Selecting, developing and deploying Debian-based IT solutions in the Venezuelan National Migration Process

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Legal precedents

- 1999, **National Constitution**, science and technology are matter of public interest
- 2000, **Decree 825**, Nationwide, free Internet access is a State's prioritory policy
- 2004, **Decree 3390**, free software to be used preferently in the National Public Administration

Yearly funds

- 1600 million USD (41 % of Budget) is for **social expenditures**: education, health care and S&T.
- **Additional funds** are usually asigned to S&T, coming directly from oil sales.
- A typical State-run FOSS project may get **up to 250,000 USD**, not including any other tech-related supports you might get (such as hardware, personnel, logistics, etc.)

Infrastructure

Hardware and networking

- **Excellent e-Government infrastructure** (most institutions have their own website, servers and services, and if they can't afford it the national gov't is able to provide them with those services)

- **Good hardware infrastructure**, mostly HP-based. Desktop/workstation market is being lifted by a joint venture between China and Venezuela, with an assembly factory in Venezuela.

- **Good Internet connectivity**, mostly US-based. To be improved by a joint venture with the Chinese government willing to launch a telecom satellite. Good nat'l connectivity.

Political

- **Soreighnity** and National Security (2002 National Strike)
- **Only country left** in the region with a strong, active, nationwide migration plan.

Economical

- Huge savings, even including the initial costs of ownerships related to training and equipment. A small office could **save up to 100,000 USD per year** just by moving away maintenance contracts.

Motivation

Social

- FOSS has provided a fast way to **improve IT literacy** in the Country. Millions of people have learned to read and write, and then have completed their basic/secondary education, while still lacking a decent IT education.

- Nationwide **Plan Nacional de Alfabetización Tecnológica** has trained 200,000 people using Debian, willing to benefit 1,000,000 by 2008.

- Government says that some social policies that come inherently with FOSS merge with the ones they're defending, so they seem happy with it, which is a **Good Thing**.

Actors

Government

- As **The Director**, establishing guidelines and managing the migration process.
- As a **client**, requesting human resources, developments, services and support.
- As a **provider**, training people, providing logistics and job opportunities.

Big enterprises

- In most cases, there are **no savings** regarding money investment. Some of them were even involved in corruption.
- They're in the **borderline** between free software and anything non-free.
- They have a shortage of personnel and **lack of creative resources**.

Actors

Medium and small enterprises

- Initially benefited by the high demand of services.
- Great human and creative resources.

Co-operatives

- Highly benefited due to their political situation.
- Access to a wide range of resources including loans, insurances and so on.
- Lack of trained personnel, lack of creative ideas.

Actors

Community

- Several groups involved (user groups, activist groups and developer groups, as well as local groups, university groups and specific groups) with a great, nationwide, user-base (est. 3000 actively following events, since mid-90's)

- Highly de-centralized and de-organized, and usually not controlled.

- Great human and creative resources, developers, teachers, decision-makers.

- Usually non-profit groups, but most members are independent consultants (see Medium and small enterprises)

- Usually called up to provide comments or technical information on government decisions, including laws, decrees, rules, guidelines and other procedures.

Selecting

The who

- Small companies, private consultants and co-ops are usually preferred.
- Most enterprises value çommunity"participation and will usually Google a bit about the applicants.
- Usual measures, such as a nationwide, publicly-announced licitation process, are not done.

The how

- Debian Documentation is thoroughly used, especially the Security Handbook. Documentation is always looked for in spanish.
- Other community resources, like Debian Administration, forums and mailing lists, are also checked for, but Debian Venezuela is usually a first place for questions.

Developing

Policies

- Most projects observe LSB 3.1, FHS 2.3, Debian Policy and specific policies.
- Product-oriented programming in languages such as PHP and Perl. Java is heavily disregarded as a viable solution.
- Proprietary software only when it compromises the viability of a mainly FOSS-based project. Needs authorization.
- Bugs and improvements must be reported to Debian in a usable way. This have been done in a small scale and mainly through Debian Venezuela.

Project management

- Year-oriented budgets for most projects (required by Law) and no strict timelines.
- Usually a non-technical person is assigned as the management. This damages most projects since requirements

Deploying

Training

- Almost any project will include a clause requiring the development to be documented or a training process to be completed.
- A nationwide, medium-level, training program in FOSS (Academia de Software Libre) receives recommendations from developers and teachers in Venezuela.

Results

- Results can be reported to the Oficina de Tecnologias de la Informacion. Using this reports, the Oficina de Tecnologias de la Informacion establishes guidelines and denies/approves any request for proprietary software usage.
- As of today, there's only one known authorization for proprietary software usage: those parts of Sun's Java that still remain proprietary.

Debian in Venezuela

Government

- Debian is officially recommended by the office in charge for the migration (Oficina de Tecnologias de la Informacion) since 2006.

- **National Distribution**: uses Debian package base and it's based on Debian's best practices.

- Networking and **e-Government** platform uses Debian since 2006 (Centro Nacional de Tecnologias de la Informacion).

- CNE, the **National Electoral Authority**, uses exclusively Debian for their network backend and they usually receive members of the community willing to audit their backend and their electoral system.

State enterprises

- Most State enterprises have decided to use FOSS even when they're not mandated by Law.
- PDVSA has decided to migrate their servers and desktops to Debian. They haven't released information on that yet.
- CVG Edelca, which produces the equivalent in clean energy of almost 450,000 bpd, has already migrated their servers to Debian, several specializaed applications and 500 of their end-users in business critical areas. By Dec 2007, there will be 3000 Debian desktops.

Debian in Venezuela

Private enterprises

- Some private enterprises are progressively starting to use FOSS, especially because they feel that they'll not be compatible when making businesses with the Government.
- Since several small service companies and private consultants work with Debian, there're several cases of Debian-based private enterprises, mainly for network services such as VPNs. (see Seguros Nuevo Mundo, an insurance company)

Universities

- Most universities now feature a course or two regarding FOSS and use FOSS themselves for network or development.
- It's known that some Universities are using Debian in their network backends (for example UNESR or UNA) and in some cases their teachers endorse the use of Debian.

Results: good things

Good things

- The communities user-base has grown a lot since 2005, therefore a bigger number of activists are working towards FOSS-usage nationwide and sponsorship for those groups.
- Debian is highly regarded as the national standard, being in use since 2005 in several critical institutions.
- Usage by the government has made private enterprises and end-users to interest in FOSS.
- Since there's more budget for S&T, some institutions have decided to invest their savings in training or developing new products.
- As far as the OTI concerns, Debian is being recommended and most policies are bound to be observed in all developments.
- Decisions regarding FOSS are usually consulted with the communities, which has prevented some catastrophes (see the Red Hat Enterprise Linux case)

Bad things

- FOSS seems to be taken into account as a mere political issue, a state of mind which needs to be reversed ASAP through a communication campaign.

- Most developments are not yet integrated to the national policies, either because they're not willing to (they might want to do their packages using a sloppy procedure, for example) or because they don't know about them.

- Venezuelan State is a highly bureaucratic one, therefore making it hard to setup a project in a "standard"way. When it happens, though, usually a lot of resources are available.

Comments are welcome

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