

Open-Source Initiatives

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ABSTRACT

National Informatics Centre (NIC), Kerala, has been taking a lot of initiatives using open-source technologies to prove that cost-effective and world-class standards and solutions can be used very effectively by the government. The District Collectorate suite (DC*Suite), the centralised seat allotment process for professional courses (CAPNIC), the Treasury Information Management System (TRIM), MESSAGE – a workflow management system, CLAIMS – the *Lok ayukta* Information Monitoring system, and e-DROP for assigning officials for polling duty are some Linux/Apache/PHP/MySQL-based applications.

The web sites for the Press Information Bureau, Thiruvananthapuram, and four Kendriya Vidyalayas have been developed using open-source content management tools –Mambo and Joomla.

Key Areas

The key areas where open-source-based initiatives have been taken are:

- Critical solutions that are based on Linux/Apache/PHP/MySQL. Linux/Apache/PHP/PostgreSQL have been implemented in NIC Kerala.
- Development of user-friendly web sites with local language support using open-source content management tools like Mambo and Joomla.
- Solutions using JAVA/J2EE.
- Multimedia solutions.
- Open Office implementation across Kerala.

Introduction/Background

Linux has been used in NIC centres of Kerala for deployment of mail, web, application, intranet and data base servers. RedHat, Mandriva and Fedora are the various flavours of Linux used.

- Mambo and Joomla are freely downloadable content management systems (CMSs) and are hence cost effective. The content manager need

not know any programming language such as HTML to update the site developed using these CMSs. The web sites for the Press Information Bureau, Thiruvananthapuram; Doordarshan, Thiruvananthapuram; Lakshibai National College for Physical Education and five Kendriya Vidyalayas in Thiruvananthapuram district have been developed using these CMSs.

- LAMP-based and LAPP-based applications like the integrated suite of applications for the district e-governance (DC*Suite), court case information system, centralised seat allotment process for professional courses, treasury information system, campus – academic and administrative activities of the College of Engineering, Thiruvananthapuram, etc., are some of the successful implementations in Kerala. These are also cost-effective solutions.
- Dairy*Net is Linux/Apache/PHP and PostgreSQL based. It facilitates a common interaction channel between the Dairy Department, cooperative societies and dairy farmers.
- A centralised water charge billing and revenue collection system for the Kerala Water Authority, providing anywhere, anytime and anyhow revenue collection and consumer redress (ABACUS), has been developed on the Java platform.
- Open-source multimedia tools such as Gnome meeting, Camstudio and Gimp are widely used in the NIC centres of Kerala.
- Training at state, district levels on Open Office 2.0 has been conducted, and around 400 revenue staff have been trained by the Government of Kerala. Kasargod district has been declared as the first Open Office-trained collectorate. Open Office is used for note sheet preparation in DC*Suite, MESSAGE applications. In the Lakshmi Bai Sports College, 40 staff have been trained in using Open Office.

Objective

Content Management Systems

- Administrator and super user privileges
- Any number of users and roles definition
- Authentication and role management built-in
- Online updating of design and content
- Online content moderation
- Internal audit/statistics
- Ease of use
- Cuts down the development cycle
- No third-party maintenance required

LAMP/LAPP Applications

The DC*Suite Application for District e-Governance

- e-Governance solution
- All services of the collectorate automated through computerisation
- All the modules are integrated in one package
- Workflow model implemented
- Completely automated at Palakkad district
- Intranet services, counter services and touch-screen services enabled
- Replication in other districts of Kerala

TRIM: The Treasury Application

- The top management of the finance department will benefit through the financial management of the state.
- Other departments for financial reconciliation.
- Citizens can check their treasury savings account balance.

CLAIMS: Court Cases Information Monitoring System

- Case status, posting of hearing details and the present status of the case at any time can be obtained by the public, the complainant and the department.

Centralised Allotment Process for Professional Courses (CAPNIC)

- For conducting counselling from multiple locations for the allotment of seats for the professional courses in Kerala.
- Candidates can attend counselling from anywhere, and it helps them and their parents save the cost of travel and accommodation.
- Vacancy positions can be known to the public at any time as the data is updated on the web.
- The cost and time involved in making the list available to the colleges were completely eliminated, and the list was made available on the web with the photograph of each candidate.
- The entire process was made transparent, and the allotment details can be verified for any candidate and any college.
- College-wise/Branch-wise/Category-wise vacancy positions are available on the web site.

- Payment and refund mechanisms are automated and integrated into the system, which eliminates manual compilation and reconciliation.
- Higher option and reallocation lists are published on the web, which eliminates time delay and reduces cost.

Technology

Linux, Apache, PHP, Java, CMSs (Mambo and Joomla) and MySQL have been used for the development of all critical applications.

Future Plans

The expertise generated can be replicated in other geographical locations. Documentation and training will make the replication process easier. The following open-source initiatives have been taken up for replication across geographical locations.

1. CAPNIC: Online counselling
2. DC * Suite: District collectorate suite
3. CMS: Open source content managers
4. Dairy * net: Dairy development system
5. Lok ayukta: Court information system

Conclusion

The use of open-source-based applications by NIC, Kerala, for the various e-governance-based applications, both critical and online, has proven to be very cost-effective.