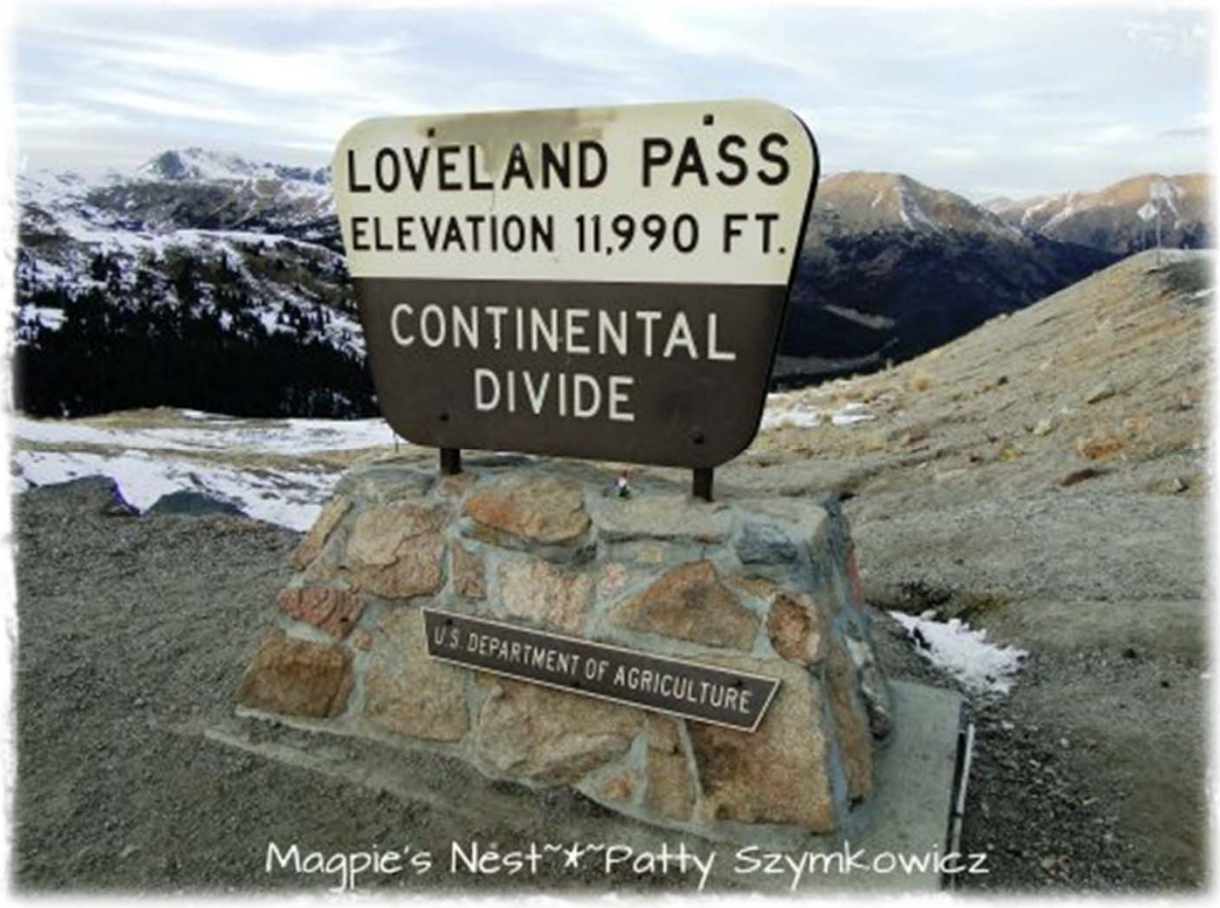
Building Online Trust

Jeremy Rowley

DigiCert

digicert® | YOUR SUCCESS IS BUILT ON TRUST®

The Great Divide: Perspective



Initiatives

- OCSP Stapling
  - Better revocation
  - Faster handshakes
  - Require mustStaple
- Certificate Authority Authorization
  - Prevents fraud
  - Easy to implement
- Certificate Transparency
  - Detects mis-issuance
  - Prevents government MITM
- Key Pinning
  - Limits issuance
  - Potential bricking problem

New Developments and Discussions

- Technology Changes
  - 1024 bit deprecation
  - SHA2 requirement
  - Internal name phase out
  - SSL beyond logins and shopping carts
- Implementations
  - CAA deployment
  - CT deployment
- Projects
  - EV certificate expansion
  - Performance working group
  - Code signing baseline standards
  - Certificate lifecycles
  - OCSP Stapling push

Building Trust

CAs
- Better issuance practices
- Better standards
- New technology

Browsers
- Enforce good practices
- Set high standards
- Deploy new technology

Server Software Providers
- TLS 1.2
- OCSP Stapling
- Other enhancements

ICANN community
- Accurate WHOIS
- Push changed information

EDUCATION

The Path Ahead

Improved Online Security

- New technologies
- Better standards & enforcement

Bumps in the Road

- Legacy devices/software
- Old paradigms

Chicken vs. Egg

- Early, voluntary adoption vs. mandatory

Transparency, Accountability & Self-Selection

- More visibility into certificate issuance
- Enhanced information

Questions?

Contact me:

Jeremy.rowley@digicert.com

Resources:

- https://www.cabforum.org/
- https://casecurity.org/