

CALDAV

a new python library

CALDAV?

- Networked calendaring protocol
- Extension of WebDAV (RFC4791)
- Mixed XML & vCalendar

CALDAV

EXAMPLE 1 : ADDING AN EVENT, REQUEST

```
PUT /Calendar/personal/34015b4a-dadc-11df-b741-60fb42f64976.ics HTTP/1.1
Content-Type: text/calendar; charset="utf-8"
authorization: Basic c29nbzE6c29nbzE=
Accept: text/xml
```

```
BEGIN:VCALENDAR
VERSION:2.0
PRODID:-//Example Corp.//CalDAV Client//EN
BEGIN:VEVENT
UID:20010712T182145Z-123401@example.com
DTSTART:20060714T170000Z
DTEND:20060715T040000Z
DTSTAMP:20060712T182145Z
SUMMARY:Bastille Day Party
END:VEVENT
END:VCALENDAR
```

CALDAV

EXAMPLE 1 : ADDING AN EVENT, RESPONSE

```
HTTP/1.1 201 Created
Date: Mon, 18 Oct 2010 17:21:54 GMT
sogo-request-duration: 0.199971
content-length: 0
content-type: text/plain; charset=UTF-8
etag: "gcs00000000"
Via: 1.1 sogo-demo.inverse.ca
Vary: Accept-Encoding
```

CALDAV

EXAMPLE 2 : SEARCHING FOR EVENTS, REQUEST

```
REPORT /Calendar/personal HTTP/1.1  
depth: 1
```

```
<?xml version='1.0' encoding='utf-8'?>  
<C:calendar-query xmlns:C="urn:ietf:params:xml:ns:caldav" xmlns:D="DAV:">  
<D:prop>  
<C:calendar-data>  
<C:expand start="20060713T170000Z" end="20060715T170000Z"/>  
</C:calendar-data>  
</D:prop>  
<C:filter>  
<C:comp-filter name="VCALENDAR">  
<C:comp-filter name="VEVENT">  
<C:time-range start="20060713T170000Z" end="20060715T170000Z"/>  
</C:comp-filter>  
</C:comp-filter>  
</C:filter>  
</C:calendar-query>
```

CALDAV

EXAMPLE 2 : SEARCHING FOR EVENTS, RESPONSE

```
HTTP/1.1 207 Multi-Status
content-type: text/xml; charset="utf-8"
content-length: 7342
```

```
<?xml version="1.0" encoding="utf-8"?>
<D:multistatus xmlns:D="DAV:" xmlns:C="urn:ietf:params:xml:ns:caldav">
<D:response>
<D:href>/Calendar/personal/34015b4a-dadc-11df-b741-60fb42f64976.ics</D:href>
<D:propstat>
<D:prop>
<C:calendar-data>BEGIN:VCALENDAR
VERSION:2.0
PRODID:-//Example Corp.//CalDAV Client//EN
BEGIN:VEVENT
UID:20010712T182145Z-123401@example.com
DTSTART:20060714T170000Z
DTEND:20060715T040000Z
DTSTAMP:20060712T182145Z
SUMMARY:Bastille Day Party
END:VEVENT
END:VCALENDAR</C:calendar-data>
</D:prop>
<D:status>HTTP/1.1 200 OK</D:status>
</D:propstat>
```

CALDAV API

EXAMPLE 1 : ADDING AN EVENT

```
from datetime import datetime
from caldav import DAVClient, Calendar, Event

calendar_url = "http://sogo1:sogo1@sogo-demo.inverse.ca" + \
               "/S0Go/dav/sogo1/Calendar/personal"

data = """BEGIN:VCALENDAR
VERSION:2.0
PRODID:-//Example Corp.//CalDAV Client//EN
BEGIN:VEVENT
UID:20010712T182145Z-123401@example.com
DTSTAMP:20060712T182145Z
DTSTART:20060714T170000Z
DTEND:20060715T040000Z
SUMMARY:Bastille Day Party
END:VEVENT
END:VCALENDAR
"""

client = DAVClient(calendar_url)
calendar = Calendar(client, calendar_url)

event = Event(client, data=data, parent=calendar).save()
```

CALDAV API

EXAMPLE 2 : SEARCHING FOR EVENTS

```
from datetime import datetime
from caldav import DAVClient, Calendar

calendar_url = "http://sogo1:sogo1@sogo-demo.inverse.ca" + \
    "/S0Go/dav/sogo1/Calendar/personal"

client = DAVClient(calendar_url)
calendar = Calendar(client, calendar_url)

events = calendar.date_search(datetime(2006,7,13,17,00,00),
                              datetime(2006,7,15,17,00,00))
```

CALDAV API

EXAMPLE 2 : INTERNAL MECHANISM

```
expand = cdav.Expand(start, end)
data = cdav.CalendarData() + expand
prop = dav.Prop() + data

range = cdav.TimeRange(start, end)
vevent = cdav.CompFilter("VEVENT") + range
vcal = cdav.CompFilter("VCALENDAR") + vevent
filter = cdav.Filter() + vcal

root = cdav.CalendarQuery() + [prop, filter]

q = etree.tostring(root.xmlElement(), encoding="utf-8",
                  xml_declaration=True)
response = self.client.report(self.url.path, q, 1)
```

CALDAV RESOURCES

LEARN ABOUT CALDAV AND GET INVOLVED!

- Me: cyril@pantherific.com
- RFC: <http://www.ietf.org/rfc/rfc4791.txt>
- Pypi: <http://pypi.python.org/pypi/caldav>
- CODE: <http://bitbucket.org/cyrilrbt/caldav>
- ANNOUNCEMENT: <http://savetheions.com/2010/06/04/introducing-python-caldav/>