

An aerial photograph of a coastal wetland or marsh area. The terrain is a mix of light brown and greyish-brown, with some darker patches. A prominent vertical blue line runs down the right side of the image, and a horizontal blue line runs across the middle. The text is overlaid on the image.

Plone: FNAL Experiences with Content Management

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Hepix, Spring 2005

CSI – Core Servers & Infrastructure

- Responsibilities
 - Windows Infrastructure
 - Web (Apache & IIS)
 - Storage
 - Scientific Linux Fermi
 - Email
 - Calendar
 - Backups
 - AFS

User Requests

- Wiki Support
- Document Management
- Issue Tracking
- Restricted Web site design
- Workflow tools

Support multiple web applications or provide configurable, extensible framework?

What Is Plone?

- Plone is a Content Management System designed for:
 - a document publishing system
 - workflow tracker
 - portal server
 - groupware collaboration tool

Why Plone?

- Open source
- Supported
 - ~100 developers on the Plone Development team
 - 3rd Party support available
- Easy to use
- Easy to install
- Built on CMF on top of Zope

Why Plone?

- Database Interoperability
 - most relational database systems, open source and commercial
- Secure
 - Multiple methods to authenticate
 - Folder and document permissions
 - Sandbox structure

Why Plone?

- Multiple protocols
 - FTP, XMLRPC, HTTP and WEBDAV
- Extensible
 - Numerous plug-ins for features and content types
- Platform Independent
 - Runs on Windows, Linux, Mac OS X, FreeBSD and Solaris

FNAL Uses

- Open Science GRID

- Documentation management

- Wiki support

- GRID certificate authentication

<https://plone3.opensciencegrid.org/opensciencegrid/>

FNAL Uses

- Scientific Linux
 - Documentation management
 - Restricted Access
 - Bug Tracking
 - Password authentication
- <https://www.scientificlinux.org/>

FNAL Uses

- Windows Policy

- Documentation management
- Restricted Access
- Form approval process
- FNAL Kx509 certificate authentication

<https://plone3.fnal.gov/WinPol/>

<https://plone3.fnal.gov/WinForms/Forms/>

FNAL Additions

- Authentication
 - Fermi Kerberized X509 certificate
 - DOE Grid Certificates
 - LDAP Integration
- System Logbooks
- Workflow

FNAL Additions

- Workflow
 - Request submittal
 - Review/Vote
 - Approval

FNAL Design – *Infrastructure Server*



FNAL Design – Infrastructure Server

- One Plone site running on top of a single Zope instance with folders for major sections, divisions and lab experiments
 - Control over portlets
 - Custom Style Sheets (colors/layout)
 - Full control over content

FNAL Design – Infrastructure Server

- Inherit Authentication Rules (users and groups)
- Inherit Plug-ins
- Shared Search across all folders in site.

The Infrastructure server has 6GB of memory

FNAL Design – *Site Server*



FNAL Design – Site Server

- Multiple Plone sites running on top of a single Zope instance. This system is used by projects that reach outside the lab or where specific Plone module development is required.
 - Control over portlets
 - Custom Style Sheets (colors/layout)
 - Full control over content

FNAL Design – Site Server

- Control of Authentication rules (including users and groups)
- Ability to choose Plugins (can't handle different versions of same plugin though)
- Localized Search for site

The Site server has 2GB of memory

FNAL Support

- Customers are required to provide at least one (1) manager for their folder or site.
- The manager(s) is/are responsible for:
 - Learning about Plone
 - Configuring the Plone site/folder to customer specifications
 - Maintaining plugins that they have requested

FNAL Support

- CSI provides:
 - server support
 - authentication method
 - folder/site creation.
 - Plugin recommendation, testing and installation
 - instance configuration help

FNAL Support

- 3rd party Support
 - Examining 3rd party support for plug-in testing and development and instance configuration help.

Lessons Learned

- Customisation beyond a certain point has a steep learning curve.
- Plone likes memory. Lots of memory
- Plone is slower than static web pages
- Better to have one Zope instance and multiple Plone sites than multiple Zope Instances and Plone sites (on one box)
- Training
- Search doesn't work across separate Zope instances
- LDAP integration with Active Directory painful if there are too many groups and users

In Conclusion

- Plone is a user-friendly content management system
- We have just scratched the surface of its potential