 64 bits in seconds by page generator in seconds. The results calculate by page generation FOR (WAMP 64 BITS – WAMP 32 BITS). As mentioned the results shows in table3. The lower page generation is mean higher speed of computer. Finally we realize that the version with higher facility will make the software is heaver and the page generator higher and make the speed is much lower than the others. Hence, the higher in versions is modernized and the size will be heaver in byte, but the generate time is higher and the speed is very poor. The first version 1.7 EasyPHP is very primitive no any graphical activity; for example in the primitive version couldn't creating any relations between tables and speeds is better. However in the modern versions such as version 12.1 is fully of graphical operations but the page generation is higher and speed is very poor if compared to versions EasyPHP1.7. From investigation one and two or the subtracting page generating two from page generating one we found out the simplest version is faster than the more complicated version duty the size of the web server, the heaver size is slower in speed.

Easy PHP Versions	Apache Versions	Page Generated in Seconds with Windows 7 Ultimate 32-bit	Page Generated in Seconds with Windows 7 Ultimate 64-bit	Differences WAMP 64BITS - WAMP32 BITS
1.7	1.3.27	0.0027	0.0016	-0.0011
1.8	1.3.33	0.0033	0.0033	0
3.0	2.2.11	0.0048	0.0073	0.0025
5.3.6.0	2.2.17	1.0294	1.0081	-0.0213
12.1	2.4.2	1.0492	1.0587	0.0095

TABLE 3: Differences between WAMP 32 bits & WAMP 64 BITS IN SECONDS BY PAGE GENERATER

The figure 1,2,3,4,5 shows first in range of lower page generator from lowest to higher in second's time by WAMP with 32.

Figure 1

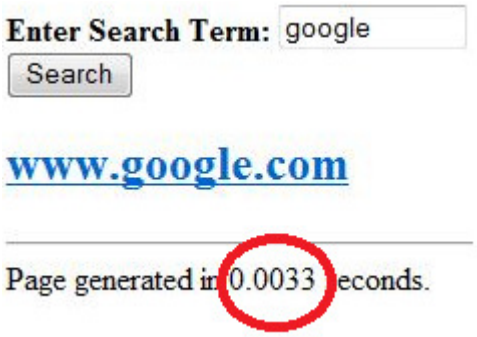

Figure 2

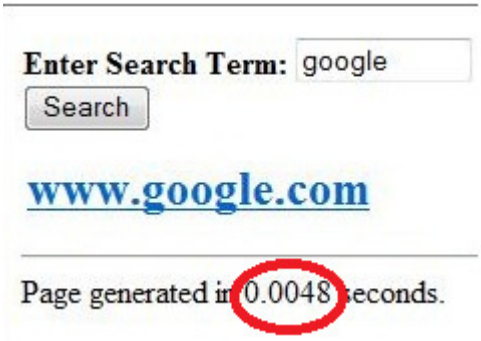

Figure 3

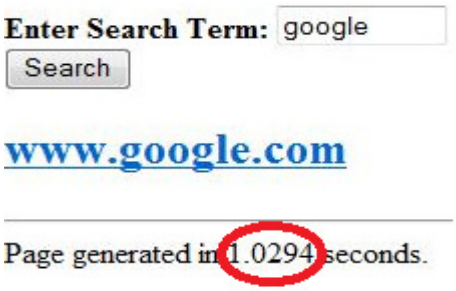

FIGURE 4

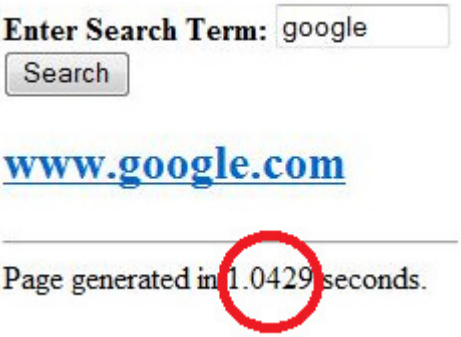

FIGURE 5

THE FIGURE 6,7,8,9,10 SHOWS FIRST IN RANGE OF LOWER PAGE GENERATOR FROM LOWEST TO HIGHER IN SECOND'S TIME BY WAMP WITH 64.

Figure 6

Figure 7

Figure 8

Figure 9

Figure 10

V. CONCLUSIONS

Since new adjustment is introduced in the modern versions of apache web server. The newer mentioned generation in WAMP much more powerful and complicate with heaver size in bytes. WAMP has a great role in to online technologies. The better web servers provide better web services with the role of operating system and computer architecture. EasyPHP versions are lots and our proposed system tested on several versions of apache with 32 and 64 bits hardware. The time of response in previous section [IV] help to select best time consume in versions of Apache web server and of course the best version is that version that supports windows operating system (Apache version 1.3.27) for both 32 and 64 bits architecture, because time consume helps E-systems and traditional systems. Our proposed system found out the lowest time page generated with simple apache version is better. . Our future work will be testing our proposed system on open source and PHP support Apache more than IIS. The only problem with the

investigation is has to take in account the first test because all the tests after test wouldn't be true.

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