

HobbyClub

Requirements Specifications

Technology Components

As the project *HobbyClub* aims to develop a modern technology which can enable fancy features for the end-user, there is a list of requirements in order to set up the site and maintain it in the easiest possible way, making life easier for the developers. The basic requirements for the *HobbyClub* project consist of the following:

- 1) Hardware components and hosting
- 2) Version Control System
- 3) Web Server
- 4) Database Server

All these components mentioned above are listed and described in the following sections. For further details, please refer to the document “*Technical Architecture*”.

Hardware Components and Hosting

First and foremost, in every single project and when developing any product, the most important thing is to find a place where to store the information and where to centralize the operations of the project team.

For this purpose, the team decided to keep the project on a flexible server, for instance, at a developer's home, where all developers could have easy access to it and manage the project without restrictions.

As the project is a simple web site, the basic requirements are reduced to only a computer server which can work as multiple servers. Normally, for big projects,

companies use several computers, where they store the database in one computer, the web server in other computer, etcetera. However, this project is not as big as in a real company, and the team decided to set up an unique server which would run multiple servers inside: a web server, a database server, a concurrent version control system server, etcetera.

The server is basically an Intel machine with a connection of 1Mbps to the Internet. As some benchmarks were performed, it turned out to be enough for the purposes of this project. In the machine were allocated the developers accounts from which they could have access to the project source and the web site from the developers' side.

Version Control System

This software is “mandatory” when it comes to professional projects. Any concurrent version control system software, nowadays, is very powerful and manages almost any situation when developing a product.

However, the *HobbyClub* team chose to use Subversion (SVN) software. In contrast to the classical CVS, SVN is faster, portable and more secure. It is faster because it has built-in compression when uploading/downloading patches, it is portable since it does not require a permanent connection to the Internet, and it is more secure since it is able to resolve patch conflicts in time.

Another advantage of using SVN is that it lets perform any action related to any event on the server. As a matter of fact, in *HobbyClub* the team has set up that when a developer has sent a new patch, it calls the server scripts to rebuild the whole site (containing the new changes) and also it sends an email to all developers informing about the new changes.

Web Server

The HTTP server chosen for this project was Apache Server. The choice was easy and very concluding: Apache Server is the most used along the Internet, it is also open

source and it supports a huge variety of modules, such as PHP and MySQL database, which is what the *HobbyClub* team needed.

On the top of the web server, there is support for PHP (version 4) Scripting Language, which is responsible of the link between the user-interface and the server side.

Database Server

On the same host, but separated from the web server, a MySQL database server was installed. Similar reasons as in the choice for the web server led the team into this decision. MySQL is an experienced software and is open source. Moreover, MySQL integrates perfectly with PHP as well as Apache, making it highly suitable for this project.

The database server was a necessary entity since the very beginning of this project. The fact that it can store all kind of information gave the team the idea of creating a complete project with users and passwords, messages board, events and clubs, internal searches, etcetera. Obviously, without a database, the project would find many restrictions when implementing fancy features.

Intercommunication Tools

Despite all the internal servers are set up and the computer server is connected to the Internet to show the web site, there are still some arrangements that must be done by using external tools to improve the functionality of the project site.

In fact, many projects nowadays are very time-consuming since they require the developers to send the patches, update the documentation, notify the rest of developers and rebuild the new source code to show it to the customer, everything done manually.

In consequence, the developers are focused only on the source code (the “coding” part), where they only need to know how to upload and download patches from the source code. The process of notifying other developers, of rebuilding the new web site with the

updated source code and taking care of the patch security issues, is performed by the server.