Significance of Lamp Technology

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Abstract: *This paper reports the way we teach students how to setup and run virtual Linux, Apache 2, MySQL, and PHP Server. LAMP is a shorthand term for a web application platform. Together, these open source tools provide a world-class platform for deploying web applications. Running on the Linux operating system, the Apache web server, the MySQL database and the programming languages, PHP or Perl deliver all of the components needed to build secure scalable dynamic websites.*

Keywords: Web Application, LINUX, APACHE, MYSQL, PHP Language

I. INTRODUCTION

LAMP is an open-source Web development platform that uses Linux as the operating system, Apache as the Web server, MySQL as the relational database management system and PHP/Perl/Python as the object-oriented scripting language.

Sometimes LAMP is referred to as a LAMP stack because the platform has four layers. Stacks can be built on different operating systems.

LAMP is suitable for building dynamic web sites and web applications.

Since its creation, the LAMP model has been adapted to another component, though typically consisting of free and open-source software

II. COMPONENTS

LAMP stands for Linux, Apache, MySQL, and PHP. Together, they provide a proven set of software for delivering high-performance web applications. Each component contributes essential capabilities to the stack:

- **Linux:** The operating system. Linux is a free and open source operating system (OS) that has been around since the mid-1990s. Linux is popular in part because it offers more flexibility and configuration options than some other operating systems.
- **Apache:** The web server. The Apache web server processes requests and serves up web assets via HTTP so that the application is accessible to anyone in the public domain over a simple web URL.
- **MySQL:** The database. MySQL is an open source Relational database management system for storing the application data.
- **PHP:** The programming language. The PHP open source scripting language works with Apache to help you create dynamic web pages.

III. HOW LAMP PROCESS WORK

A high-level look at the LAMP stack order of execution shows how the elements interoperate. The process starts when the Apache web server receives requests for web pages from a user's browser. If the request is for a PHP file, Apache passes the request to PHP, which loads the file and executes the code contained in the file. PHP also communicates with MySQL to fetch any data referenced in the code.

PHP then uses the code in the file and the data from the database to create the HTML that browsers require to display web pages. The LAMP stack is efficient at handling not only static web pages, but also dynamic pages where the content may change each time it is loaded depending on the date, time, user identity and other factors.

After running the file code, PHP then passes the resulting data back to the Apache web server to send to the browser. It can also store this new data in MySQL. And of course, all of these operations are enabled by the Linux operating system running at the base of the stack.

3.1 Benefits of LAMP Technology

- **Highly Secure:** Thanks to the number of updates, encryptions, security architecture, and much more in Lamp stack, we can assure that this technology is very safe.
- **Independent Platform:** You can use operating systems (OS) along with different platforms such as Windows, Android, iOS and Linux. You can join with independent platforms and get the maximum benefits out of it.
- **Fast Development:** Since there are many options available, you can develop the application in a faster manner. Developers need not worry much about the time since everything is going to take place in a faster manner.

IV. APPLYING LAMP

4.1 Programming

PHP is the glue that takes the input from the browser and adds the data to the MySQL database. For each action add, edit, or delete you would build a PHP script that takes the data from the html form converts it into a SQL query and updates the database.

4.2 Security

The standard method is to use the security and authentication features of the apache web server. The tool mod_auth allows for password based authentication.

V. LITERATURE REVIEW

The TERM is one of the most effective and most common methods for the development of enterprise-grade, web-apps, due to their flexibility, adaptation, and evaluation of the system performance. The open-source code, the stack is created, the object is gradually grew over a period of time. Linux, Apache, and PHP has been widely used for more than 20 years.

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VII. CONCLUSION

Once you go through this article you may have a better understanding of LAMP Stack and its web applications. It has proven to be a secure and stable platform for website development and has also adapted itself by collaborating with various other solutions.

In the above applications, we learned how LAMP Stack is easy to customize according to available resources. It is interchangeable with other open source solutions and simplifies the development process.

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