Experience of Openfetion development

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What is Openfetion ?

OpenFetion is a Fetion client for linux based on GTK+2.0, implementing Fetion Protocol Version 4. It supports most features of Fetion. What's more, it's lightweight and efficient with intuitive interface.

OpenFetion is the main branch of the ofetion project which also contains pidgin-openfetion, libofetion and cliofetion.

Snapshot
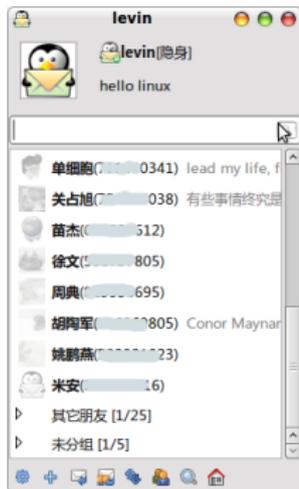
Why developed Openfetion

- I need a fetion client for linux to chat with my friends.

- libfetion's unfriendly appearance in GTK environment.

- I think it's better for an IM to display friends' portraits.

- Fetion's protocol is simple and easy to implement.

- too much free time.

Openfetion development history

- First edition was released by the end of 2009,hard to use,many many bugs
- Fetion changed protocol in the begining of 2010, so I analysed the new protocol, and rewrote all the code
- We developed fetion plugin for pidgin/empathy in late 2010, which was also ported to MacOS Adium by Evan JIANG

How I got the protocol of Fetion ?

Two Important Tools

- **.NET Reflector**

    .NET Reflector is a class browser and analysis tool for .NET, that allows you to navigate, search, disassemble and analyze .NET components.

- **Wireshark**

    Wireshark is a network protocol analyzer for Unix and Windows.

What the protocol looks like ?

The protocol of Fetion is some kind of SIP, not the SIP
defined in RFC3261, but a simplified SIP defined in a draft of IETF.

```
59.64.128.104.55765 ----> 221.176.31.39.8080:
------------------------------------
R fetion.com.cn SIP-C/4.0
F: 916098834
I: 2
Q: 2 R
A: Digest response="3ED2E2ADB592A45FFF6244A954D31EFBC685F6B1E0601B0F853588B34D1F0B42
E10119FD330EBCFADABA8CE71689C34316864A9DA86CBFD6C47070FC177B30DE8EA3E8F02AF019CE7A8B
D77A83289E60D7EF284962C5E02F605AC72D9F5C774BBF94CAC2339C5E11AF64E7B29C131F3FF24E6F28
18A1671DE19AC4EBDEF51F21",algorithm="SHA1-sess-v4"
AK: ak-value
L: 397

<args><device machine-code="001676C0E351"/><caps value="1ff"/><events value="7f"/><u
ser-info mobile-no="15210634361" user-id="657846055"><personal version="358352966" a
ttributes="v4default"/><custom-config version="358352966"/><contact-list version="35
7476347" buddy-attributes="v4default"/></user-info><credentials domains="fetion.com.
cn"/><presence><basic value="0" desc=""/></presence></args>
```

How it was implemented ?

Several shared libraries was invoked to implement OPENFETION. Here're the core libraries.

- **libgtk+-2.0**
  GTK library for the UI.

- **openssl**
  encryption library for SHA1,RSA and HTTPS.

- **libxml2**
  library for XML generation and parsing.

- **libsqlite3**
  lightweight SQL database for data localization.

Conclusion of the work

OpenFetion is not my own work, but the result of the ofetion team. One can not create good software, a team can.

The work of opensouce software development is really fascinating. If you want to find something to do, join an opensource project, or just start a small project of your own, no one will blame you for your bad work, they just encourage you.

Thank You