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Seminar report

On

LAMP Technology

Submitted in partial fulfillment of the requirement for the award of degree of Bachelor of Technology in Computer Science rg

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Preface

I have made this report file on the topic **LAMP Technology**, I have tried my best to elucidate all the relevant detail to the topic to be included in the report. While in the beginning I have tried to give a general view about this topic.

My efforts and wholehearted co-corporation of each and everyone has ended on a nen, c. successful note. I express my sincere gratitude towho assisting me throughout the preparation of this topic. I thank him for providing me the reinforcement, confidence

Acknowledgement

I would like to thank respected Mr..... and Mr.for giving me such a wonderful opportunity to expand my knowledge for my own branch and giving me guidelines to present a seminar report. It helped me a lot to realize of what we study for.

Secondly, I would like to thank my parents who patiently helped me as i went through my work and helped to modify and eliminate some of the irrelevant or un-necessary stuffs.

Thirdly, I would like to thank my friends who helped me to make my work more organized and well-stacked till the end.

Next, I would thank Microsoft for developing such a wonderful tool like MS Word. It helped my work a lot to remain error-free.

Last but clearly not the least, I would thank The Almighty for giving me strength to complete my report on time.

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ABSTRACT

LAMP is a shorthand term for a web application platform consisting of Linux, Apache, MySQL and one of Perl or PHP. 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. LAMP has been touted as "the killer app" of the open source world.

With many LAMP sites running Ebusiness logic and Ecommerce site and requiring 24x7 uptime, ensuring the highest levels of data and application availability is critical. For organizations that have taken advantage of LAMP, these levels of availability are ensured by providing constant monitoring of the end-to-end application stack and immediate recovery of any failed solution components. Some also supports the movement of LAMP components among servers to remove the need for downtime associated with planned system maintenance.

The paper gives an overview of LINUX, APACHE, MYSQL, and mainly on PHP and its advantage over other active generation tools for interactive web design and its interface with the advanced database like MYSQL and finally the conclusion is provided.

Introduction

It's the development platform that determines the efficiency of an application. The choice of a wrong platform means the resultant application won't match the specifications of the client in their entirety.

Businesses, these days, are not looking for just any application. They want an application that can improve their business processes and fast track their business growth. For this to happen, they need an application that can be easily integrated into their existing IT infrastructure and one that can be trusted to deliver a high performance.

With an aim to developing the best web applications, developers have increasingly started using LAMP. LAMP is a software bundle or stack that stands for Linux, Apache, MySQL and PHP, Perl or Python. I

It's interesting to note that they were developed individually and at no point during the development of the software did the developers think about creating them for combined use. But, it was found that taken together, they offer an unbeatable stack of solutions driven technologies that support application servers.

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Why is LAMP a popular choice?

Think of a scenario wherein your business is unable to manage its organizational data. You want a solution to the comprehensive data flow taking place throughout your organization and you want this solution in double quick time.

In cases like these, where a business or an organization cannot dedicate a lot of time to problem solving, the LAMP stack is the preferred platform for development.

This is because developers can build an application quickly and ensure its reliability and stability. It's actually a win-win situation for both you and the developers.

res et Both sides save time, and the well-defined development process ensures a highly efficient

Components of the LAMP Stack

LINUX

LINUX is presently the most commonly used implementation of UNIX. Built from the ground up as a UNIX work-alike operating system for the Intel 386/486/pentium family of chips by a volunteer team of coders on the internet LINUX has revitalized the old-school UNIX community and added many new converts. LINUX development is led by Linus Torvalds.

The core of the system is the LINUX kernel. On top of the kernel a LINUX distribution will usually utilize many tools from the Free Software Foundation's GNU project. LINUX has gained a huge amount of momentum and support, both from individuals and large corporations such as IBM. LINUX provides a standards compliant robust operating system that inherits the UNIX legacy for security and stability.

Originally developed for intel x86 systems LINUX has been ported to small embedded systems on one end of the spectrum on up to large mainframes and clusters. LINUX can run on most common hardware platforms,

APACHE

Apache is the most popular web server on the Internet. Apache like LINUX, MySQL and PHP is an open source project. Apache is based on the NCSA (National Center for Super Computing Applications) web server. In 1995-1996 a group of developers coalesced around a collection of patches to the original NCSA web server. This group evolved into the Apache Software foundation.

With the release of Apache 2.0 apache has become a robust well documented multithreaded web server. Particularly appealing in the 2.0 release is improved support for non-UNIX systems. Apache can run on a large number of hardware and software platforms. Since 1996 Apache has been the most popular web server on the Internet. Presently apache holds 67% of the market.

MySQL

MySQL is a fast flexible Relational Database. MySQL is the most widely used Relational Database Management System in the world with over 4 million instances in use. MySQL is high-performance, robust, multi-threaded and multi user. MySQL utilizes client server architecture. Today, more than 4 million web sites create, use, and deploy MySQL-based applications. MySQL' focus is on stability and speed. Support for all aspects of the SQL standard that do not conflict with the performance goals are supported.

Features include:

• Portability. Support for a wided variety of Operating Systems and hardware

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- Speed and Reliability
- Ease of Use
- Multi user support
- Scalability
- Standards Compliant
- Replication
- Low TCO (total cost of ownership)
- Quality Documentation
- Dual license (free and non-free)
- Full Text searching
- Support for transactions
- Wide application support

PHP

What's next in the field of web design? It's already here. Today's webmasters are deluged with available technologies to incorporate into their designs. The ability to learn everything is fast becoming impossibility. So your choice in design technologies becomes increasingly important if you don't want to be the last man standing and left behind when everyone else has moved on. But before we get to that, lets do a quick review of the previous generation of web design.

In the static generation of web design, pages were mostly html pages that relied soley on static text and images to relay they information over the internet. Here the web pages

lacked x and y coordinate positioning, and relied on hand coded tables for somewhat accurate placement of images and text. Simple, and straight to the point, web design was more like writing a book and publishing it online.

The second generation of web design (the one we are in now), would be considered the ACTIVE generation. For quite a while now the internet has been drifting towards interactive web designs which allow users a more personal and dynamic experience when visiting websites. No longer is a great website simply a bunch of static text and images. A great website is now one which allows, indeed, encourages user interaction. No longer does knowing HTML inside out make you a webmaster, although that does help a great deal!! Now, knowing how to use interactive technologies isn't just helpful, it's almost a requirement. Here are a few of the interactive technologies available for the webmasters of today.

The benefits of using PHP server side processing include the following:

- ≻ Reduces network traffic.
- > Avoids cross platform issues with operating systems and web browsers.
- Can sent data to the client that isn't on the client computer.
- > Quicker loading time. After the server interprets all the php code, the resulting page is transmitted as HTML.
- Security is increased, since things can be coded into PHP that will never be viewed from the browser.

BROWSER

Since all the tools are in place to deliver html content to a browser it is assumed that control of the application will be through a browser based interface. Using the browser and HTML as the GUI (Graphical User Interface) for your application is frequently the most logical choice.

The browser is familiar and available on most computers and operating systems. Rendering of html is fairly standard, although frustrating examples of incompatibilities remain. Using html and html-form elements displayed within a browser is easier than building a similarly configured user interface from the ground up. If your application is internal you may want to develop for a specific browser and OS combination. This saves www. you the problems of browser inconsistencies and allows you take advantage of OS

APPLYING LAMP

1. **Storing our data:** Our data is going to be stored in the MySQL Database. One instance of MySQL can contain many databases. Since our data will be stored in MySQL it will be searchable, extendable, and accessible from many different machines or from the whole World Wide Web.

2. User Interface: Although MySQL provides a command line client that we can use to enter our data we are going to build a friendlier interface. This will be a browser-based interface and we will use PHP as the glue between the browser and the Database.

3. **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. 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. You can also use allow/deny directives to limit access based on location.

Using one or both of these apache tools you can limit access based on who they are or where they are connecting from. Other security features that you may want to use would be mod auth lap, mod auth oracle, certificate based authentication provided by mod ssl.

When not to use LAMP?

Applications not well suited for LAMP would include applications that have a frequent need for exchanging large amounts of transient data or that have particular and demanding needs for state maintenance.

It should be remembered that at the core http is a stateless protocol and although cookies allow for some session maintenance they may not be satisfactory for all applications. um an . of web ap. .pilication. If you find yourself fighting the http protocol at every turn and avoiding the "url as a resource mapped to the file system" arrangement of web applications then perhaps

Benefits of LAMP

The benefits of the LAMP stack are illustrated by the number of proponents of this system. Benefits of using LAMP include:

- Easy to code: Ask all developers and they will tell you that coding is a breeze on LAMP. What this is does is that it ensures that coding is relatively bug free and doesn't have to go through an exhaustive and time consuming process of fixing the bugs.
- **Easy deployment**: For many developers, it's the deployment of a web • application that becomes a tricky exercise; especially when the programming language cannot be easily integrated with the server and database. But, there are no such problems with LAMP as PHP is a standard Apache module. This makes it easier to deploy LAMP web applications.
- **Local Development** Another huge advantage of using LAMP is that a • developer can build an app locally and then deployed it onto the web.

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CONCLUSION

While Flash, Active X, and other proprietary elements will continue to creep in and entice webmasters, in the end, compatibility issues and price of development will dictate what eventually win out in the next generation of web design.

However, for the foreseeable future PHP, HTML, and databases are going to be in the future of interactive web design, and that's where I'm placing my bets. Open Source continues to play an important role in driving web technologies.

Even though Microsoft would like to be the only player on the field, Open Source, with it's flexibility will almost certainly be the winner in the end. Betting the farm on LAMP (Linux, Apache, MySql, PHP) seems much wiser to me than the alternative (Microsoft, IIS, Asp) ... not to mention it's a much less expensive route to follow.

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Reference

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