Distributed Path Validation

High Security and Massive Scalability for Federated PKIs
The Problem

• **Find a certification a path…**
  – from something I trust
    • Any Root CA Certificate trusted by Windows
    • Configured Windows to trust the US Treasury Root CA
  – to a certificate received in a signed email
    • Messages received from PD-VAL Working Group members
    • Messages received from DoD contractors
  – that is valid
    • Full RFC 3280 path validation including status checking
  – that meets required policies
    • US Treasury Medium or High Assurance policies
  – and do it FAST!
The CoreStreet Solution

Directory Servers

CoreStreet RTC Authority

Pre-signed OCSP Responses
Certification Path Data

Microsoft Outlook with CoreStreet Validation Plugin

SCVP Request:
Trust Anchor and End Entity

SCVP Response:
Certification Path and OCSP Responses

requires trust
(physical and data security)
The Akamai Distributed Computing Platform

- Globally Distributed Platform
  - 15,000+ Servers
  - 1,100+ Networks
  - 70 Countries

- Average Network Web Traffic: 80+ Gbps

- Over 40 Billion Hits Per Day
  - 1,000,000 hits/sec

- Next Generation Management Tools: Yield Best In Class Network Management Metrics

- Patented Core Technology

- Network Monitoring
  - 3 Geo Dispersed Customer Care Centers
  - 24x7x365
Akamai Platform Overview

CoreStreet RTC Authority

Akamai Network
15,000 Servers
1,100 Networks
70 Countries

Internet

Network Storage

Edge Servers