# dnskeys: Bootstrapping Trust With DNS

Iain Learmonth and Sathyanarayanan Gunasekaran

Kings of Code Hack Battle
23rd - 24th April 2014

# Who are we?

**Iain Learmonth**

- Computing Science Student - University of Aberdeen
- Director of 57North Hacklab
- Debian Contibutor

**Sathyanarayanan Gunasekaran**

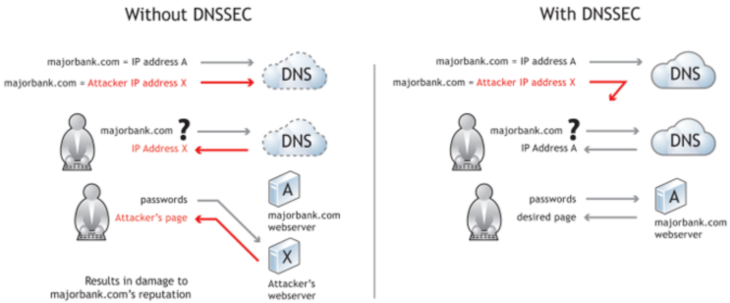
- Computing Science Student - Georgia Tech
- Tor Developer

# getdnsapi

- getdns is a modern asynchronous DNS API
- getdns performs DNSSEC validation of records returned

# getdnsapi

## DNSSEC



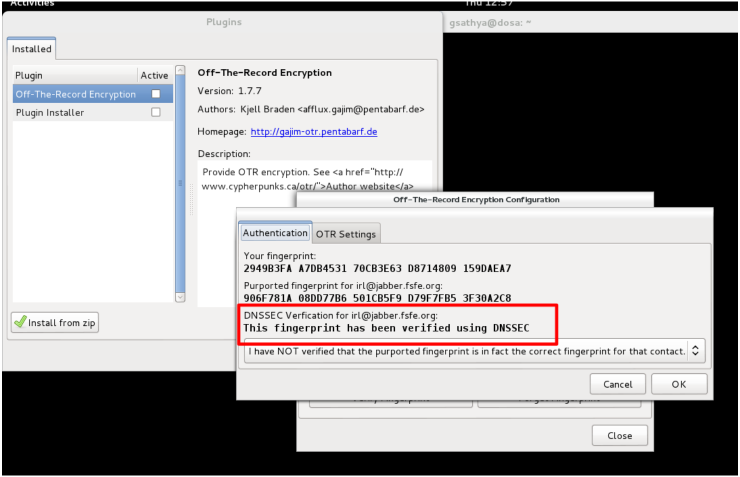
# OTR

> *Off-the-Record Messaging, commonly referred to as OTR, is a cryptographic protocol that provides strong encryption for instant messaging conversations.*
>
> – Wikipedia

# OTR Fingerprints

906F781A08DD77B6501CB5F9D79F7FB53F30A2C8

# Verifying fingerprints with DNSSEC



**Off-The-Record Encryption**

Version: 1.7.7

Authors: Kjell Braden <afflux.gajim@pentabarf.de>

Homepage: http://gajim-otr.pentabarf.de

Description:

Provide OTR encryption. See <a href="http://www.cypherpunks.ca/otr/">Author website</a>

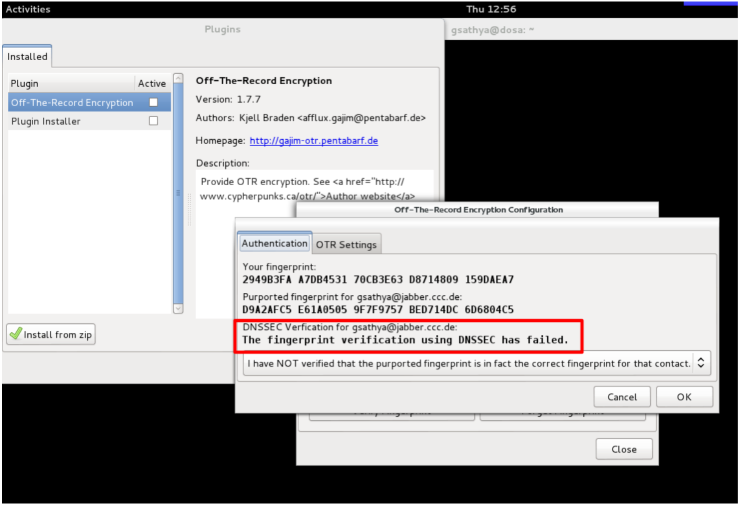
Your fingerprint:
`2949B3FA A7DB4531 70CB3E63 D8714809 159DAEA7`

Purported fingerprint for irl@jabber.fsfe.org:
`906F781A 08DD77B6 501CB5F9 D79F7FB5 3F30A2C8`

DNSSEC Verfication for irl@jabber.fsfe.org:
`This fingerprint has been verified using DNSSEC`

I have NOT verified that the purported fingerprint is in fact the correct fingerprint for that contact.

# Verifying fingerprints with DNSSEC



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Off-The-Record Encryption Configuration

Your fingerprint:
2949B3FA A7DB4531 70CB3E63 D8714809 159DAEA7

Purported fingerprint for gsathya@jabber.ccc.de:
D9A2AFC5 E61A0505 9F7F9757 BED714DC 6D6804C5

DNSSEC Verfication for gsathya@jabber.ccc.de:
**The fingerprint verification using DNSSEC has failed.**

I have NOT verified that the purported fingerprint is in fact the correct fingerprint for that contact.

**GitHub:** https://github.com/irl/dnskeys and https://github.com/gsathya/gotr
**PyPI:** https://pypi.python.org/pypi/dnskeys