LEAP Encryption Access Project

Encrypted communication for mere mortals

(superheroes welcome, too)

Problem: Centralisation

- gmail, hotmail, you name it

Federation

- **user → provider → provider → user**
- **eg: SMTP, XMPP**

Better federation

- **The users should be protected from the provider.**
- **The provider should be protected from users.**

What does LEAP do?

1. **LEAP Platform:**
   a toolkit to make it easy for you to run a service provider.

2. **New protocols:**
   so that users don't need to trust the provider.

3. **Bitmask client:**
   a client that works smoothly with any compatible provider.

LEAP Platform

Example: Setup 2-node VPN provider

```
sudo gem install leap_cli
leap new example --domain example.org
cd example
leap add-user --self
leap cert ca
leap cert dh
leap cert csr
leap node add blueberry services:openvpn \
    ip_address:1.1.1.1 openvpn.gateway_address:1.1.1.2
leap node add raspberry services:couchdb,webapp \
    ip_address:1.1.1.3
leap init node
leap deploy
```

New Protocols

- **Soledad:** searchable client-encrypted synchronized database.
- **Bonafide:** secure user registration, authentication, password change, etc.
- **Key management:** precise rules for OpenPGP best practices, automated.

Current Services: VPN

- Route all your internet trafic through an encrypted channel.
- Prevent eavesdropping (thiefs in the public network, police, ...).
- Circunvent internet censorship.
- Prevent leaks (DNS, IPv6, ...).

Current Services: email

Work in progress

- End-to-end encryption using OpenPGP.

- Automatic key discovery and validation.

- Service provider has no access to user data.

- Strong protection for metadata, whenever possible.

- Cloud synchronized for high availability on multiple devices.

Bitmask client
currently available for Android and Linux
Windows and Mac OS coming soon
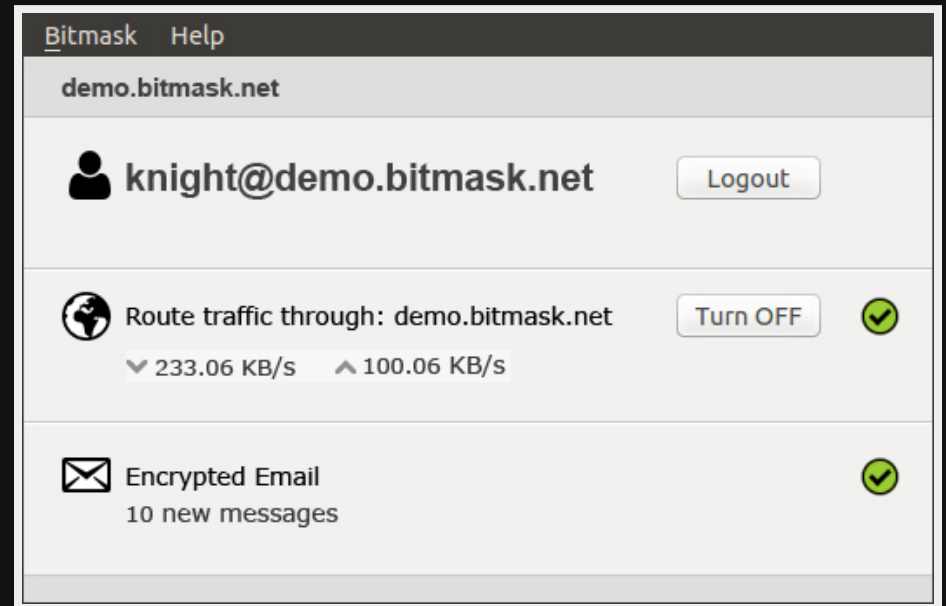
Bitmask DEMO
Demonstration Provider

demo.bitmask.net offers free service to anyone trying the Bitmask application. We currently support encrypted internet (VPN), with encrypted email coming soon.

Download Bitmask

Log In

Log in to change your account settings, create support tickets, and manage payments.

Sign Up

Create a new user account. For higher security, we recommend you create your account via the Bitmask application instead.

Get Help

Can't login? Create a new support ticket anonymously.

Note: This service is intended for demonstration purposes only. Your account might be deleted without warning.

demo.bitmask.net

user control panel

Users   Usernames   Tickets   Log Out

varac@demo.bitmask.net

Overview
Account Settings
Support Tickets
Log Out

Welcome varac.

Created 2014-03-21 10:06:38 UTC
Updated 2014-03-21 10:06:38 UTC
Enabled true

👤 Destroy your account.

❓ Create and check support tickets.

To use bitmask services:

⬇ Download Bitmask

🏠 Home   ⟨⟩ Privacy Policy   🗎 Terms of Service

demo.bitmask.net

Open Tickets   Closed Tickets   All Tickets   +New Ticket

Created at   ↓ Updated at

Subject	Created	Updated	Voices
can not log in - invalid username or password	08 Jul 15:32	08 Jul 15:36	
My	24 Jun 06:23	24 Jun 06:25	
pincu	10 Jun 07:23	10 Jun 07:23	unauthenticated user
qwer123	29 May 03:28	29 May 03:28	qwer123
Ubuntu 15.04	25 Apr 07:48	25 Apr 07:48	
Timeout error contacting backend.	24 Apr 18:02	24 Apr 18:02	
Connection error	12 Mar 16:07	12 Mar 16:07	
How to get tickets	15 Jan 02:45	15 Jan 02:45	rockbox
blabla	26 Dec 05:51	26 Dec 05:51	
art	24 Dec 01:50	24 Dec 01:54	unauthenticated user

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https://leap.se

Bitmask App

https://bitmask.net