




# RIPE NCC: Trusting Technology

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A photograph of the Golden Gate Bridge in San Francisco, taken from a high vantage point on a grassy hill. The bridge's iconic orange-red towers and suspension cables are prominent, stretching across the blue water of the bay. In the background, the city skyline is visible under a soft, orange-hued sky at sunset. A dark, semi-transparent rectangular box is overlaid on the right side of the image, containing white text.

**Open Source projects are  
the *roads and bridges* of  
the Internet**



A photograph of a modern cable-stayed bridge at night. The bridge's central pylon and its radiating stay cables are brightly lit with white lights, creating a starburst effect. The bridge deck is also illuminated. The lights reflect on the dark water in the foreground. In the background, some distant city lights are visible. A semi-transparent black rectangular box is overlaid on the right side of the image, containing white text.

**In 2013 the new bay bridge  
was built for \$6.5 billion**



**In 2007 Northbound I-680  
was built for \$1.3 billion  
Dollars**



Open source now creates  
billions of dollars of value  
and touches all of our lives



A photograph of a sunset over a body of water. The sun is low on the horizon, creating a bright glow and reflecting on the water. The sky is filled with dramatic, orange and yellow clouds. The water is calm, showing a clear reflection of the sun and clouds. In the foreground, there are silhouettes of trees and grass. A semi-transparent black rectangular box is overlaid on the right side of the image, containing white text.

**We've reached a golden  
age of open source.**



**Or not**



**The Problem: Security**



In 2014 the security of the Internet was  
hit by a number of open source  
vulnerabilities



Shellshock

NTP



This isn't just an open source problem





Why is this happening if Linus's law is true:  
“Given enough eyeballs, all bugs are shallow.”

A man with long dark hair and a full beard is smiling and looking slightly to his right. He is wearing a dark-colored shirt. The background is an office environment with glass partitions and a white pillar.

**NTPd Maintainer Earning  
less the \$25k per year**



# GnuPG Author: Going Broke





**OpenSSL: Less than  
\$2000 per year in  
donations**



# **OpenSSH Maintainer: Working part time jobs**

A photograph of a man with short reddish-brown hair, wearing a pink t-shirt and white-rimmed sunglasses. A grey pigeon with iridescent green and purple neck feathers is perched on his right shoulder. The background shows St. Mark's Square in Venice, with the Procuratie Vecchie building featuring a row of arches and windows. Other people and pigeons are visible in the square.

**Bash Maintainer: Working  
nearly alone**



A photograph of a large, green-painted steel truss bridge spanning a river. The bridge has a complex network of green steel beams and supports. Below the bridge, the river flows rapidly, creating white water rapids. The sky is clear and blue. In the foreground, there are some concrete structures and a road with a guardrail. The text "In 2007 this bridge was the most traveled in Minnesota" is overlaid on the right side of the image in white font.

**In 2007 this bridge was the most traveled in Minnesota**





**August 1, 2007 the I-35W  
collapsed killing 13 people**



**Heartbleed was the I-35W  
bridge of open source**

# Why Is This Hard?

- Because software is complex.
- Because secure code is hard to write and maintain.
- Because we want to fix open source market failures without screwing up open source market success.





# Why can we fix this?

- Because only open source allows for collective and transparent remediation.
- Because open source can leverage shared testing and tools to make everyone better.
- Because we can share best practices to make writing secure code easier.



A photograph of a server room with rows of server racks on both sides of a central aisle. The room is dimly lit with blue overhead lights. The racks are filled with server units, many of which have glowing red and green indicator lights. A green exit sign is visible at the end of the aisle.

# Attacking The Problem:



**CORE  
INFRASTRUCTURE  
INITIATIVE**

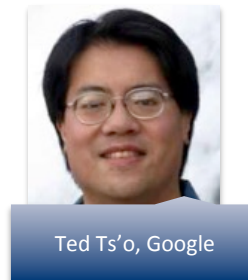


We are taking a pre-emptive approach to cyber security. 20 industry giants have already signed on.





# In addition to large tech firms we have an advisory board of industry experts.





# What is CII Doing?



CLI is focused on three key things.



# 1 Funding Projects That Need Help

- GnuPG
- Network Time Protocol
- OpenSSL
- OpenSSH
- Open Crypto Audit Project
- New research and infrastructure initiatives being announced next week

# 2 Core Infrastructure Census

How do we find the next OpenSSL, NTPd or Bash?

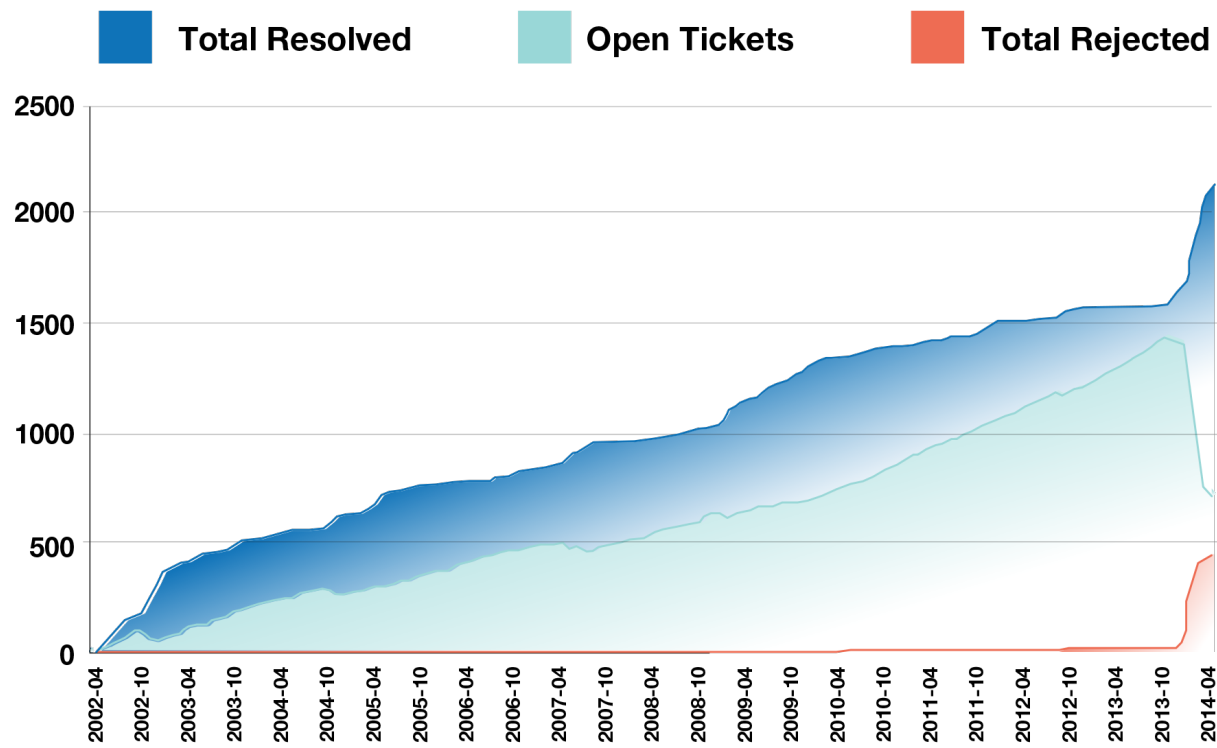
This is not as easy as it sounds.

# 3 Security Best Practices Guidelines

How can we provide ALL open source projects with help writing secure code from day one?



# OpenSSL Bugs Since Heartbleed



The security, privacy and stability of the Internet matters to all of us. Those things depend on open source and we have an opportunity to act.

# We need your help

- Tell us about critical open source projects that need help
- Census and best practices guidelines will be published as open source projects: contribute and improve them
- Have your company join CII



# Thank you.

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