



The History and Value of Deploying DNSSEC

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Who is Afilias?



- **10 years of experience** in critical Internet infrastructure



- Best known for domain name registry services in **support of 17 million domains** across 15 TLDs



- Diverse DNS Network handling **billions of queries** daily



- Largest DNSSEC deployment – more TLDs than any other provider



What problem does DNSSEC solve?

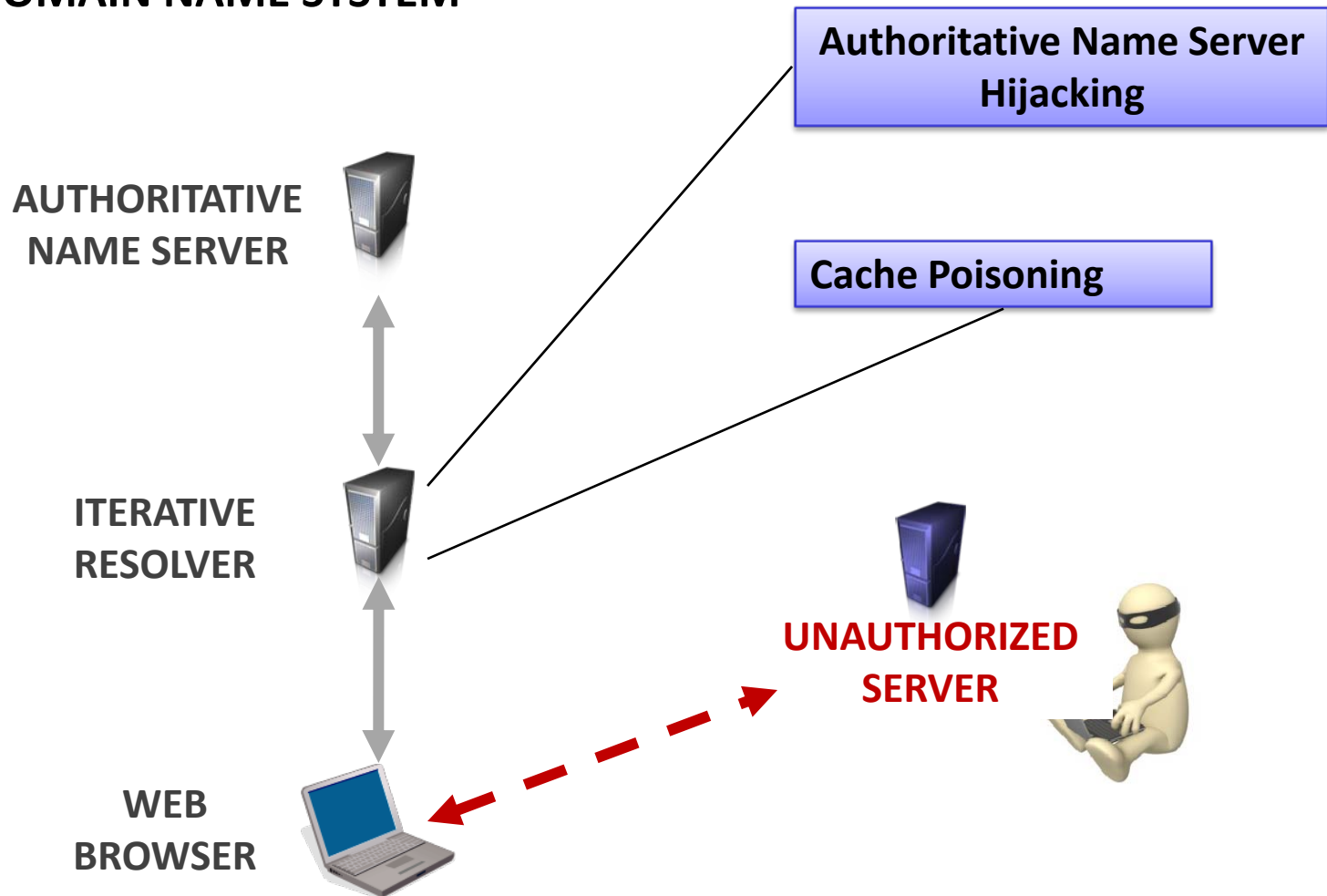
When you visit a website, or send an e-mail, can you be sure you are communicating with the server that you think you are?



(At least not with certainty)

The risks without DNSSEC...

DOMAIN NAME SYSTEM



When does site identity matter?

DNSSEC is designed to protect users from the consequences of forged DNS data inserted by malicious actors

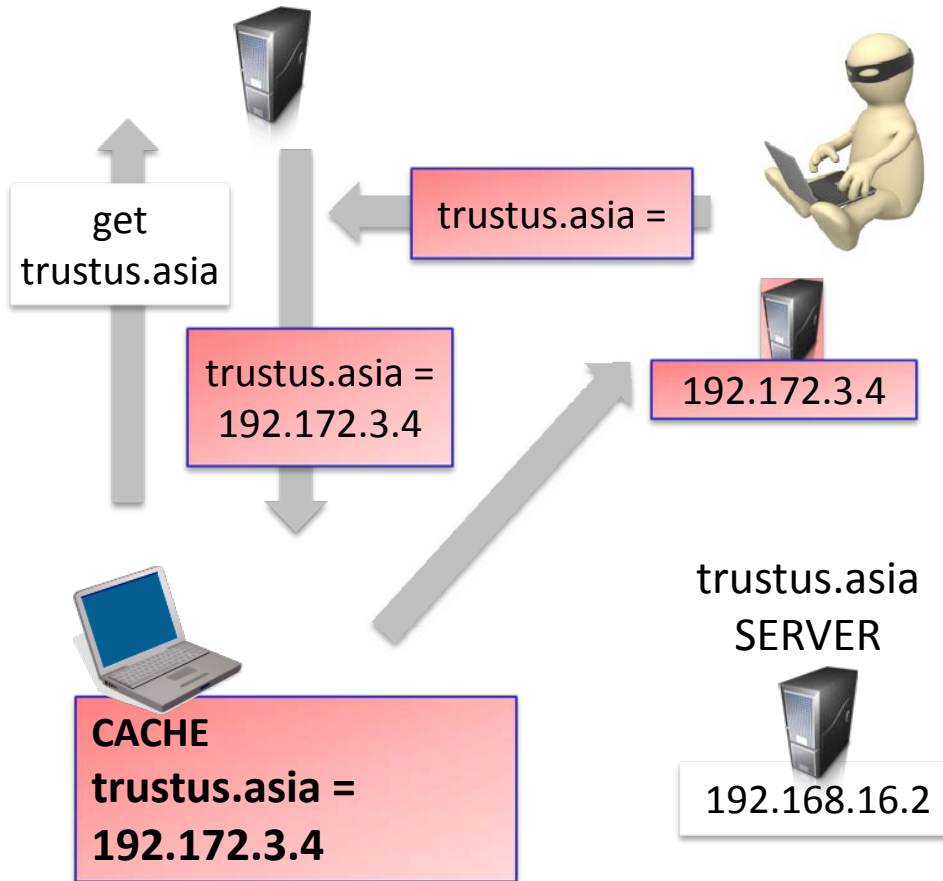
The DNS was originally build on a model of trust

As the Web has expanded, and new criminal exploits have grown more sophisticated, this is no longer an acceptable model for the future of applications and services that rely on the DNS



Cache poisoning risks

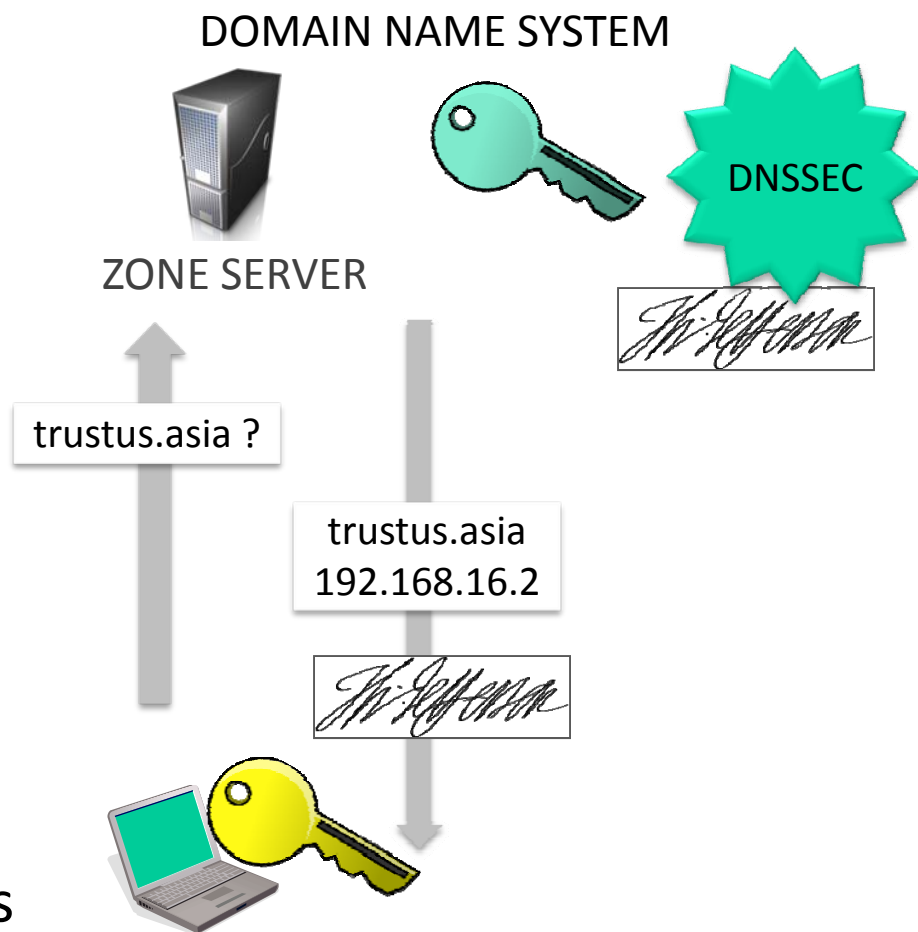
DOMAIN NAME SYSTEM



1. A DNS resolver sends a DNS query and accepts the first response it receives.
2. If a malicious actor were to send back an incorrect response, the resolver would use this address until its cache expired.

How can DNSSEC help?

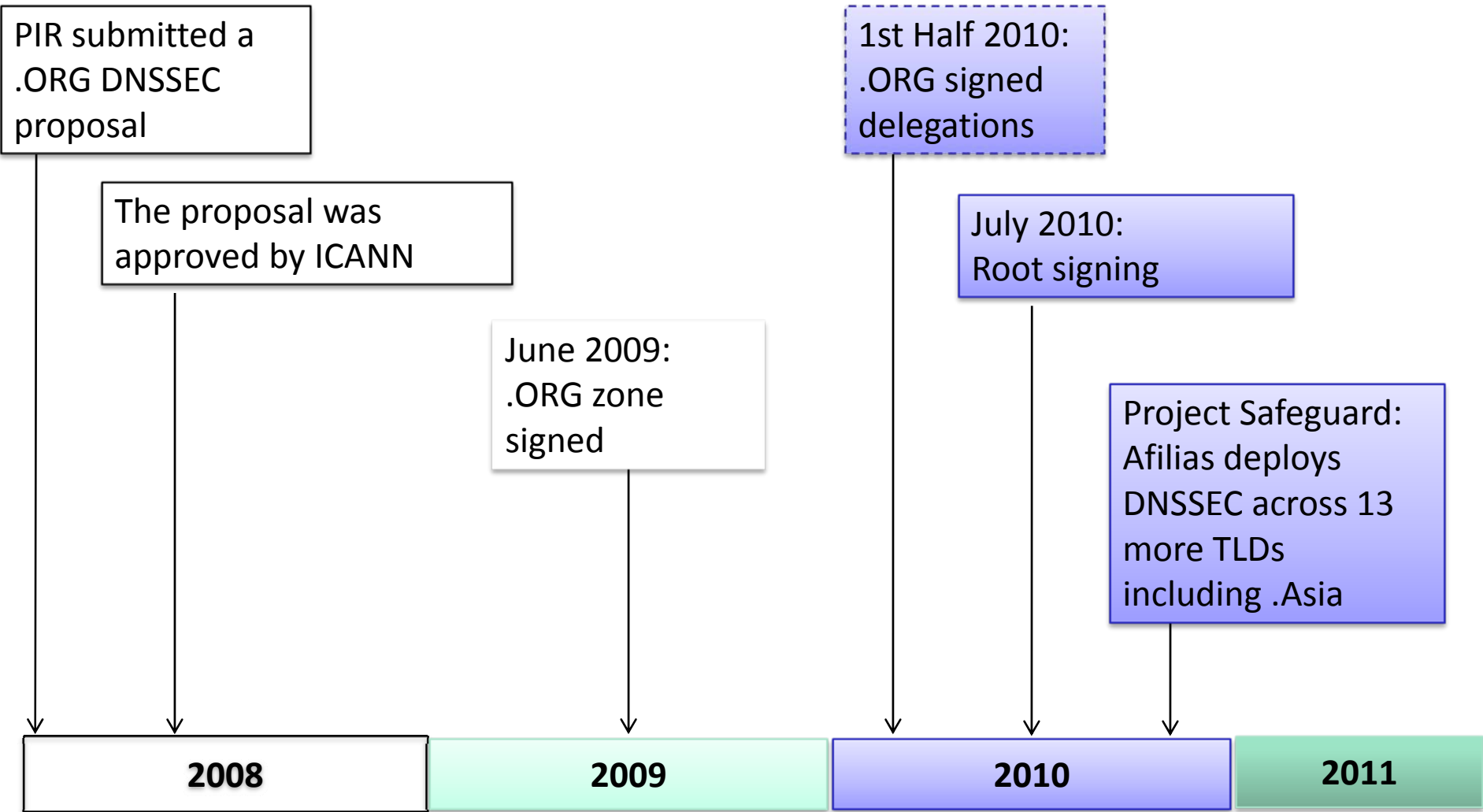
- Domain Name System Security Extensions adds security to the Domain Name System
- With DNSSEC, users and servers can verify DNS responses for:
 - Data integrity
 - Origin authentication
- The data is protected. It does not matter what server or resolver provides the data.



DNSSEC Benefits by User

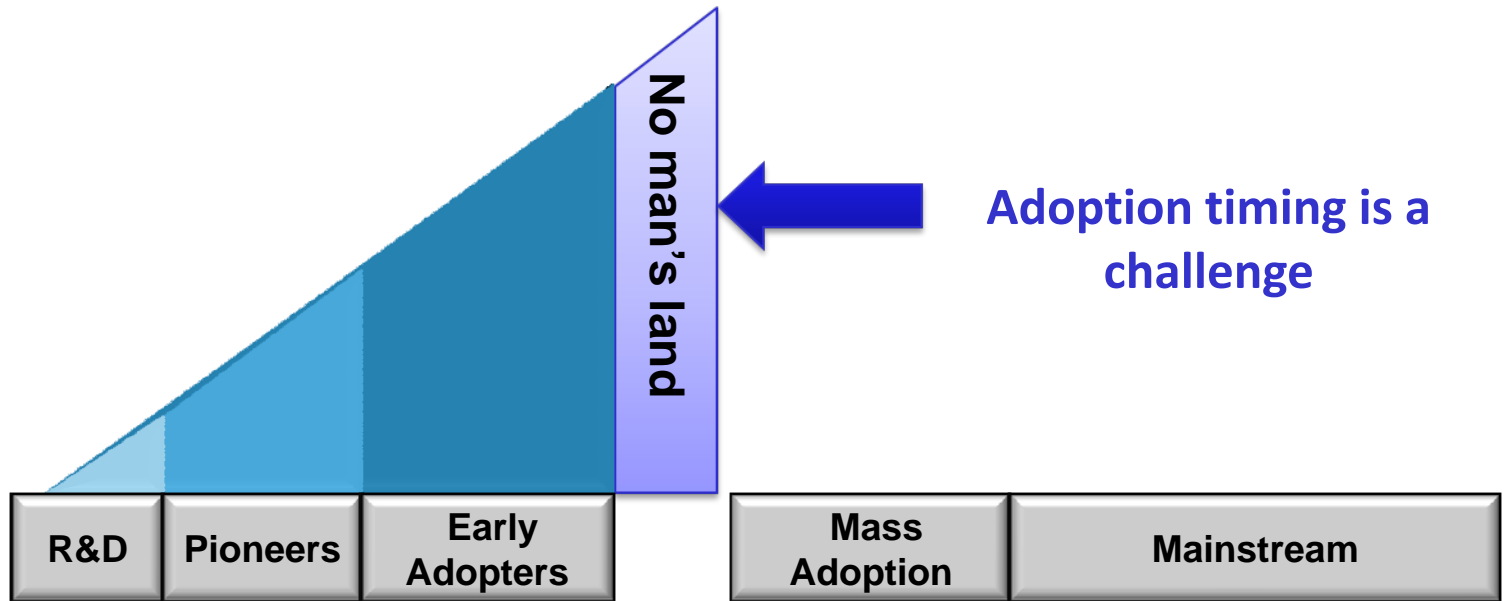
End –User	Registrant	Registrar	Registry
Gain confidence of reaching the intended website	Fraud mitigation	Comply with new industry standards	Meet new industry standards
	Greater brand protection	Meet Registrant demands for increased domain security	Meet Registrar demands for increased security of their domains

Afilias DNSSEC timeline



DNSSEC adoption

- Now requires ISPs and application providers to get on board to envision new services that can bring this security to the mainstream





Thank you!