Akonadi - Overview and State

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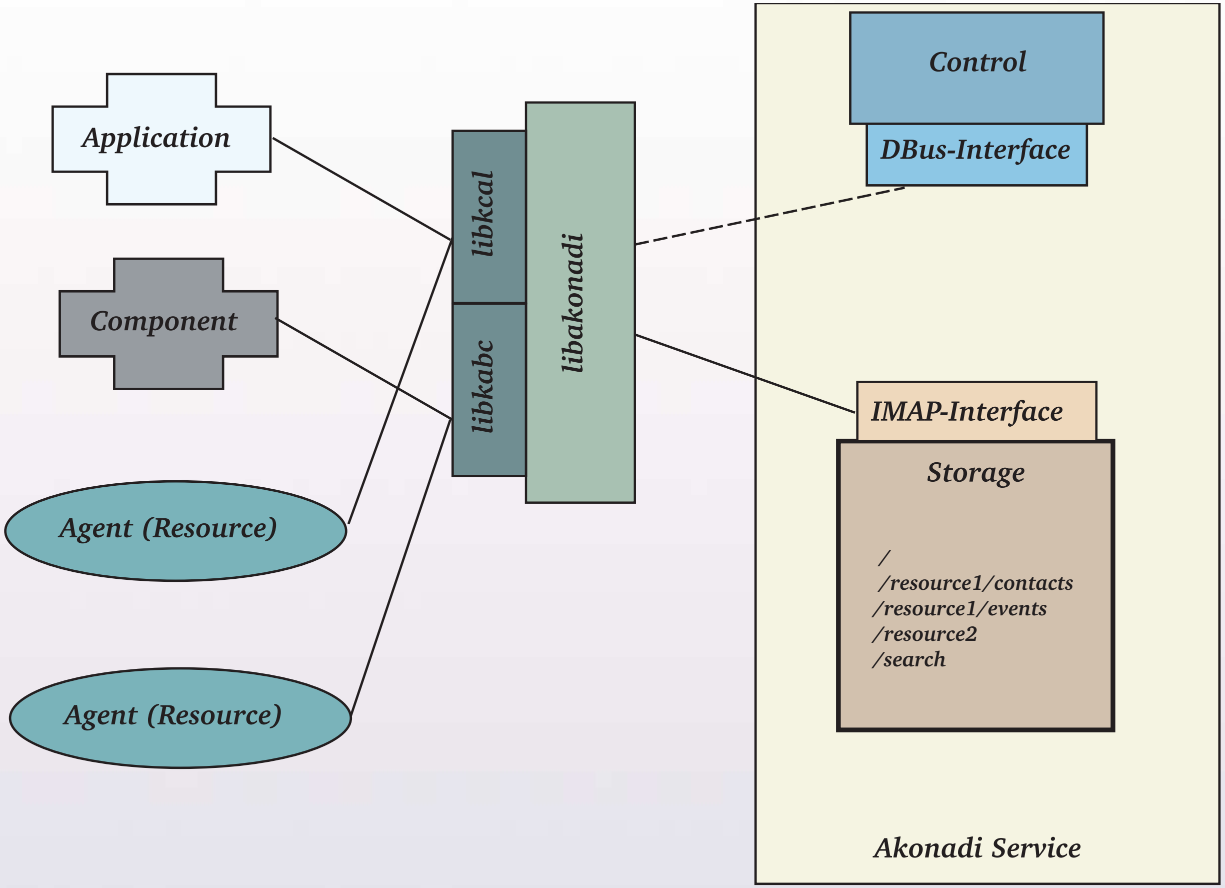
Overview

Background

- KResource framework does not scale
  - ▷ A fully running Kontact keeps your addressbook in memory 6 (!) times
- Applications and libraries not designed for asynchronous operations

Design


Application
Component
Agent (Resource)
Agent (Resource)
libkcal
libkabc
libakonadi
Control
DBus-Interface
IMAP-Interface
Storage
/
/resource1/contacts
/resource1/events
/resource2
/search
Akonadi Service

Storage

- Filesystem-like storage of PIM items and collections
- PIM item:
  - ▷ Persistent, unique identifier
  - ▷ Currently: BLOB, storage in a SQL database
  - ▷ Future: Tree of BLOBs, only store structure + metadata in a database
- Storage knows nothing about data formats
- Caches PIM items from remote servers
- Change notifications

Control

- Starts and monitors the storage and resource processes
- Provides D-Bus API for managing resources

Resources

- Applications which synchronize data between the storage and an external data source
(e.g. groupware server or file)
- One process per desktop instead one plugin per application

libakonadi

- KJob-based API for async retrieval and manipulation of collections and PIM items
- Change monitoring of collections/items
- Self-updating collection and item models
- Independent of PIM item types, type-specifc libs (kabc, kcal) build on top of libakonadi

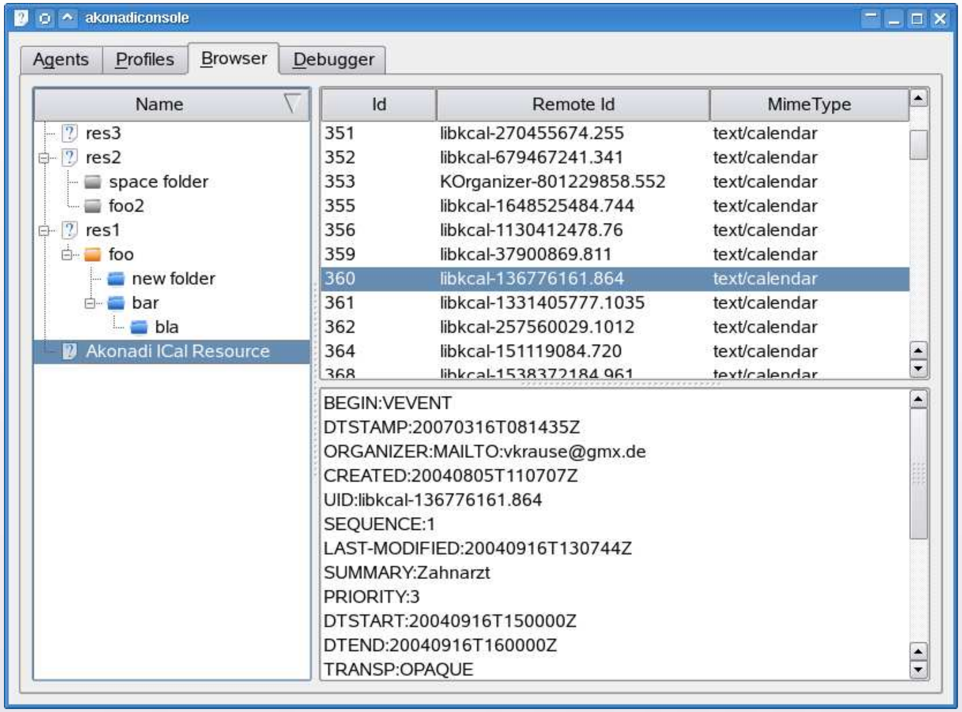
Current State

Current State

- Storage
  - Stores items and collections
  - All basic operations are implemented
- Control
  - Lifetime management for storage and resources
- Resources
  - Basic change recording and replay for offline mode
  - Simple iCalendar file resource
- libakonadi
  - API for basic operations
  - collection and item models

Development Tools

- akonadiconsole:



Id	Remote Id	MimeType
351	libkcal-270455674.255	text/calendar
352	libkcal-679467241.341	text/calendar
353	KOrganizer-801229858.552	text/calendar
355	libkcal-1648525484.744	text/calendar
356	libkcal-1130412478.76	text/calendar
359	libkcal-37900869.811	text/calendar
360	libkcal-136776161.864	text/calendar
361	libkcal-1331405777.1035	text/calendar
362	libkcal-257560029.1012	text/calendar
364	libkcal-151119084.720	text/calendar
368	libkcal-1538372184.961	text/calendar

```
BEGIN:VEVENT
DTSTAMP:20070316T081435Z
ORGANIZER:MAILTO:vkrause@gmx.de
CREATED:20040805T110707Z
UID:libkcal-136776161.864
SEQUENCE:1
LAST-MODIFIED:20040916T130744Z
SUMMARY:Zahnarzt
PRIORITY:3
DTSTART:20040916T150000Z
DTEND:20040916T160000Z
TRANSP:OPAQUE
```

- akonadi command line tool
- KMail