Title:
A Practical Use Of Open Source Code Softwares

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Summary:
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proprietary software costs would be too high for our financial resources. Our
only option then was to make use of Open Source Code softwares.

However, within the Open Source Code there are lots of softwares to choose from,
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Keywords:
web design, web site development, linux, open source code, free, slackware

Article Body:
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In our case, we picked Linux as our operating system. However we faced a big
question: Which Linux distribution ? There are dozens of linux distributions,
each one with specific advantages, sometimes with or without paid services.

We chose linux Slackware because we thought that it would suit better our needs,
in terms of stability and reliability. Slackware is a conservative distribution,
meaning that it only offers in its distribution package kernel versions and
third party libraries, once it□ been proved to be stable and reliable. As a
result, Slackware is one the most stable Linux operating system on the market.
If the user wishes the most recent Linux kernel and libraries, we recommend to
look for a different distribution.

Another reason for us picking Slackware, was because of its text interface, which at the beginning may become a bit difficult, in the long run however it offers a better understanding of the Linux environment. This way most of Slackware configurations are done thru text scripts.

Once it was set the operating system, we picked Apache as our web server. Apache is one of the most popular web server in the internet. For server programming language, we chose PHP. Also, a very popular programming language. Our experience with Apache/PHP proves that this setup is very reliable, working extremely well in our production environment. For workstation programming language, we chose javascript, which besides of having a simple syntax, it offers lots of resources.

Apache web server is really a complete web server. Also, it can become very complex with many configuration setups.

For our database, we picked Postgresql. This database has been made available to the public for more than 15 years, and besides of being well debugged, it offers so many resources that it has become one of the best database options from Open Source Code softwares. Extremely reliable, Postgresql has reported cases where there have been databases in production with over 4 terabytes. Besides all of that, Postresql is not the most popular Open Source Code database. A matter of marketing ? Probably.

As for the programming language PHP, we had to use an object oriented application structure. There are many PHP application structures being offered with Open Source Code license. Object oriented application is very important, because it makes programming very easy and scalable up to the point where the system may grow without many problems. Also, it helps to keep PHP code separated from HTML, with the help of some specific libraries, such as Smarty. We make use of Smarty library and we believe that it is a very important resource, which can even make web pages faster thru the use of its cache functions.

Also a very important set of libraries worth mentioning for PHP systems, is the PEAR libraries. In PEAR web site, among the many libraries being offered, there are the database interface DB and the MAIL_QUEUE, which sends emails thru the use of database.

As we came to the end of our web site project, we had to use some sort of real time database replication. For that we chose the DRBD and Heartbeat libraries. The use of database replication is very important and should not be postponed. Just after 3 months our system got into production, our server hard disk became

bad. Thru the use of DRBD/Heartbeat we were able to put the system back into production within seconds, without loosing any data. DRBD/Heartbeat replication is done thru the use of a lan network between the server and slave nodes.

Our project also makes use of ImageMagick (enlarge and reduce images), Iptables (firewall), Tsearch2(text search in portgresql) and Mon (linux monitoring tasks).

Also a very important library worth mentioning is the pseudo APC compiler for PHP. Speed is always a critical factor for internet sites.

Our web site is already in production and based upon our experience we can say that the Open Source Code softwares we picked, proved to be extremely reliable and stable. Open Source Code softwares can certainly be an excellent option for developing web sites.

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