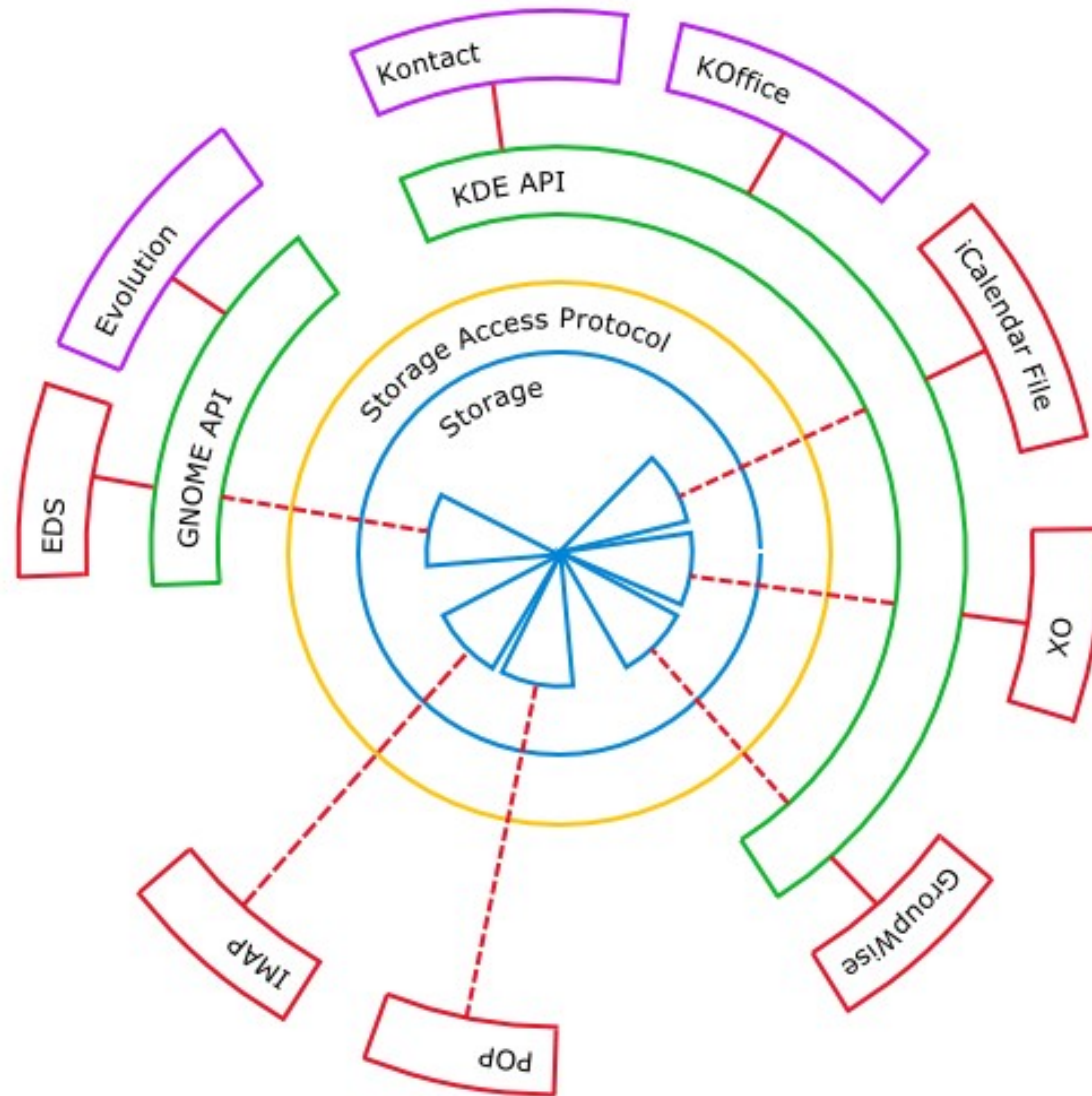AKONADI

Why rewrite the foundation of KDE PIM?

KResource

- Designed 10 years ago for small amounts of data

- Synchronous access

- No code sharing

- Hard to extend

- No change notifications

- No shared data

- (Ab-)Used way beyond its capabilities

Goals

- Fix all of the above

- Provide a unified API to access PIM data, independent of the actual data source

- Provide flexible cache policies for remote data

- Fast virtual folders, representing search results

- Usable for the whole free desktop

Chaos

Design

Server

- Fully type independent

- Caches remote data

- Change notifications

- Conflict detection

- Based on MySQL

- Depends only on Qt

Protocol

- Data access
  - Based on IMAP
  - Optimized for high throuput
  - Data encoded using standard formats
- Change notification, control methods
  - D-Bus
  - Optimized for easy use
- Platform and toolkit independent

Basic Objects

- Filesystem-like structure
  - Collections
  - Items

- Items consist of
  - A payload, consisting of one or more parts
  - Arbitrary attributes

Client Library

- libakonadi: Qt/KDE based
  - C++
  - Ruby
  - Python
  - C#
- Mostly type-independent
- Type-specific plugins

API

- Low-level
  - Job based
  - Asynchronous
- High-level
  - Qt Model/View
- Change monitoring and recording/replay

Resource Agents

- Connect Akonadi to external data sources

    - Local files (ical, vcard, maildir,...)

    - Mail or groupware servers

    - Web services (facebook, del.ico.us, ...)

- Translate data formats

- Replay offline changes

Other Agents

- Implement functionalitry not limited to a single application

- Operate autonomously on PIM data

- Examples

  - Indexing

  - Mail threading

  - Filtering

  - ...

Status

- Server and client library first released with KDE 4.1

- First users: Mailody, KPilot

- Supported types:
  - Mail
  - Contacts
  - Calendar
  - RSS feeds
  - Bookmarks

Roadmap for KDE 4.2

- Use Akonadi for contacts and calendar data for all of KDE PIM

- Limit porting work by using KResource <-> Akonadi bridges

  - Allows to use KResource based backends with Akonadi

  - Transparent for old applications