

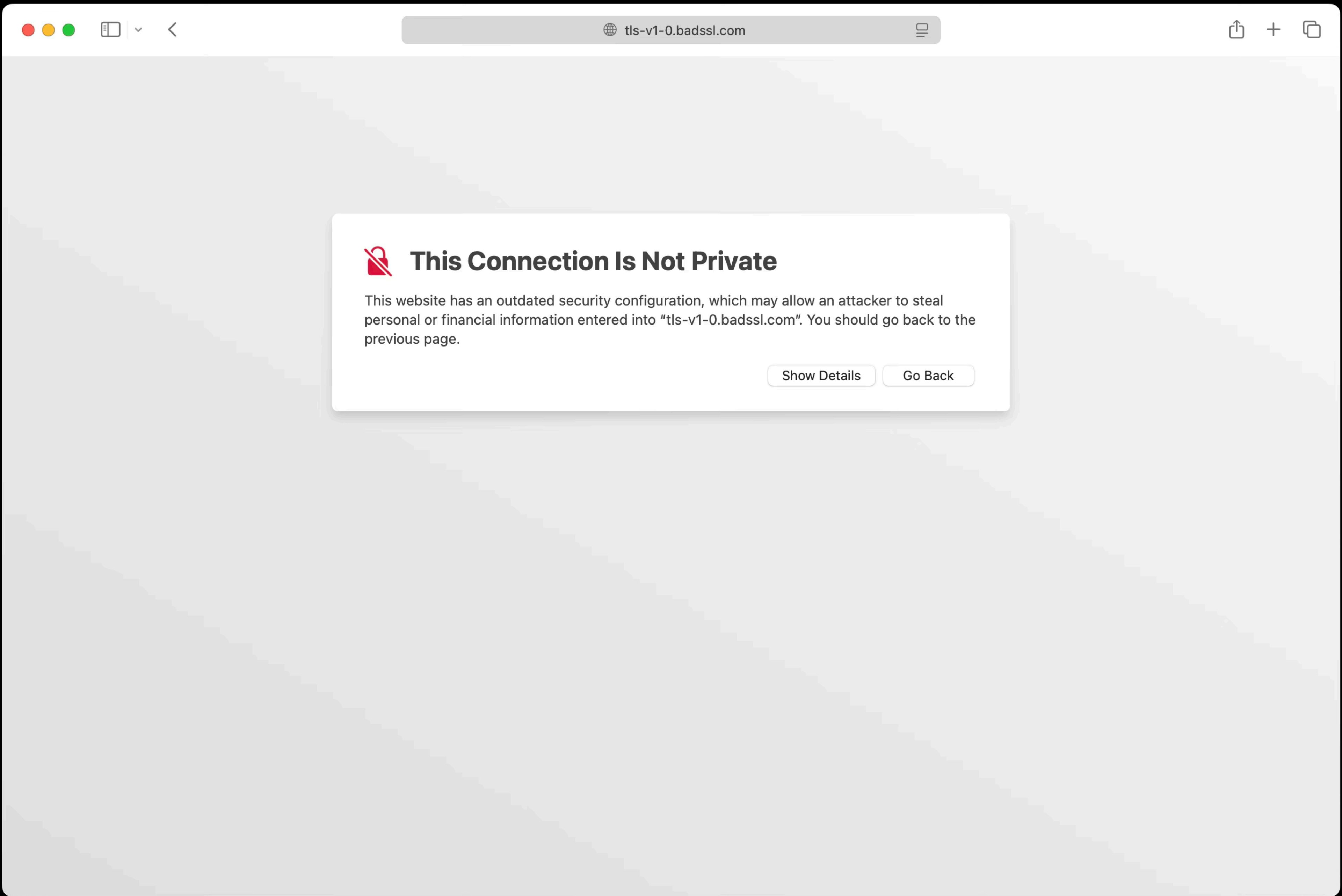


Make Cleartext HTTP Harder

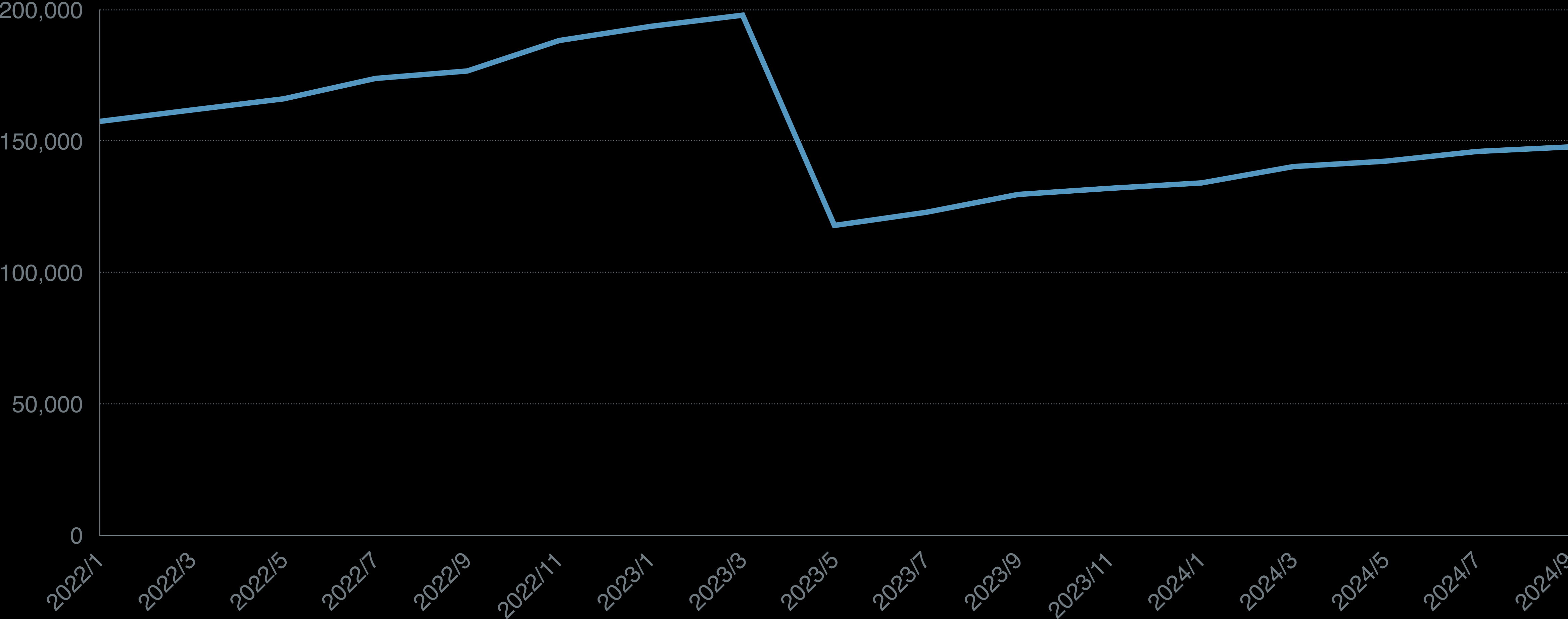
Guoye Zhang, Apple

HTTPS now is easier than ever

But it's still hard



HSTS Preload List



Good design:
Right thing = Easy thing

Make cleartext HTTP harder

- Flip HSTS preload list to HTTP allow list
 - Shrinks instead of grows
- Require certificate
 - <http://www.example.com/.well-known/insecure-certificate>
 - Treat as TLS error if not present
 - Cost increases yearly

Cleartext HTTP use cases

- Testing
- Local devices / IOT
- Captive portals

Discussion