

Free Software at Zaragoza City Council

Gnome Marketing Hackfest (May 2010)

Background

Government Agreement (2005)

In 2005, all political parties, unanimously, expressed their wish on promoting actions to support free software at the Zaragoza City Council. To be precise, within the local civil servant desktop environment.

This agreement initiated proliferation of free software within the municipal departments in Zaragoza. This was not just a declaration of intent. It was a need for starting the project to develop the idea based on this agreement. This was done by the 'Dirección General de Ciencia y Tecnología' within the city council and allowed ideas to become actions.

The agreement had a series of singular features that make it a very important tool:

- It was a unanimous agreement of all the politic parties, meaning that is ideological free assuring its continuity in time.
- For any other Public Administration Office willing to follow the same path, this agreement establishes a starting point.

Environment

Desktop

There are approximately 2800 Desktop PCs in the city council. Hardware is very varied as it has been incorporated at different times and from different providers.

Moreover, we must take into account the peripherals variety and quantity:

- Printers (laser, ink, multifunction, etc)
- Scanners
- Digital Cameras
- Mobile Devices
- etc...

Regarding software, there is a wide range as needs for every departments are quite different:

- Programming (Development and access to Databases).
- Office automation
- Terminal Applications?

- CAD Tools

There is also another kind of terminal, called “Zaragoza Accesible”, for the general public use at the different municipal centres for local information purposes.

Servers

There are more than 60 servers are needed to service to this huge infrastructure (both internally and externally):

- File servers
- Mail servers
- Authentication servers
- Printing servers
- Certification servers
- Intranet / Internet
- Security servers
- Document management system
- etc...

Some of them run on Linux, whereas some others, such as file, mail and authentication servers use Novell.

Distribution

There are more than 100 different sites along the city to provide nearer and to better service.

Some of these sites are quite big and have a good access to the LAN, buildings at the “Plaza del Pilar” o the new “Seminario” building are two examples, in contrast to that, there are some other sites that will need to improve their communication systems with the LAN.

All of the above gives the idea of the big complexity faced and shows the effort needed to make the migration to a free software system a reality.

Roadmap (please see slide enclosed)

Milestones

0. First step, previous to first stage, consisted on inventorying every department (both software and hardware). This step was of a big importance as it allowed to know with exactitude how big the project was and how and where the initial efforts had to be focused on. One of the conclusions from this step was the need for the changeover had to be progressive.
1. First stage, change of lightweight Windows XP applications (minor in terms of use not in importance). They were as follows:

- Mozilla Firefox as web browser, replacing Internet Explorer.
 - Mozilla Thunderbird as mail client, replacing Outlook.
 - FileZilla as FTP client.
 - VLC as multimedia player, replacing Media Player.
2. Second stage was the time for office suite changeover. OpenOffice replaced Microsoft Office 97 suite. The main features in both packages are practically the same (leaving aside Base vs. Access) and the functionalities are also quite similar.

This may be considered the most important migration process of all since these applications are extensively used by all departments. The main goal was not to interfere in day-to-day work and to keep both quality and functionality standards as they were. For these reasons this stage was the most delicate of them all.

To illustrate, we must say that this stage is the one that has taken the longest, up to 5 different versions of OpenOffice have been distributed.

3. Third stage brought changeover for the OS in all PCs. SLED (SuSE Linux Enterprise Desktop) was the chosen application since it was the one with better integration to our Novell Services (files, authentication, mail, etc.).

Parallel to the first migration stage, a first prototype, using SLED 10, started to be developed with two main goals in mind: to get IT people familiar with Linux and to think about the best way to implement the desktop environment. A Novell Technical Consultant helped with the prototype development.

In mid 2008, after second stage was finished and consolidated, Linux started to be implemented, one by one, on PCs.

Apart from the mentioned stages and along the whole migration project, information on how and when free software was to be implemented and how this was to affect their day-to-day tasks has been shared with all stakeholders.

It has been also very important the specific training need both to the technical personnel and the final users.

Above all, it is vital to have a daily helpdesk team dealing with emergencies and questions any civil servants may have when using these applications.

Resources

Personnel

Despite the number of computers is about 2800, users are around 5500.

Within the IT department there are 2 different workgroups dealing, more specifically, with free software implementation:

1. Free Software group has 7 members and deals with the following tasks:
 - Management and coordination (1 person)

- OpenOffice Helpdesk (2 people)
 - Research & Development (3 people)
 - Workstation migration (1 person)
2. Users helpdesk group. Formed by 8 people, they give support for all applications, both free and licensed.

Training

As said above (please refer to Roadmap slide), training is very important for the IT department as well as the final user.

Technical personnel pursued Novell certification to be able to use and adapt Linux.

Civil servant training was divided into two modules:

- OpenOffice. 20 hours.
- Linux Desktop. 6 hours.

As said before, office suite were more important for us than the operative system. Thanks to Gnome we could obtain a desktop environment quite similar to Windows XP, easing the technology changeover.

External consultancy

To be able to start the Linux desktop prototype model development an external consultant (Jordi Bruguera) was needed, who had worked for Novell before.

Although that was necessary and very important at the beginning of the project, nowadays all R&D work to adapt free software to our system is being carried out by our IT department.

“Renove” Plan

As incentive for some users migrating to Linux, some computers are being renovated, making them more receptive to the changeover. Some examples: bigger RAM or new flat monitors (TFT) replacing the old ones (CRT)

Some Numbers

2800 desktop computers:

- Lightweight applications (Firefox, Thunderbird, etc...) are installed in 100% of the computers.
- 100% of computers have OpenOffice installed although use is around 80% as there are some features that have been not possible to migrate. Two examples: mailing lists from Access on Linux or some specific graphics that can be done on Excel but Calc do not offer.

- 14 % of the computers already use Linux (more specifically our distribution AZLinux). In this case, migration is slow because of the following causes:
 1. The user needs study and the migration progress are specific of each computer.
 2. We started desktop changeover in mid 2008. Compared to the time dedicated to OpenOffice suite, difference between numbers are easy to understand.

Within this group of computers already with Linux we can find those for “Zaragoza Accesible”. 100% of the latter (about 50 computers) run free software.

Advantages

Instant saving on software licensing was the first advantage to be obtained although this process will be better seen in the long term. Economical savings have been invested on city council personnel training in order to help with the migration.

Technological independence is, of course, also obtained. Flexibility and control offered by Linux is to be had into account thanks to Gnome.

A software distribution platform has been developed by our team for the Linux desktop solution that shows the independence, flexibility and control achieved. We call it MIGAS.

To plainly explain what MIGAS is, it can be said that it allows to assign specific software to specific computers at a designated date. These tools also show software setup results (feedback) and provide with installation information. All without any supervision: all is automatic.

Another inherent advantage of Linux systems is the built-in safety: a user can only work with their files only, having no access to other users or OS files. This can also be done with Windows but it not as easy to manage.

Viruses, so habitual on Windows systems, are not a problem using our free software desktop solution. This is a big advantage compared to Windows XP users since their system must run an antivirus application (and therefore using many computer resources).

Shared knowledge is another benefit that free software offers. Along these years, we have used knowledge from blogs, forums, etc. In the same way we offer our knowledge to other Public Administrations on migration to free software.

Difficulties

Lack of knowledge

At the beginning and because the project’s big magnitude, it would have been easy to get into a FUD (Fear, Uncertainty and Doubt) state. This added to the lack of knowledge of the IT team (with experience in Windows OS), showed that training was the first thing to take care of and this is what we started with. Novell was the chosen partner to learn from.

Internal Effort

As said before, there was a need for training to implement the new system, and that takes time. Besides, IT personnel was still performing the same tasks than before which required a big effort for the team to get up to date with the new environment.

Unfriendly Environment

Some think that, with free software, everything should be easier. This is not necessary true since we may find a unfriendly environment to work against.

- Hardware manufacturers do not usually develop controllers for their products that run on Linux.
- Software companies do not normally update their applications for Linux or they are not even released.

Electronic DNI (Spanish identity certification) is a perfect example. There are only software released for 3 Linux distributions and they all are for obsolete versions of it.

- To find alternatives to commercial software is not always easy. Sometimes you must compromise some features.
- Users are reluctant to changes, whatever they may be, even if it improves their day-to-day work.

Insufficient coordination among Public Administrations

Many others have walked the same path on adoption of free software. None of their experience could be used by us as there was not a clear shared information channel.

It would be very interesting, for future references, to create a common forum in order to make interaction possible. We are working with CENATIC to order to create a common way of communication.

Conclusions

If there was no such a thing as free software, it had to be invented as it promotes values in society as a whole:

- Freedom
- The importance of the general public
- Sharing
- Generosity

Regarding Public Administration, free software means:

- A challenge, technically speaking (it is quite complex) as well as human (way of thinking)
- a chance that it should not be let escape.

Contact

Please feel free to contact us for more information on our project or about how to implement free software in Public Administrations.

Project Blog

You can find us on:

<http://zaragozaciudad.net/azlinux/>

We can not updated as much as we would like to as our resources are limited but you will find content to be very interesting, any feedback will be welcomed.

Mail contact

azlinux@zaragoza.es

Address

Edificio Seminario

Vía Hispanidad 20, 3ª planta, ala este

Servicio de Redes y Sistemas

50009, Zaragoza