



KDE and the Secret Service

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Agenda

- Secret Storage
- ksecretservice Architecture
- Planned Features
- Current Progress
- Questions?



Secret Storage

- Stores a user's secrets (eg. passwords)
 - Encrypted with master password
 - Unlocked on demand
 - KDE's KWallet, GNOME Keyring
- Problems:
 - Users use software based on different desktops
 - 3rd party applications: Which to support?



Secret Storage API

- Solution: Common API
 - freedesktop.org specification project
 - Started July 2009
 - Stef Walter (GNOME), Michael Leupold (KDE)
- Goals:
 - Improved interoperability
 - Make it appealing for 3rd party applications to use it



Secret Storage API

- D-Bus API
- Collection ~ Wallet
 - Collection of secrets
 - Lock, Unlock, Delete, ...
- Item ~ Entry in wallet
 - Individual secret
 - Identified by string attributes
 - GetSecret, SetSecret, Lock, Unlock, ...
- Prompt objects
 - Designed to be asynchronous



ksecretsservice Backend

- Daemon Backend
 - Implement access to “real secrets”
 - Designed similar to the D-Bus API
 - Asynchronous
 - Level varies
 - Determined by specific implementation
- Examples:
 - Temporary collection (memory only)
 - Stored in file (like .kwl)
 - Stored on thumb drive or smart card



ksecretsservice Frontend

- Daemon Frontend
 - Implements protocol to communicate with applications
 - Uses Backends to perform actual operations
 - Examples:
 - Secret Storage API
 - KWallet (backwards compatibility)
 - Others might make sense:
 - kpasswdserver
 - ssh agent

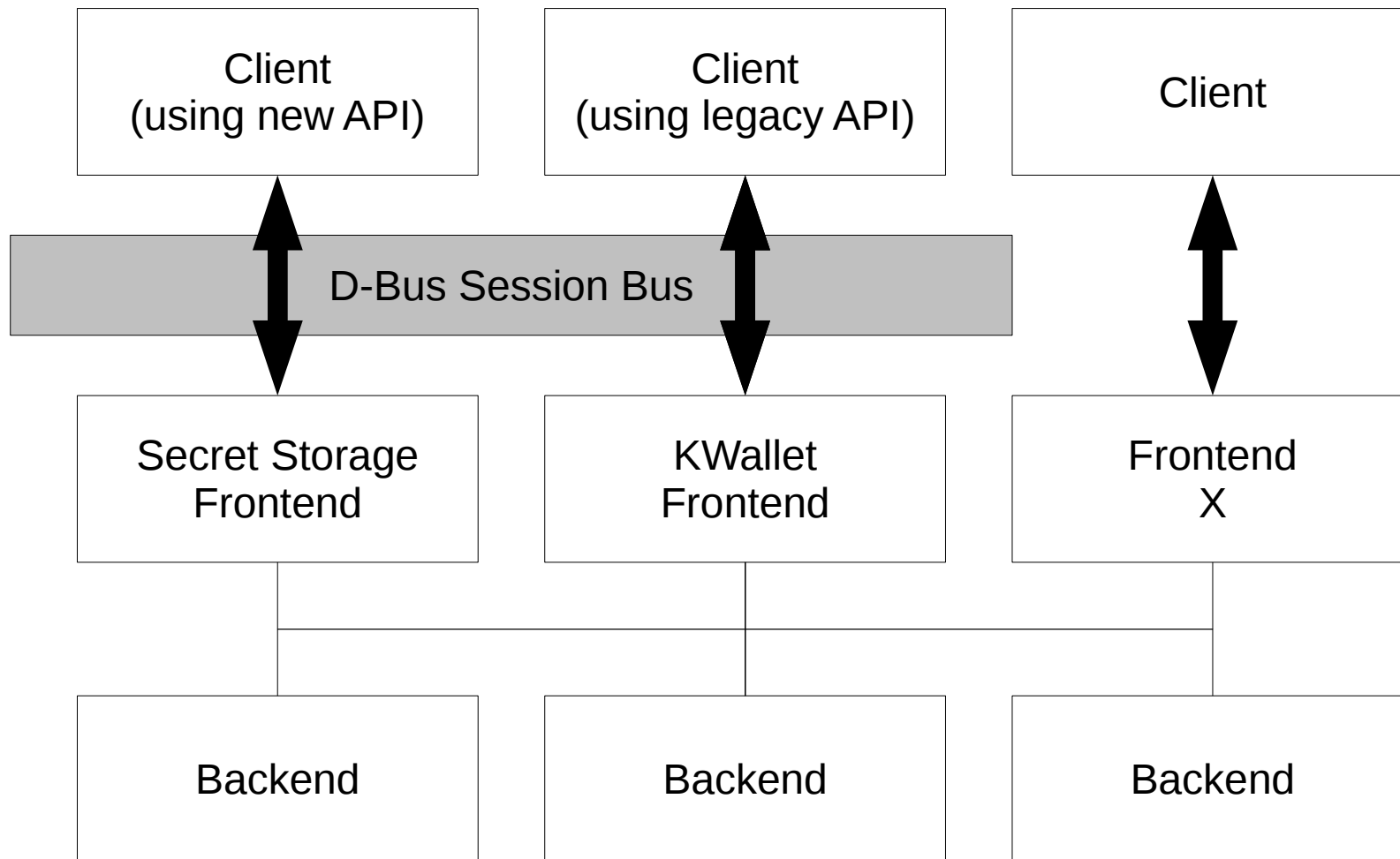


ksecretsservice Client APIs

- Client-side API
 - Straightforward, similar to D-Bus API
 - KWallet::Wallet (deprecated, less features)
- Possibly Qt-only so non-KDE applications can use it



ksecretsservice architecture





Planned features

- Multiple ways to open collections
 - Password
 - Smart card
- Temporary collections
- “More secure” on user request
 - Robust ACLs
 - Detect tampering with configuration



Current progress

- Basic framework done
- Working on new secret file format
- In the works: UI, ACLs, configuration, client-side libraries ...
- Progressing slowly but steadily
- First release with KDE 4.6 (maybe!)

- Help is always welcome!



Thanks for your attention!

Questions?

(Thanks to Thomas Thym for this great presentation template)