

# Implementing KDE-pim support for google calendar and contacts

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**why?**

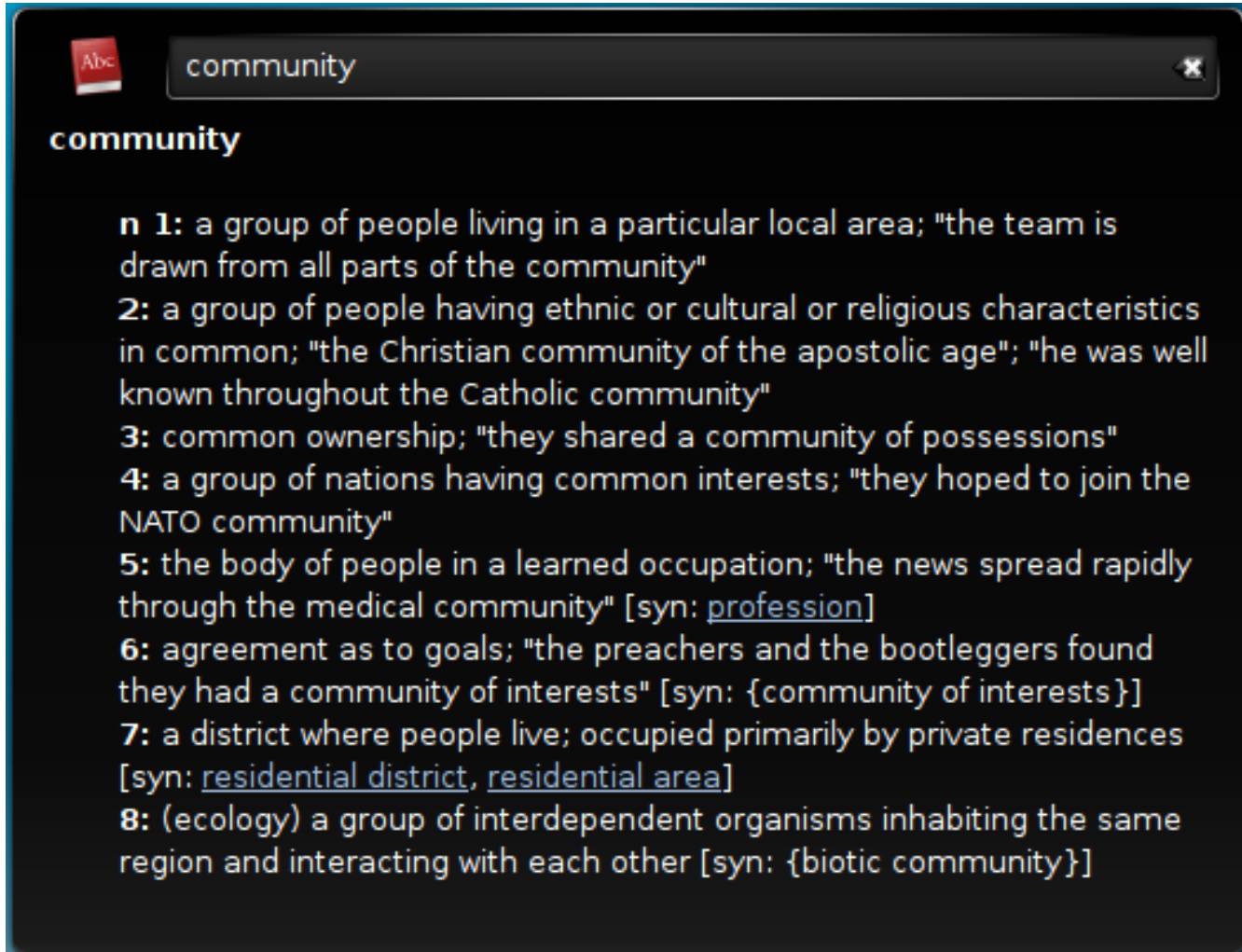


# Why google and KDE?

- beautiful!
- documentation
- PoC
- KDE: community



# What is community?



A screenshot of a dictionary entry for the word "community". The interface shows a search bar with "community" entered and a small "abc" logo. Below the search bar, the word "community" is listed in bold. The entry consists of eight numbered definitions:

**community**

**n 1:** a group of people living in a particular local area; "the team is drawn from all parts of the community"

**2:** a group of people having ethnic or cultural or religious characteristics in common; "the Christian community of the apostolic age"; "he was well known throughout the Catholic community"

**3:** common ownership; "they shared a community of possessions"

**4:** a group of nations having common interests; "they hoped to join the NATO community"

**5:** the body of people in a learned occupation; "the news spread rapidly through the medical community" [syn: [profession](#)]

**6:** agreement as to goals; "the preachers and the bootleggers found they had a community of interests" [syn: {community of interests}]

**7:** a district where people live; occupied primarily by private residences [syn: [residential district](#), [residential area](#)]

**8:** (ecology) a group of interdependent organisms inhabiting the same region and interacting with each other [syn: {biotic community}]

```
<Savago> hello there!  
<Savago> How are you doing, man?  
<Savago> By the way... thanks for the tip concerning the KUrl.  
<krake> you're welcome :)  
<krake> I have new tips ;)   
<Savago> Great, please send them. :-)  
<krake> the comparison in line 205 needs to be updated. entry_id is no longer just  
st the contact id  
Savago checking...  
Savago Ouch! You are right.  
<Savago> Here over from previous implementation.  
<krake> the comment about the "const guy" in itemAdded() and friends:  
<krake> you need to tell Akonadi that you have committed the change using changed  
Committed()  
<krake> this method takes a new item, quite like itemRetrieved  
<krake> see http://websvn.kde.org/trunk/KDE/kdepim/akonadi/resources/vcard/vcardresource.cpp?revision=879139&view=markup  
<Savago> ah... so is it just a matter of creating a new Item object and then using  
ng itemRetrieved.  
<Savago> cool!  
<krake> yes
```

```
<Savago> Could you give some hints about how to use kwallet? Is there a place with documentation? And any sample code?
<Savago> :-)
<lemma> hi, are you still around?
<lemma> just got home :)
<lemma> well, in case I'm not longer around when you get back, check this link:
http://www.staikos.net/~staikos/papers/2003/kwallet-kastle-2003.ps
<lemma> I think that's the closest to a "tutorial" we have. but if you have specific questions, feel free to ask
* Savago back from lunch.
<Savago> Thanks a lot for the return, I will check it.
<lemma> alright
<lemma> do you already have the resource in playground?
<Savago> Yep!
<lemma> nice. where is it and will it eat my google calendar if I try it? :)
<Savago> Is on playground/pim/google-data
<lemma> thanks!
<Savago> For while only google contacts.
```

Good community: where is easy for new coders, designers, users to contribute.

# Video: gcontacts + KAddressbook





# Video: gcalendar + Kontakt



# KDE + libgcal

Akonadi resource

**kdepim**

DONE	Akonadi	Google calendar and contacts resource	Adenilson Cavalcanti <cavalcantii@gmail.com>
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[http://techbase.kde.org/Schedules/KDE4/4.3\\_Feature\\_Plan#kdepim](http://techbase.kde.org/Schedules/KDE4/4.3_Feature_Plan#kdepim)

## KDE planet and commits digest!

### Brazilian overlords

Submitted by **krake** on Wed, 04/08/2009 - 21:48

**KOrganizer** | **Development** | **KDE PIM**

In case you thought that reading about the **Akonadi developer sprint** on the dot gave you an all encompassing overview of stuff happening around Akonadi, you forgot our brazilian friends.

Adenilson Cavalcanti, also **featured** in one of Danny's excellent commit digests, has been working like a mad man (or a genius, thin line and all that ☺) on the Akonadi resources for Google's data services.



<http://www.kdedevelopers.org/node/3931>

# Gcalendar and contacts



\*rip off from EA...

# Top 10 bugs: 2009-06-16

2887 bugs found.

ID	Sev	Pri	OS	Assignee	Status	Resolution	Summary	Votes
116682	wis	NOR	Linu	kdm-bugs-null kde org	NEW		Support fingerprint reader login in kdm	3839
67504	wis	NOR	Linu	kdepim-bugs kde org	NEW		IMAP IDLE support for KMail	2912
133614	wis	NOR	Linu	korganizer-devel kde org	NEW		add caldav support for sharing calendars	2819
30526	wis	NOR	Linu	konq-bugs kde org	NEW		MathML support for Konqi	2494
78153	wis	VHI	Linu	christian loose hamburg de	ASSI		Add svn (Subversion) support	2422
76082	wis	NOR	Linu	coolo kde org	NEW		smooth scrolling in all apps	2329
92845	wis	NOR	Linu	kdelibs-bugs kde org	NEW		KWallet should use PAM to make single-sign-on possible	1985
31114	wis	NOR	Linu	kdepim-bugs kde org	NEW		When deleting mail locally, delete on POP3 server, too.	1880
86423	wis	NOR	Linu	kdepim-bugs kde org	NEW		Ability To Reply To HTML Email With Same HTML Format As It Was Received	1856
125952	wis	NOR	Linu	korganizer-devel kde org	NEW		calendar synchronization with Google Calendar	1723

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# Tip: be open to newcomers





Google™

# How google data protocol works?

- REST + atom (i.e. HTTP + XML)
- Allows: get all, add/edit/delete, query, others
- Sync: tricky!

# Authentication

- HTTPS POST to feed (clientlogin)
- You get:

```
SID=DQAAAG8AAABj5gOYUwq6qTouiHU6IbqJAKWW-HxC9GpZ4rk7VAofl1PlhXazCRSZNeMCT4_tU6tU0EpTJ1vwPfHeqnEesgiJGTaMB2p8hZzXkJPEe0vgKBAoWIzpvHle0T91MbiDPwfLK3Aa-gs92vka-bGmJLL  
LSID=DQAAAHIAAABh9oh-UHneBqtisDPxgG65p3RWNEhd1-SQbZ-MeEdT3YSTPCDzGfjkwG-Vsv83X0UjwfTMHGCmcZypMmF1BbBuP2lDjKWKJ4eu0RYDbxHhH50scqXMjug4HI48QpABn04ovaT7n0ROV6kpZM_qQHMMNZYLodSmjv2B6V7_maDOnw  
Auth=DQAAAHAAAABh9oh-UHneBqtisDPxgG65p3RWNEhd1-SQbZ-MeEdT3YSTPCDzGfjkwG-Vsv83X0Wn35gYADT9ZXX7YR5FZUPIjc5tYfszDFwcauz0na3XAV099ilf43WNU0YHUzWqoVfgpr0JFBaxU8ucpFnVpni
```

# Add

26	1.091386	192.168.200.37	209.85.195.99	HTTP	POST /calendar/feeds/default/private
27	1.091918	209.85.195.99	192.168.200.37	TCP	http > 36074 [ACK] Seq=1 Ack=960 Win

.....

- ▶ Frame 26 (1025 bytes on wire, 1025 bytes captured)
- ▶ Ethernet II, Src: Apple\_f3:84:b1 (00:1f:5b:f3:84:b1), Dst: DellEsgP\_94:cc:e8 (00:0b:db:94:cc:e8)
- ▶ Internet Protocol, Src: 192.168.200.37 (192.168.200.37), Dst: 209.85.195.99 (209.85.195.99)
- ▶ Transmission Control Protocol, Src Port: 36074 (36074), Dst Port: http (80), Seq: 1, Ack: 1, Len: 959
- ▼ Hypertext Transfer Protocol
  - ▶ POST /calendar/feeds/default/private/full HTTP/1.1\r\n
  - Host: www.google.com\r\n
  - Accept: \*/\*\r\n
  - GData-Version: 2\r\n
  - Content-Type: application/atom+xml\r\n
  - Content-Length: 601
  - Authorization: GoogleLogin auth=DQAAAHAAAADTnyWqh7Ewq2xvDoP-PlskUQ28HAJ4Evz3ZQ6TChAcXKibRrJh\_6DZ2s8k8Az8Zy\r\n
- ▼ Media Type
  - Media Type: application/atom+xml (601 bytes)

# Edit

51	2.594766	192.168.200.37	209.85.195.99	HTTP	PUT /calendar/feeds/default/private/
----	----------	----------------	---------------	------	--------------------------------------

.....

- ▶ Frame 51 (1317 bytes on wire, 1317 bytes captured)
- ▶ Ethernet II, Src: Apple\_f3:84:b1 (00:1f:5b:f3:84:b1), Dst: DellEsgP\_94:cc:e8 (00:0b:db:94:cc:e8)
- ▶ Internet Protocol, Src: 192.168.200.37 (192.168.200.37), Dst: 209.85.195.99 (209.85.195.99)
- ▶ Transmission Control Protocol, Src Port: 36076 (36076), Dst Port: http (80), Seq: 1, Ack: 1, Len: 1251
- ▼ Hypertext Transfer Protocol
  - ▶ PUT /calendar/feeds/default/private/full/lmb7vl8iqoqqj r0auhjl6fij50 HTTP/1.1\r\nHost: www.google.com\r\nAccept: \*/\*\r\nGData-Version: 2\r\nContent-Type: application/atom+xml\r\nContent-Length: 854Authorization: GoogleLogin auth=DQAAAHAAAADTNyWqh7Ewq2xvDoP-PlskUQ28HAJ4Evz3ZQ6TChAcXK1bRrJh\_6DZ2s8k8Az8Zy\r\nIf-Match: \*\r\n\r\n
- ▼ Media Type
  - Media Type: application/atom+xml (854 bytes)

# Delete

77	4.331983	192.168.200.37	209.85.195.99	HTTP	DELETE /calendar/feeds/default/private/full/l
78	4.332345	209.85.195.99	192.168.200.37	TCP	http > 36078 [ACK] Seq=1 Ack=399 Win=0

▶ Frame 77 (464 bytes on wire, 464 bytes captured)

▶ Ethernet II, Src: Apple\_f3:84:b1 (00:1f:5b:f3:84:b1), Dst: DellEsgP\_94:cc:e8 (00:0b:db:94:cc:e8)

▶ Internet Protocol, Src: 192.168.200.37 (192.168.200.37), Dst: 209.85.195.99 (209.85.195.99)

▶ **Transmission Control Protocol, Src Port: 36078 (36078), Dst Port: http (80), Seq: 1, Ack: 1, Len: 398**

▼ Hypertext Transfer Protocol

- ▶ DELETE /calendar/feeds/default/private/full/l**nb7vl8iqoqqjr0auhjl6fij50** HTTP/1.1\r\n

Host: www.google.com\r\n

Accept: \*/\*\r\n

GData-Version: 2\r\n

Content-Type: application/atom+xml\r\n

If-Match: \*\r\n

Authorization: GoogleLogin auth=DQAAAHAAAADTNyWqh7Ewq2xvDoP-PlskUQ28HAJ4Evz3ZQ6TChAcXKibRrJh\_6DZ2s8k8Az8Zy\r\n

Content-Length: 0\r\n

\r\n

# Who implements gdata protocol?



# libgcal

- dependencies: libxml, libcurl
- BSD license
- features
- origin: opensync python plugin by Ehabkost



# Syncml + libgcal



# Libgcal: unit tests

```
safe/b : bash
File Edit View Scrollback Bookmarks Settings Help
ncompatible pointer type
/home/adenilson/akonadi/safe/utests/utest_screw.c:96: warning: passing argument 2 of 'gcal_get_contacts' from
incompatible pointer type
[ 84%] Building C object utests/CMakeFiles/testgcal.dir/utest_userapi.c.o
[ 89%] Building C object utests/CMakeFiles/testgcal.dir/utest_xmlmode.c.o
[ 94%] Building C object utests/CMakeFiles/testgcal.dir/utest_xpath.c.o
[100%] Building C object utests/CMakeFiles/testgcal.dir/utls.c.o
Linking C executable testgcal
[100%] Built target testgcal
adenilson@macblack:~/akonadi/safe/build$ GCAL=user make test
[ 42%] Built target gcal
[100%] Built target testgcal
Running suite(s): userapi
100%: Checks: 9, Failures: 0, Errors: 0
/home/adenilson/akonadi/safe/utests/utest_userapi.c:44:P:gcaluserapi:test_get_calendar:0: Passed
/home/adenilson/akonadi/safe/utests/utest_userapi.c:124:P:gcaluserapi:test_access_calendar:0: Passed
/home/adenilson/akonadi/safe/utests/utest_userapi.c:169:P:gcaluserapi:test_oper_event_event:0: Passed
/home/adenilson/akonadi/safe/utests/utest_userapi.c:204:P:gcaluserapi:test_query_event_updated:0: Passed
/home/adenilson/akonadi/safe/utests/utest_userapi.c:228:P:gcaluserapi:test_get_contacts:0: Passed
/home/adenilson/akonadi/safe/utests/utest_userapi.c:314:P:gcaluserapi:test_access_contacts:0: Passed
/home/adenilson/akonadi/safe/utests/utest_userapi.c:363:P:gcaluserapi:test_oper_contact:0: Passed
/home/adenilson/akonadi/safe/utests/utest_userapi.c:414:P:gcaluserapi:test_query_contact_updated:0: Passed
/home/adenilson/akonadi/safe/utests/utest_userapi.c:482:P:gcaluserapi:test_contact_photo:0: Passed
[100%] Built target test
adenilson@macblack:~/akonadi/safe/build$
```

# Libgcal: unit tests

## ***LTP GCOV extension - code coverage report***

Current view: [directory](#) - gcal/src



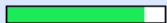
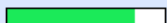




Test: [utest-info.lcov](#)

Date: 2008-10-23

Instrumented lines: 1846

Code covered: 85.2 %

Executed lines: 1572

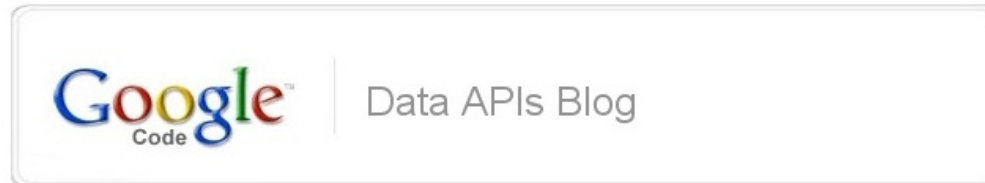
Filename	Coverage
<a href="#">atom_parser.c</a>	 83.4 % 146 / 175 lines
<a href="#">gcal.c</a>	 83.8 % 599 / 715 lines
<a href="#">gcal_parser.c</a>	 87.2 % 239 / 274 lines
<a href="#">gcal_status.c</a>	 81.2 % 13 / 16 lines
<a href="#">gcalendar.c</a>	 89.5 % 246 / 275 lines
<a href="#">gcont.c</a>	 82.6 % 128 / 155 lines
<a href="#">gcontact.c</a>	 86.0 % 160 / 186 lines
<a href="#">xml_aux.c</a>	 82.0 % 41 / 50 lines

Generated by: [LTP GCOV extension version 1.5](#)

# Libgcal: unit tests

```
    : int gcal_update_event(gcal_t gcal_obj, gcal_event event)
ll : {
ll :     int result = -1;
    :     struct gcal_event updated;
    :
ll :     if ((!gcal_obj) || (!event))
0 :         goto exit;
    :
ll :     result = gcal_edit_event(gcal_obj, event, &updated);
ll :     if (result)
0 :         goto exit;
    :
    :     /* Swap updated fields: edit_uri and updated */
ll :     if (event->common.updated)
ll :         free(event->common.updated);
ll :     event->common.updated = updated.common.updated;
ll :     updated.common.updated = NULL;
    :
ll :     if (event->common.edit_uri)
ll :         free(event->common.edit_uri);
ll :     event->common.edit_uri = updated.common.edit_uri;
ll :     updated.common.edit_uri = NULL;
    :
    :     /* Cleanup updated event */
ll :     gcal_destroy_entry(&updated);
ll : exit:
ll :     return result;
    :
    : }
```

# Look mom! libgcal on google blog!



## Have it your way: Create a client library in your favorite language!

Tuesday, August 19, 2008 at 4:52 PM

Posted by Eric Bidelman & Austin Chau, Google Data APIs Team

The Google Data team has developed [client libraries](#) in .NET, Java, JavaScript, Python, PHP, and Objective-C. With the popularity of other languages like Ruby, many developers have taken it upon themselves to build libraries for their favorite Google Data API. Here are two examples:

### Base 4 Ruby:

A ruby gem that allows developers to create, update, and delete items using the Google Base Data API.

### libgcal:

A C/C++ library to interact with the Google Calendar and Contacts APIs.

For those of you who want to get involved in open source development, feel free to contribute to these projects or help us to improve Google's officially supported [client libraries](#). If you're interested in starting fresh, checkout Jeff Scudder's presentation on [Creating a Google Data API Client](#).

Hack away!

Implemented your own client? Leave a comment.

[Permalink](#)


 Search   
powered by 

 [Site Feed](#)

 [Google](#)

4867 readers  
BY FEEDBURNER

### Archives

Archives 

### Subscribe to Google Data APIs Blog Posts

[Google Groups](#)

Email:

[Visit this group](#)



### Links

[Google Code](#)

[Google Data APIs](#)

**KDE4 + PIM = akonadi**



# Akonadi support

protocol	support
IMAP	++
POP3	+++
vcard	+++
ical	+++
googledata	+++
Exchange	++
Kolab	++

GSoC: Syncml.

# Akonadi (mis)features

**good:** D-BUS, LGPL, asynchronous, Qt

**BAD:** mysql

branch/akonadimobile has support for sqlite!

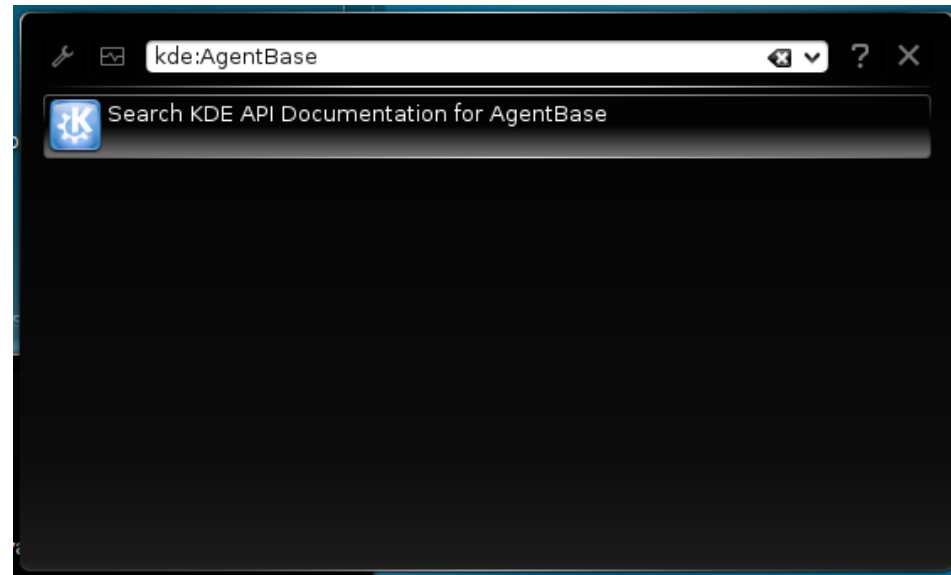


# How difficult is akonadi?

Coding:

- Gcontacts: 3 weeks
- gcalendar: 3 days

**question? ALT+F2**



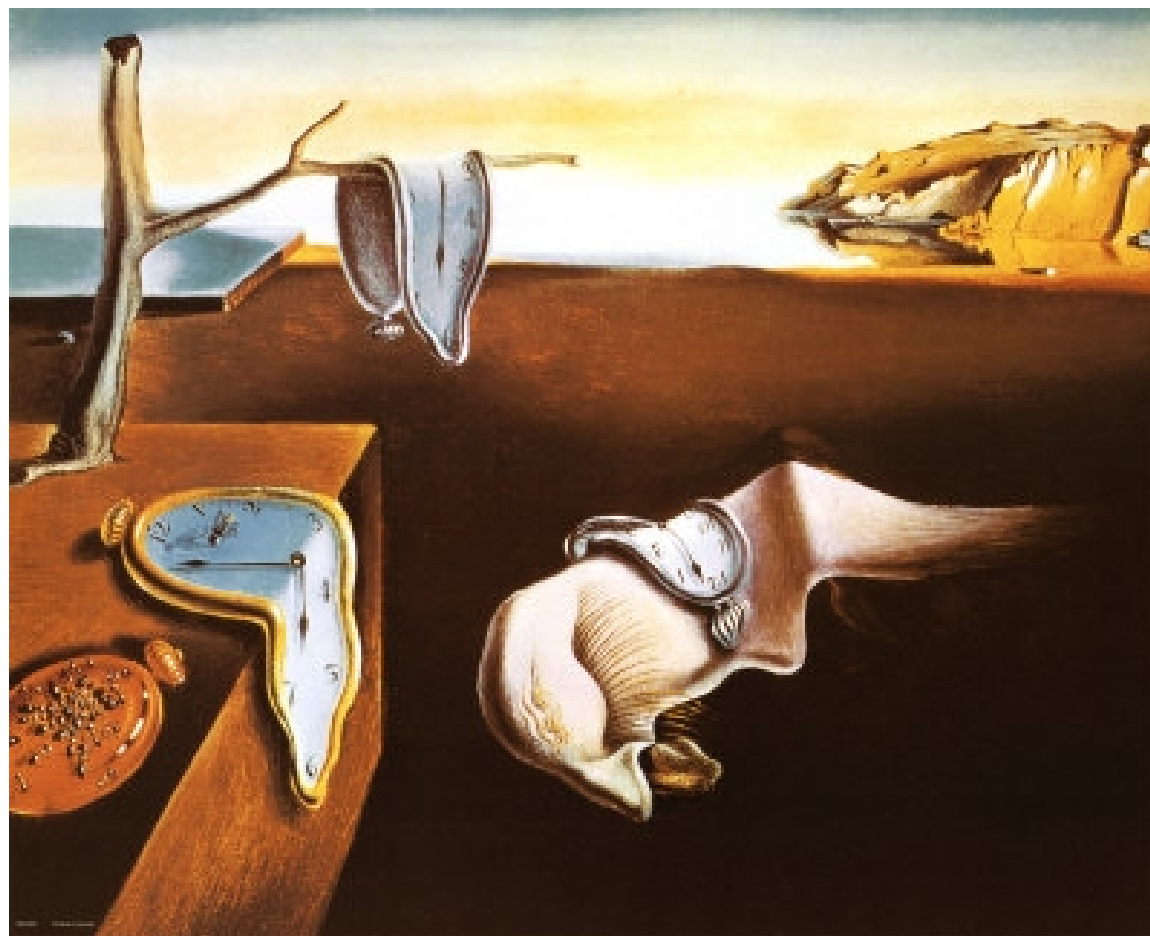
## KDE devel

- distro really up-to-date (e.g. OpenSuse)
- run the trunk! YMMV

# Sync considerations



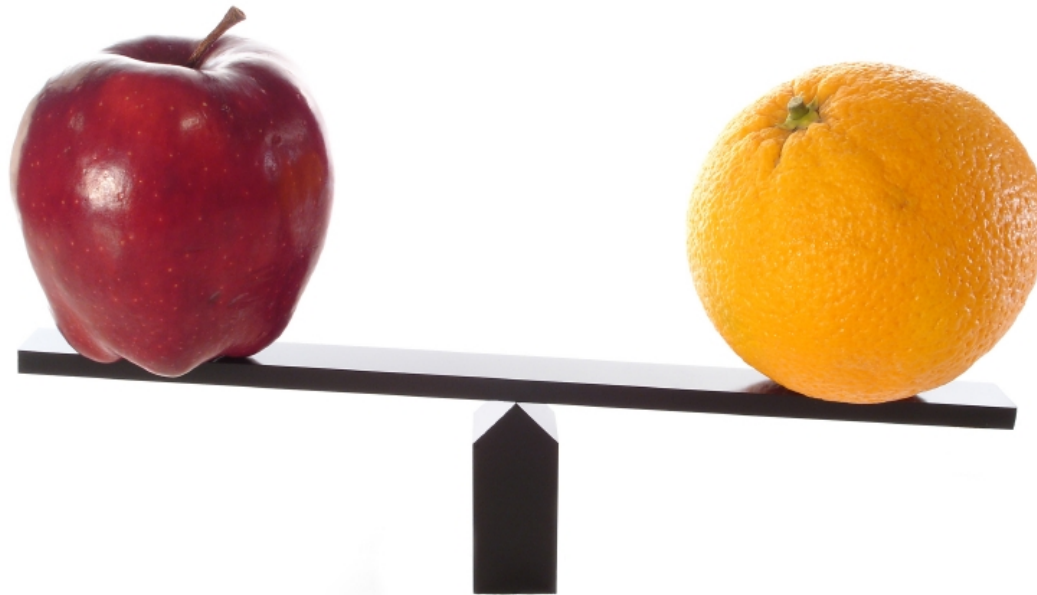
# What time is it?



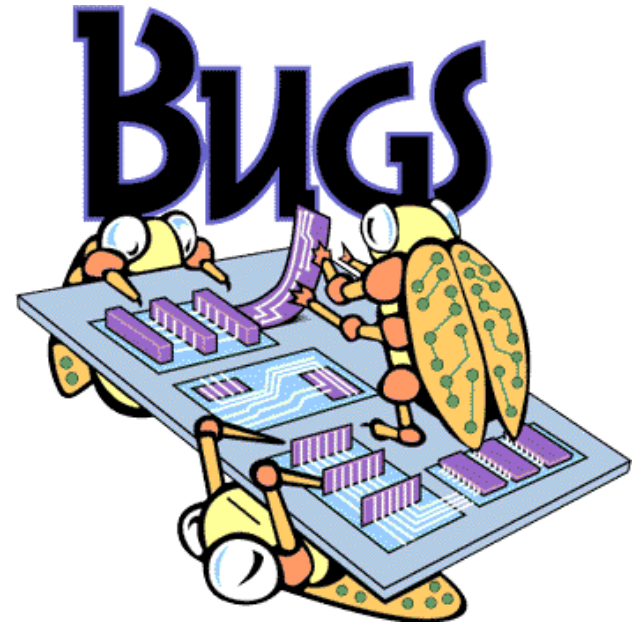
# Inclusive query



# Added or edited? Cant' tell!



# Bugs X Programmers



# How to add?

35	1.701856	192.168.200.37	209.85.195.99	TCP	36075 > http [ACK] Seq=1 Ack=1 Win=5
36	1.702026	192.168.200.37	209.85.195.99	HTTP	POST /calendar/feeds/default/private

.....

- ▶ Frame 36 (1059 bytes on wire, 1059 bytes captured)
- ▶ Ethernet II, Src: Apple\_f3:84:b1 (00:1f:5b:f3:84:b1), Dst: DellEsgP\_94:cc:e8 (00:0b:db:94:cc:e8)
- ▶ Internet Protocol, Src: 192.168.200.37 (192.168.200.37), Dst: 209.85.195.99 (209.85.195.99)
- ▶ Transmission Control Protocol, Src Port: 36075 (36075), Dst Port: http (80), Seq: 1, Ack: 1, Len: 993
- ▼ Hypertext Transfer Protocol
  - ▶ POST /calendar/feeds/default/private/full?gsessionid=xaCVC1XvPGd7t5cJYSXIk HTTP/1.1\r\n
  - Host: www.google.com\r\n
  - Accept: \*/\*\r\n
  - GData-Version: 2\r\n
  - Content-Type: application/atom+xml\r\n
  - Content-Length: 601
  - Authorization: GoogleLogin auth=DQAAAHAAAADTNyWqh7Ewq2xvDoP-PlskUQ28HAJ4Evz3ZQ6TChAcXK1bRrJh\_6DZ2s8k8Az8\r\n
- ▼ Media Type
  - Media Type: application/atom+xml (601 bytes)



## Documentation may be wrong...

**Written:** *If you received the redirect, then send the same POST request again, with the same Authorization header and the same content, but with the gsessionid parameter appended.*

**Should be:** *When you receive the redirect, send the same POST request, with the same Authorization header, to the location specified in the response location.*

# Parsing is the root of evil...

```
SID=DQAAAG8AAABj5g0YUwq6qTouiHU6IbqJAKWW-HxC9GpZ4rk7VAofl1PlhXazCRSZNeMCT4_tU6t
U0EpTJ1vwPfHeqnEesgiJGTaMB2p8hZzXkJPee0vgKBAoWizpvHle0T91MbiDPwfLK3Aa-gs92vkA-bG
mJLL
LSID=DQAAAHIAAABh9oh-UHneBqtisDPxgG65p3RWNEHd1-SQbZ-MeEdT3YSTPCDzGfjkwG-Vsv83X0U
jwfTMHGcmCZypMmF1BbBuP2lDjKWKJ4eu0RYDbxHhH50scqXMjug4HI48QpABn04ovaT7n0R0V6kpZM_
qQHMMNZYl odSmjv2B6V7_maD0nw
Auth=DQAAAHAAAABh9oh-UHneBqtisDPxgG65p3RWNEHd1-SQbZ-MeEdT3YSTPCDzGfjkwG-Vsv83X0W
n35gYADT9ZXX7YR5FZUPIj c5tYfszDFWcauz0na3XAV099il f43WNU0YHUzWqoVfgpr0JFBaxU8ucpFn
lVpni
```

result = org.xml.sax.SAXParseException: The processing instruction target matching "[xX][mM][IL]" is not allowed.

# Parsing is the root of evil...

```
commit blfbd7a04c28c3f323077f6e238e6283a7349045
Author: Adenilson Cavalcanti <adenilson@t60ade.(none)>
Date: Tue May 6 21:20:35 2008 -0400
```

```
Fix for the dreaded 'add event' bug. It was caused by a bug in the
'gcal_get_authentication' function: it copied the '\r\n' in the end
of string.
```

```
*Very* special thanks to Eduardo Habkost (a.k.a. Boto) for uncovering
the bug and pointing it to me.
:-)
```

```
The whole history is covered in the link:
```

```
http://groups.google.com/group/google-calendar-help-dataapi/browse\_thread/thread/b0bd9804ab68a6e5
```

# Sync or Async?



# Sync or Async?

```
commit f0652dbcbc07615526608213de69d1366d198869
Author: Adenilson Cavalcanti <adenilson@t60ade.(none)>
Date:   Mon Feb 16 13:03:58 2009 -0400
```

Implementing akonadi resource stressed libgcal in new ways. Since I'm doing a lot of different operations with the same gcal context, some funny things are happening (bugs that were not detected in the unit tests).

One of them is failure to perform an ADD just after doing a DELETE. I discovered that since libcurl requires use of CUSTOMREQUEST to do HTTP DELETE, this state was kept inside of curl context.

From the man page: "Restore to the internal default by setting this to NULL."

# Sync or Async?

```
diff --git a/src/gcal.c b/src/gcal.c
index 2e53a2d..4172680 100644
--- a/src/gcal.c
+++ b/src/gcal.c
@@ -1021,6 +1021,9 @@ int gcal_delete_event(struct gcal_resource *gcalobj,
     >         >         >         h_auth,
     >         >         >         NULL, NULL, GCAL_DEFAULT_ANSWER);

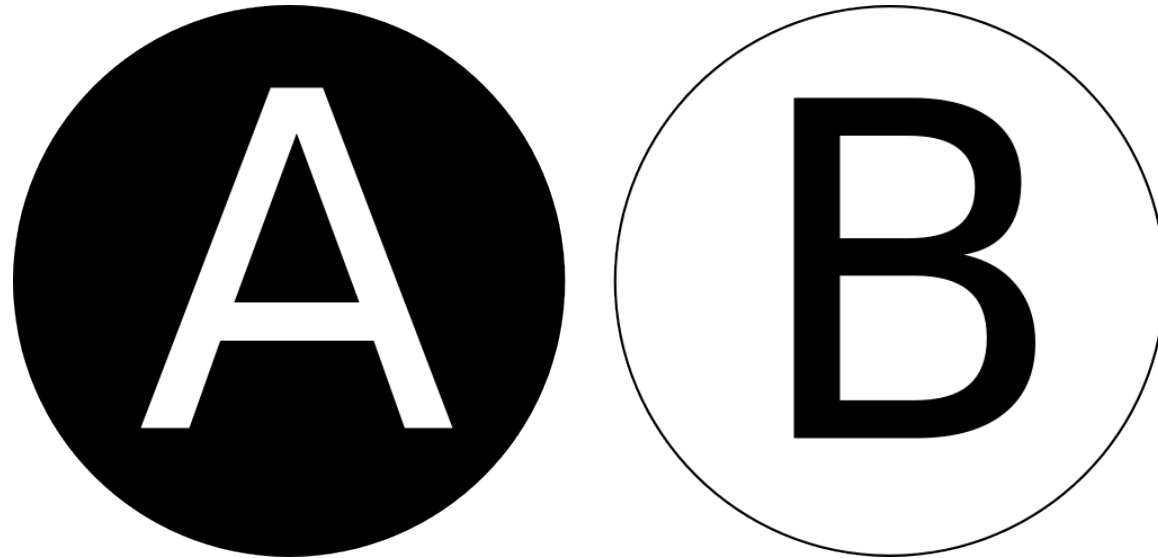
+>     /* Restores curl context to previous standard mode */
+>     curl_easy_setopt(gcalobj->curl, CURLOPT_CUSTOMREQUEST, NULL);
+
cleanup:
     >     if (h_auth)
diff --git a/src/gcont.c b/src/gcont.c
index e84b23b..c1bab9c 100644
--- a/src/gcont.c
+++ b/src/gcont.c
@@ -247,6 +247,9 @@ int gcal_delete_contact(struct gcal_resource *gcalobj,
     >         >         >         h_auth,
     >         >         >         NULL, NULL, GCAL_DEFAULT_ANSWER);

+>     /* Restores curl context to previous standard mode */
+>     curl_easy_setopt(gcalobj->curl, CURLOPT_CUSTOMREQUEST, NULL);
+
     >     if (h_auth)
     >         free(h_auth);
```

# Rant1: is XML or iCalendar?

```
<entry xmlns='http://www.w3.org/2005/Atom'  
  xmlns:gd='http://schemas.google.com/g/2005'>  
  <category scheme='http://schemas.google.com/g/2005#kind'  
    term='http://schemas.google.com/g/2005#event'></category>  
  <title type='text'>Tuesday Tennis Lessons with Jane</title>  
  <content type='text'>Meet on Tuesdays for a quick lesson.</content>  
  <gd:transparency  
    value='http://schemas.google.com/g/2005#event.opaque'>  
  </gd:transparency>  
  <gd:eventStatus  
    value='http://schemas.google.com/g/2005#event.confirmed'>  
  </gd:eventStatus>  
  <gd:where valueString='Rolling Lawn Courts'></gd:where>  
  <gd:recurrence>DTSTART;VALUE=DATE:20070501  
DTEND;VALUE=DATE:20070502  
RRULE:FREQ=WEEKLY;BYDAY=Tu;UNTIL=20070904  
</gd:recurrence>  
</entry>
```

## Rant2: dichotomy cal x contacts





**Rant3: is 2.0 == 2.1?**



**shit happens**

## Rant4: Pessimization



# Rant4: Pessimisation

```
64.233.163.147 HTTP GET /calendar/feeds/gcalntester%40gmail.com/private/full
64.233.163.147 10.4.2.145 HTTP HTTP/1.0 302 Moved Temporarily (text/html)
64.233.163.147 HTTP GET /calendar/feeds/gcalntester%40gmail.com/private/full
64.233.163.147 10.4.2.145 HTTP HTTP/1.0 410 Gone (text/html)

.....
tes on wire, 463 bytes captured)
: Apple_b2:08:e7 (00:1e:c2:b2:08:e7), Dst: Dell_b2:64:13 (00:19:b9:b2:64:13)
l, Src: 10.4.2.145 (10.4.2.145), Dst: 64.233.163.147 (64.233.163.147)
trol Protocol, Src Port: 58167 (58167), Dst Port: http (80), Seq: 1, Ack: 1, Len: 397
er Protocol
feeds/gcalntester%40gmail.com/private/full?max-results=9999999&updated-min=2009-05-01T22:52:33.00
```

# Rant4: Pessimisation

```
103 5.008917 64.233.163.147 10.4.2.145 HTTP HTTP/1.0 410 Gone (text/html)

Frame 103 (66 bytes on wire, 66 bytes captured)
  Ethernet II, Src: Dell_b2:64:13 (00:19:b9:b2:64:13), Dst: Apple_b2:08:e7 (00:1e:c2:b2:08:e7)
  Internet Protocol, Src: 64.233.163.147 (64.233.163.147), Dst: 10.4.2.145 (10.4.2.145)
  Transmission Control Protocol, Src Port: http (80), Dst Port: 58168 (58168), Seq: 1219, Ack: 43
  Hypertext Transfer Protocol
    HTTP/1.0 410 Gone\r\n
    Expires: Thu, 25 Jun 2009 22:44:29 GMT\r\n
    Date: Thu, 25 Jun 2009 22:44:29 GMT\r\n
    Content-Type: text/html; charset=UTF-8\r\n
    Cache-Control: private, max-age=0\r\n
    X-Content-Type-Options: nosniff\r\n
    Server: GFE/2.0\r\n
    X-Cache: MISS from proxy.fisl10.org.br\r\n
    Via: 1.0 proxy.fisl10.org.br (squid/3.0.STABLE15)\r\n
    Proxy-Connection: close\r\n
    \r\n
```

# Rant4: Pessimisation

```
/** XXX: google server has a bug where a 2.0 protocol request
 * is being met with a 2.1 protocol behaviour
 * (if updated-min > 30 days, return a HTTP 410 error).
 * Further details:
 * http://code.google.com/p/gdata-issues/issues/detail?id=1036
 */
int gBug = gcal_status_httpcode(gcal);
if (gBug != 410) {
    qDebug() << "Failed querying by updated";
    return result;
} else {
    qDebug() << "Workarounding bug: HTTP 410 Gone...";

    /* Calculate a date up to 30 days ago */
    QDateTime original, now, newtime;
    original = original.fromString(timestamp,
                                   QDateTime::ISODate);
    now = now.currentDateTime(QDateTime::Spec::ClockTime());
    int delta = original.daysTo(now);
    newtime = original.addDays(delta);
    newtime = newtime.addDays(-10);
    qDebug() << "delta: " << delta << "\ttimestamp: "
              << newtime.toString(QDateTime::ISODate);

    temp = newtime.toString(QDateTime::ISODate);
    t_byte = temp.toLocal8Bit();
    if ((result = gcal_get_updated_events(gcal,
                                         &all_events,
                                         t_byte.data())) {
        qDebug() << "Failed querying by updated";
        return result;
    }
}
```

# The end?



# Special thanks

- Kevin Krammer, Igor Trindade, Mike Arthur
- Friends
- INdT