



# Putting Trust Into The Network

Securing Your Network Through Trusted Access Control

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# Talk Outline

- Problem Statement
- Various Solutions
- Trusted Access Control
- Q & A



# Problem: Reduce Endpoint Attacks

- **Motivated Attackers**
  - Extortion, Identity Theft, Bank Fraud, Corporate Espionage
- **Increasingly Sophisticated and Serious Attacks**
  - Viruses, Worms, Spyware, Rootkits, Back Doors, Botnets
  - Zero-Day Exploits, Targeted Attacks, Rapid Infection Speed
- **Exponential Growth in Malware**
  - >40,000,000 Infected Machines, >35,000 Malware Varieties
- **Dissolving Network Boundaries**
  - Mobile workforce, partners, contractors, outsourcing
- **Regulatory Requirements**



# Various Solutions

- More Secure Endpoints
  - AV, Personal Firewall, Patch Management
  - Better Coding Practices, Anti-Spyware, HIPS
- Stronger Network Protection
  - Firewalls, IDS, IPS, Vulnerability Scanners
  - Network Access Control (NAC)
- But Endpoints Still Get Compromised
  - And then what?

Trusted Access Control =

Trusted Platform Module

+

Network Access Control



# Trusted Platform Module

- Hardware Security Component
  - Key storage
  - Signing and encryption
  - Secure and Trusted Boot
  - Remote attestation
- Open Standards for Features and APIs
  - Developed by Trusted Computing Group
- Included on all new commercial laptops, increasing number of desktops and servers



# Network Access Control

- Check Endpoint Health against Policy
  - At or After Network Connection
  - If Unhealthy, Quarantine and Remediate
- But what about lying endpoints?
  - Need Trusted Boot and Remote Attestation

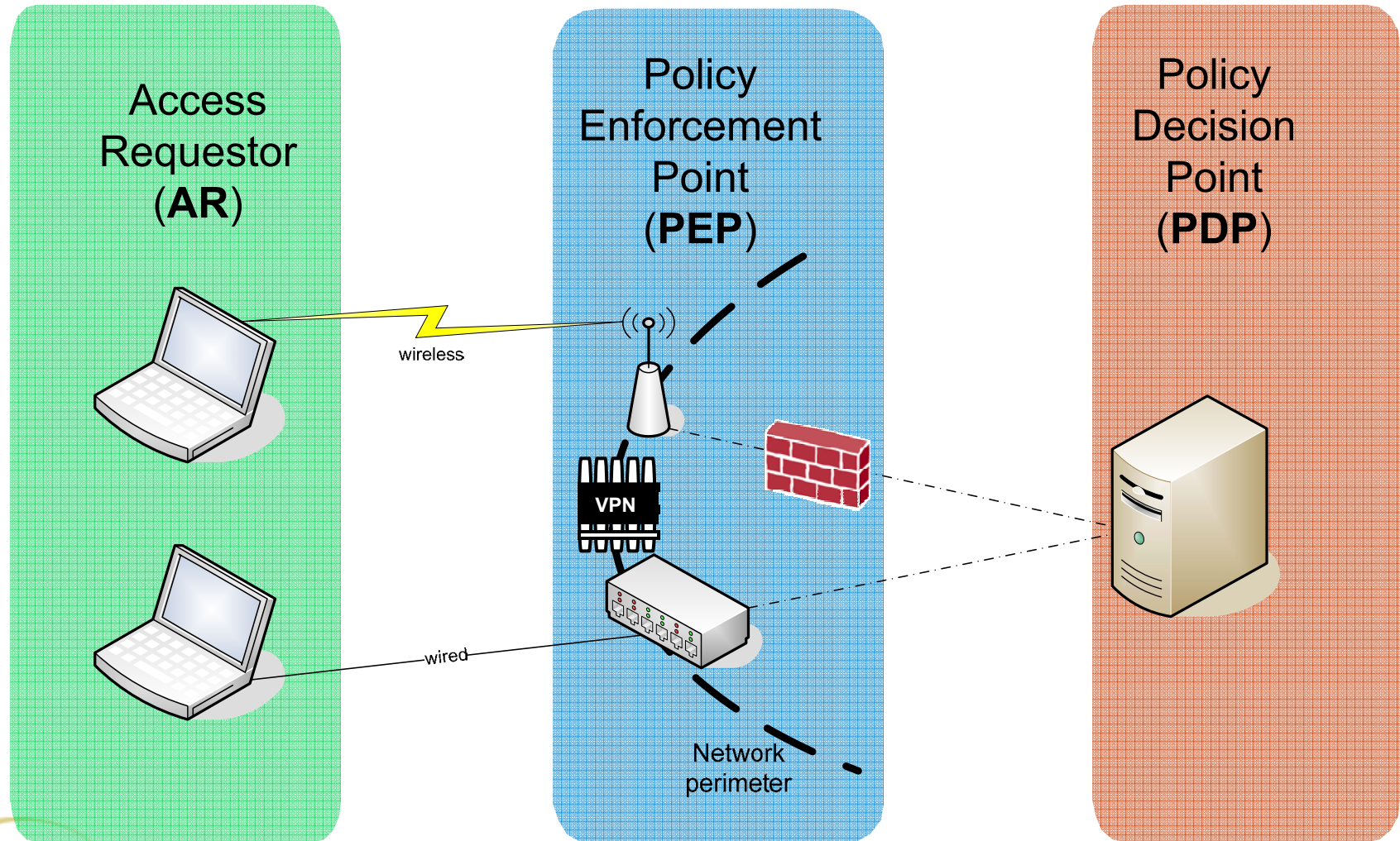
# Trusted Network Connect (TNC)

- Open Architecture for Network Access Control (NAC)
- Suite of Standards
- Developed by Trusted Computing Group
- Supports Trusted Access Control

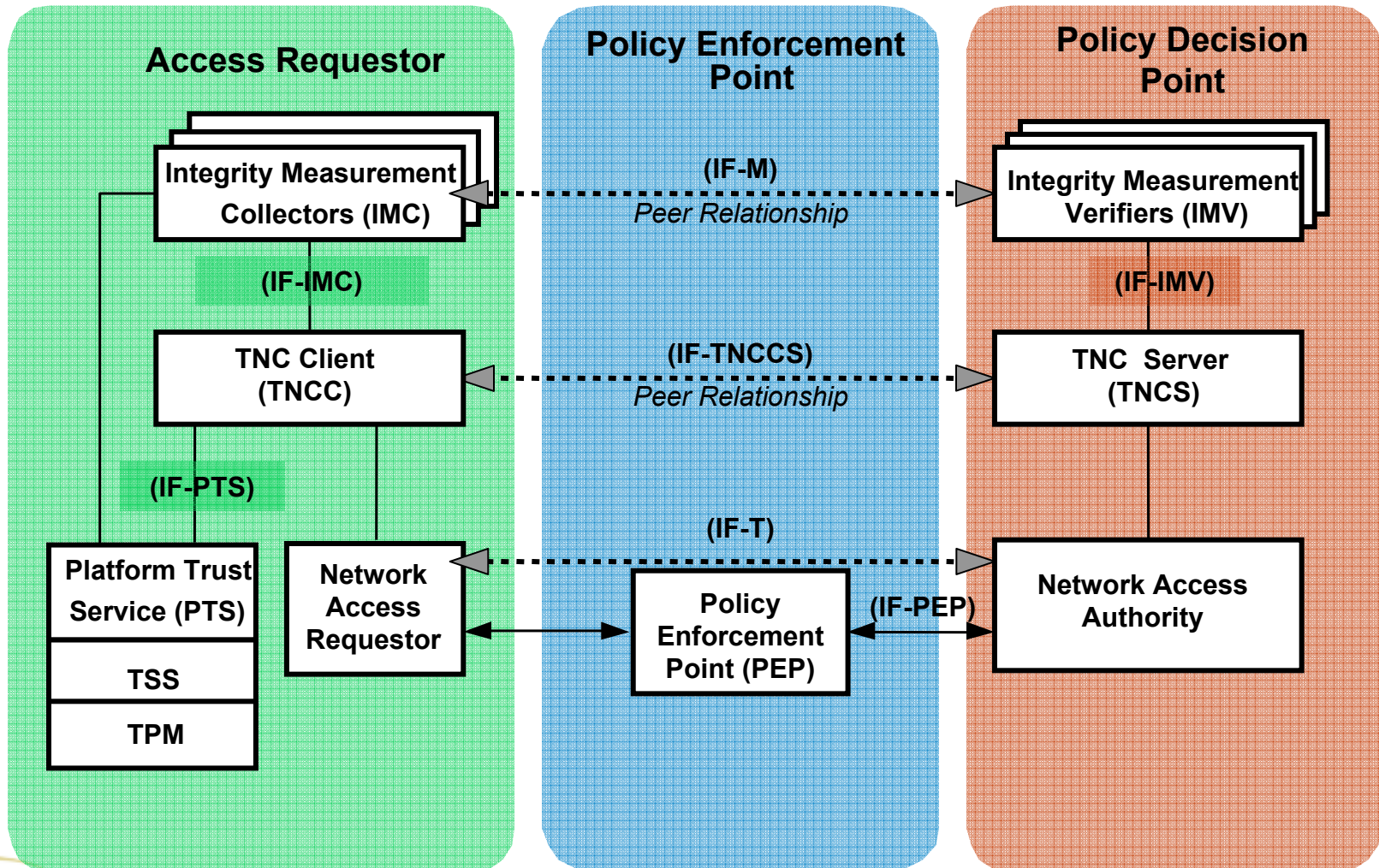




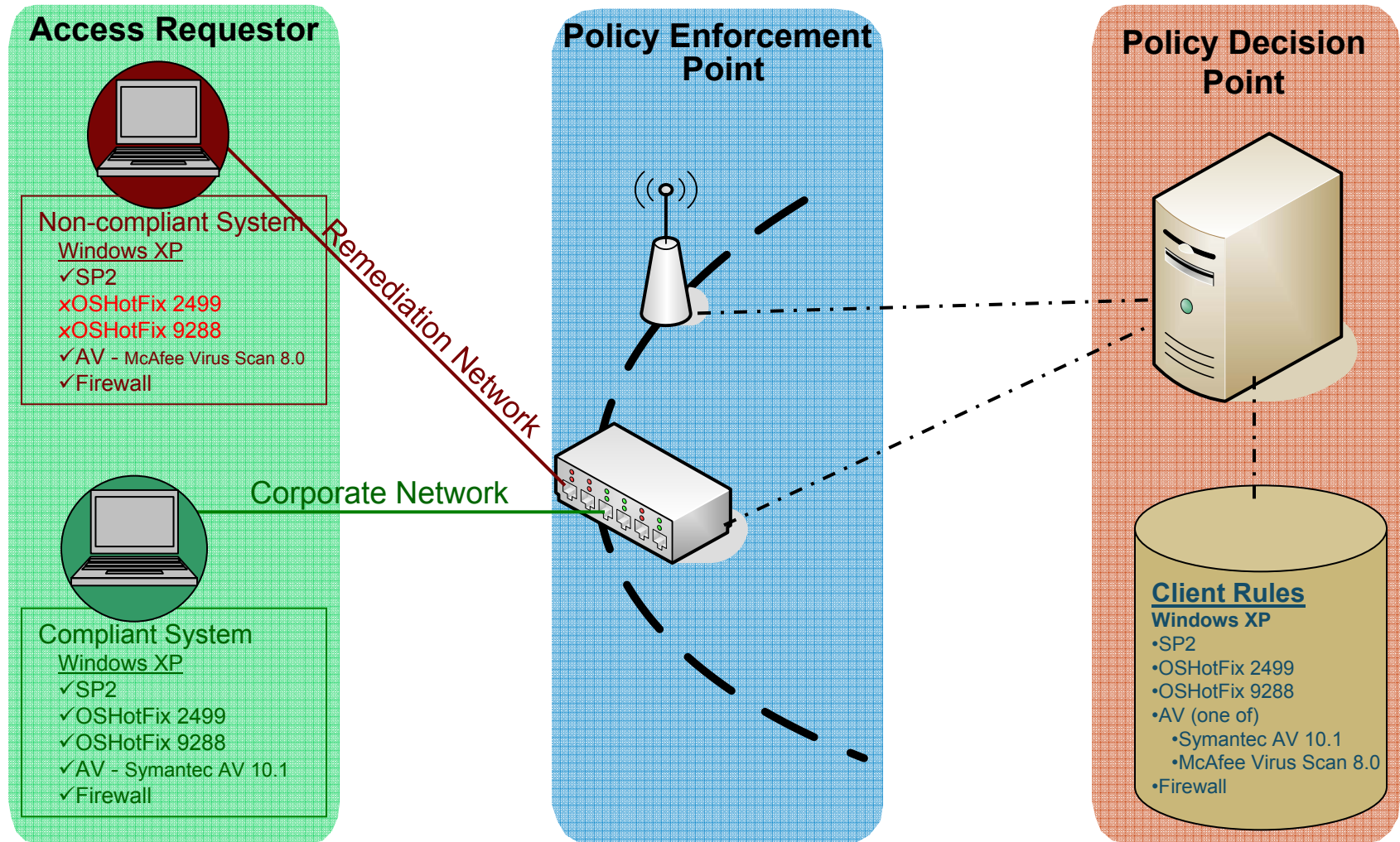
# TNC Architecture



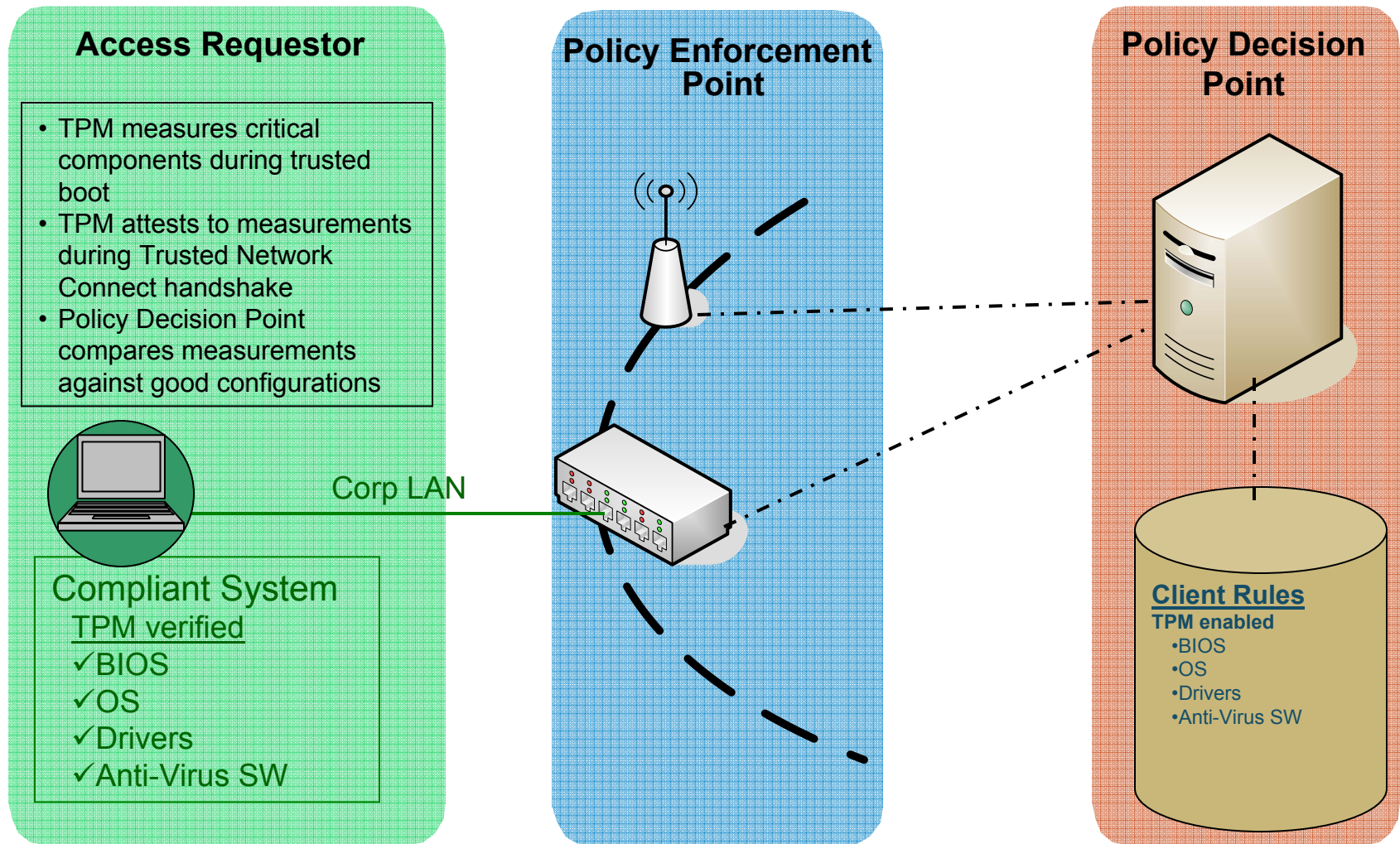
# TNC Standards



# Network Access Control Use Case



# Trusted Access Control Use Case



# Trusted Network Connect (TNC) Advantages

- Open standards
  - Non-proprietary – Supports multi-vendor compatibility
  - Enables customer choice
  - Allows thorough and open technical review
- Leverages existing network infrastructure
  - Excellent Return-on-Investment (ROI)
- Strong security
  - Trusted Platform Module (TPM)
  - Solves lying endpoint problem
- Products supporting TNC standards shipping today
  - Including open source implementations



# TNC Vendor Support

## Access Requestor

*Endpoint  
Supplicant/VPN Client, etc.*



## Policy Enforcement Point

*Network Device  
FW, Switch, Router, Gateway*



## Policy Decision Point

*AAA Server, Radius,  
Diameter, IIS, etc*



# Q & A

