

combox

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April 20, 2016

(cons 'combox 'presentation)

Introduction

Problem

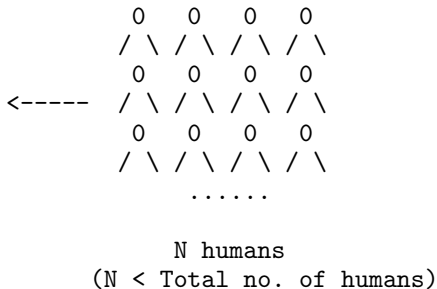
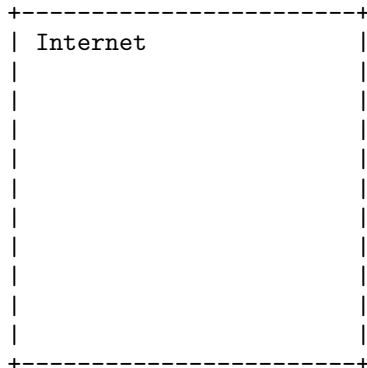
Proposed Solution

Benchmarks

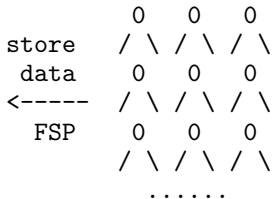
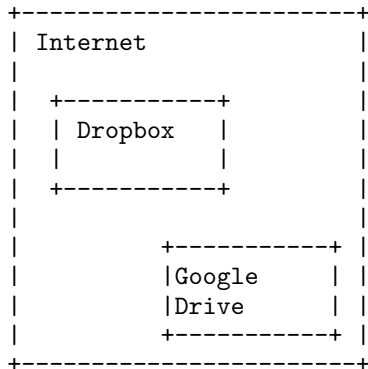
Testing

Conclusion

2016



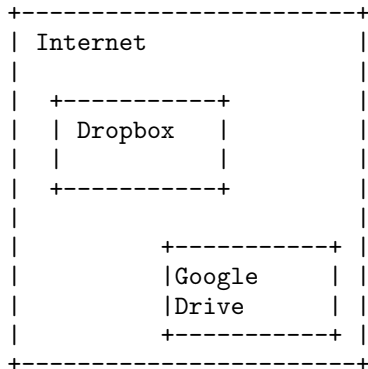
2016



M humans ($M < N$)

FSP: File Storage Provider

2016



```
store    0  0
private  / \ / \
data     0  0
<----- / \ / \
FSP      0  0
         / \ / \
         .....
```

L humans ($L < M < N$)

FSP: File Storage Provider

Invariantly

Law & Order. We may disclose your information to third parties if we determine that such disclosure is reasonably necessary to (a) comply with the law; (b) protect any person from death or serious bodily injury; (c) prevent fraud or abuse of Dropbox or our users; or (d) protect Dropbox's property rights¹.

¹<https://www.dropbox.com/privacy>

2013

- ▶ ECHELON
- ▶ Carnivore
- ▶ XKeyscore
- ▶ Boundless Informant
- ▶ PRISM

Problem

“L” folks are in trouble.

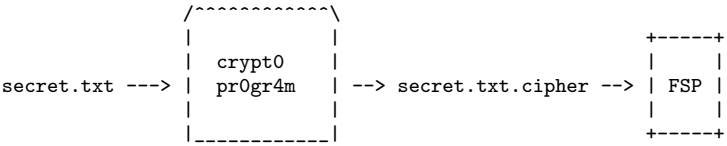
“L” are in trouble

Data stored in FSP's² computers \neq Private

The last resort

Encrypt everything!

Encrypt everything

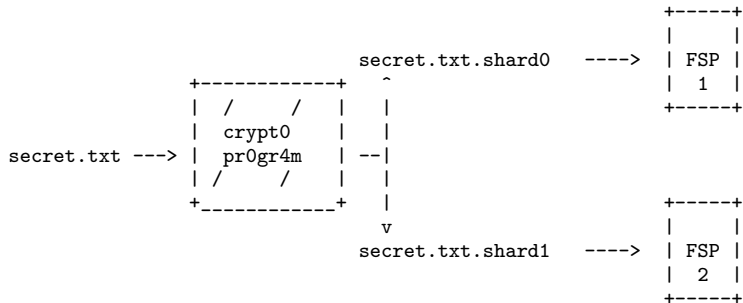


FSP: File Storage Provider (Dropbox, Google Drive, etc).

Not Enough

Our Adversaries are too powerful.

What if



FSP: File Storage Provider (Dropbox, Google Drive, etc).

Enter combox.

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Source at <https://git.ricketyspace.net/combox-paper/tree/presentation>