



# Fedora Directory Server – Project Update

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# Agenda

- What is Fedora Directory Server?
- What we did to make it more open source developer, Fedora friendly
- Relationship with freeIPA
- Future Directions
- We Want You!
- Questions

Who am I?



# What is Fedora Directory Server?

- Centralized, standard, hierarchical, network accessible data store
- LDAPv3 Server + management utilities and UI
- Netscape -> Sun/iPlanet -> AOL -> Red Hat -> Fedora
- Initial release June 1, 2005 – full release Dec. 8, 2005
- Key Features – Multi-Master Replication, Active Directory Sync, Flexible Access Control, Graphical Console

# Old build system

- Hard for external developers
- Hard for new developers
- No “make install” - have to build into proprietary package format and run install

# Conversion to autotools

- Easy for new developers to understand
- Works with OS supplied components
- Works well with rpmbuild and other native packaging formats
- Is already FHS aware
- Single easy to understand Makefile, simple configure scripts
- Still have platform specific flags in configure

# Old packaging

- All-in-one
  - Very large - > 100MB
  - Cannot leverage system components
  - No discrete subsystems
  - No sharing with other IdM products
- Proprietary packaging format – not RPM compatible
- Yet another library to maintain
- No -devel package for plug-in writers

# New Packaging

- RPMs with real source RPMs
- Smaller, discrete packages
- Uses system components
- Easier for other packages to use (DogTag, freeIPA)
- Separate console packages – can just install console on admin desktop machine (and separate Windows console package)
- All packages now in Fedora 8 and later

# Old Filesystem Layout

- Everything under /opt/fedora-ds
- No separation between read-only and writable
- Product specific – hard to write docs/tools for both Fedora DS and Red Hat DS

# New Filesystem Layout

- Uses Filesystem Hierarchy Standard (FHS) - <http://www.pathname.com/fhs/>
- Easier to separate config files from data files, read-only from writable, etc.
- Works better with SELinux and other security
- Migration scripts provided – ease of upgrade
- New setup allows considerable customization
- Can now build FHS, FHS opt, or old style

# Other Open Sourcing Considerations

- Porting from proprietary to open components – ICU, cyrus-sasl, net-snmp
- Use Apache instead of open source NES
- Removing/rewriting code with incompatible licensing
- Relicensing code
- Porting documentation to DocBook XML
- Test framework still proprietary – but working on it
- Contributor License Agreement (CLA) – permission from contributors to relicense code
- Public development – wiki, mail lists, IRC

# freeIPA and Fedora Directory Server

- Integrate directory server with other IdM components
- New end user and admin UI – replace web apps, console
- New Features for IPA
  - MemberOf
  - LDAPI – LDAP over unix domain socket
  - SASL/Kerberos improvements
  - Get Effective Rights enhancements
  - Distributed Numeric Assignment – auto POSIX UID/GID number assignment, and more

## Other Features in upcoming release

- Server API enhancements – Tasks, Password Policy
- Improve WinSync – support for POSIX schema
- Dynamic Schema Reload
- 64-bit counters
- Improved scalability and performance on 64-bit systems

# Future Roadmap Items

- Reject anonymous connections – based on time? Host/IP?  
Allow certain operations?
- Control resource limits for anonymous
- Default search base
- Reject non-SSL/require startTLS/require SASL – based on time? Host/IP?
- Dynamic group expansion – populate “member” attribute in group entries
- Improve support for building on other platforms – too “fedora-centric” right now

# Wrap Up

- We Want You! - <http://directory.fedoraproject.org/>
  - File bugs
  - Suggest new features
  - Help with wiki pages
  - Porting to other platforms
  - Scripts for management, testing
  - Coding
- Questions?