

Ubuntu Online Accounts: credentials management for application developers

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2nd February 2013 11:45–12:05 / FOSDEM

Outline

- 1 Background
 - Overview
 - Components
 - UI components
- 2 Demo
- 3 Application developer guide
- 4 Summary

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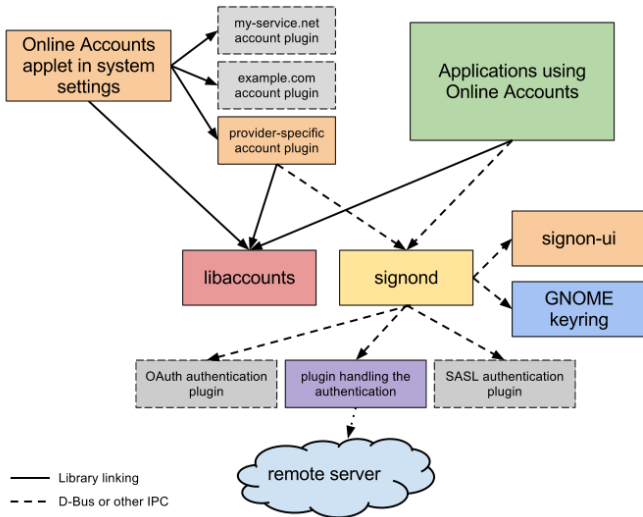
History of accounts-ss0

- non-UI components of UOA
- part of MeeGo and used in the N9
- will(?) be used in Tizen, KDE integration in progress
- LGPL 2.1 license
- hosted on Google Code

Terminology

- account: given by a provider to a user, and allows access to services
- provider: gives out accounts to users, as well as allowing them to use the accounts with a variety of services
- service: hosted by a provider, and allows the user to perform some task
- service type: describes the primary functionality provided by a service, and is a useful way to group similar services

Architectural overview



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libaccounts-glib

- C/GObject account database implementation
- C++/Qt bindings (libaccounts-qt)
- stores account settings, but no passwords/secrets
- no dependency on other UOA components

libsignon

- C/GObject and C++/Qt wrappers around signond
- forwards requests over D-Bus to signond
- thin wrapper over the (slightly ugly) D-Bus API

Account plugins

- helper modules loaded by the Control Center panel to create, edit, reauthenticate or delete an account
- client of both libaccounts and libsignon
- simple API (especially for OAuth accounts)
- XML formats for describing providers, services and service types

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signon-ui

- provides WebKit view for OAuth authentication process
- provides simple dialogues for password authentication
- integrates with system indicator to prompt user for reauthentication

gnome-control-center-signon

- applet module for GNOME Control Center (requires patched Control Center)
- also available as a standalone preferences application
- use libaccounts to enumerate the accounts, and calls out to account-specific plugins as necessary

UOA demo

Play demo video

Basic concepts

- no account management UI provided in the application; provide a dedicated account plugin and invoke the Control Center panel instead
- enumerate the available accounts and select ones relevant to the application
- fetch the credentials and use them as normal (application-specific)

Enumerating accounts

- create a new AgManager for the desired service type, to restrict the emitted signals to be related only to that service
- connect to the “enabled-event” handler on the manager
- fetch the currently-enabled services and process them
- ignore the services which are disabled or part of a disabled account

Logging in

- fetch the `AgAuthData` from the `AgAccountService`
- optionally add further authentication parameters
- pass the signon information to a new `SignonAuthSession`, together with a result callback
- process the reply in the callback and either use the authentication parameters or report the error

Registering an application with UOA

- add an XML .application manifest and install it to
`$(prefix)/share/accounts/applications`
- list services and service types if you want a
service-specific description
- use intltool to provide gettext translations

Invoking the Online Accounts panel

- call the `credentials-preferences` script, which will in turn call the Control Center or standalone preferences binary
- use the `application=application-id` argument to start with an application selected at startup
- use the `account-details=account-id` argument to start with an account selected at startup

Adding an application-specific options widget

- replaces the in-application account options
- subclass the `ApplicationPlugin` class from `libaccount-plugin`
- tied to the settings panel, so must be a `GModule` which exports a `GtkWidget` (but could use `XEmbed` with a `GtkSocket`)

Summary

- UOA simplifies credentials management for application developers

- Outlook
 - convenience library for simpler UOA consumption by applications
 - application-specific OAuth API keys

Acknowledgements

- Alberto Mardegan, UOA tech lead
- FOSDEM and devroom organisers
- you, for listening

Convenience library for applications

- single library for applications to consume, rather than several
- possibility of different backends for non-UOA credentials providers
- easier to test/mock for applications

Ubuntu contributor agreement

- required for Launchpad-hosted UOA projects
- grants certain rights to Canonical

Web credentials indicator

- used to report authentication failures to the user
- can be queried by applications over D-Bus