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LAMP Stack & MEAN Stack

Different from the data structure, regarding a website, a stack means a web server environment including the operating system, web server, the programming framework, and APIs. LAMP stack and MEAN stack are the most popular web stack. They rely on two different sets of backend languages, databases, and server environment technologies.

LAMP Stack

LAMP Stack is an open source software and it provides a great platform to develop applications and servers on the web-based platform. The four letters LAMP represent Linux, Apache, MySQL, and PHP. Linux is the operating system, Apache is the role of Web Server, MySQL is the back-end database, and PHP is the programming language for generating various web pages.

Pro：

1. The biggest advantage of LAMP is its security and universal support. LAMP has been around for decades and is supported by every major hosting provider. Taking the LAMP stack means you can host the page anywhere.
2. All of LAMP's core software is open source, so the interactions between the end users and the source under LAMP can be altered to suit the needs of the developer.
3. The LAMP stack is faster and scalable as it has a non-blocking structure.
4. For beginners, MySQL and PHP are easy to learn. Also, deployment of LAMP is smoother as it utilizes PHP as an APACHE module and uploads PHP files through a MySQL Database to an APACHE server.
5. It is easy to find support resources. All of LAMP's core software is open source, and most developers have adopted this model, so in the developer

forum, you can find a lot of support instructions, covering all the problems you may encounter in the LAMP environment.

Con:

1. Developers don't have control of the libraries that are available. For example, depending on your hosting provider, you can get stuck with the libraries and the versions of those libraries that have been built.
2. LAMP stack only supports Linux operating systems.
3. It is challenging to switch between PHP or Python and then use JavaScript or HTML.

MEAN Stack

MEAN stack has become one of the most widely adopted stacks in recent times. It is also an open source stack which helps in quick creation of web-based applications. MEAN stands for MongoDB, ExpressJS, AngularJS, and NodeJS. MongoDB is a NoSQL database, which is equivalent to Mysql in LAMP. ExpressJS defines and builds the framework of the entire website, just like Apache in LAMP. AngularJS is responsible for the communication between front-end and back-end, providing various AJAX components and front-end experience interface, just like the role of PHP in LAMP. Finally, Node.js is like the underlying role of Linux in LAMP, providing a pure Javascript environment execution platform.

Pro:

1. MEAN supports cross-platform operating systems. There is no requirement for the server operating system or server software. The MEAN stack can run on any kind of OS, and Node even has its own server that handles JS processing on the back end.
2. In MEAN, JavaScript is used for both the server and client alike. Everything can be run in a single language which improves development efficiency because it allows you to handle all front-end and back-end work in the same language.

3. Owing to the versatility of JavaScript, MEAN is highly adaptable for a vast range of web apps.
4. MEAN will provide your development team with faster data retrieval speed. MEAN uses MongoDB, which is a non-relational database, and it optimizes the query.

Con:

1. Due to privacy issues, end users often use ad blockers and disable JavaScript. Most browser extensions also allow users to proactively choose which scripts are allowed to run, so your application won't work if it's completely JavaScript-based. This can create issues between the user and website owners.
2. The MEAN stack is slow and not as scalable as the LAMP stack as it has a non-blocking structure.
3. JavaScript tends to make websites slower to load, and this could reduce its popularity.

Database management is the main difference between the two stacks. LAMP uses MySQL for relational data storage, while MEAN uses MongoDB, which is a non-relational database. Non-relational DBs are faster and easier to scale with high traffic.

If you deal with large amounts of uncluttered data or big data, in this case, MEAN stack becomes the most suitable stack. Whereas, on the other hand, if you deal mostly with developing simple non-high end websites then LAMP is the most preferred choice of a stack.

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