



## TCG and IETF Agree on NAC Standards February 2010

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### IETF and TCG: Working Together

#### TCG's Role

- Develop and standardize trusted computing technology
- Certify products that implement TCG Specifications

#### IETF's Role

- Achieve universal agreement on Internet standards

#### Benefits of TCG-IETF Cooperation

- Rapid innovation with broadest consensus



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## Two TCG Specs are Now IETF RFCs

### TCG and IETF Released Equivalent NAC Standards

- IETF's PB-TNC = TCG's IF-TNCCS 2.0
  - Standard protocol for endpoint health checks
- IETF's PA-TNC = TCG's IF-M 1.0
  - Standard messages for things to check
  - OS version and patches, Anti-Virus status, etc.
- All part of TCG's TNC architecture



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## What does this mean?

### Universal Agreement on NAC Standards

- All parties have agreed on these standards
- Effort included Cisco, Juniper, Microsoft, TCG, etc.
- Signals end to "NAC wars"
- All parties are working together nicely
- Joint work not complete



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## Benefits Coming When Joint Work Done

### Customer Benefits

- Plug-and-play NAC compatibility
  - Products that implement IETF NEA RFCs work together
- Easy to ensure product compatibility
  - Require support for IETF NEA RFCs
- TCG will offer product certification
  - Verified compliant with specs and interoperable
- Should lead to NAC support built into more products
  - Printers, cell phones, etc.

### Vendor Benefits

- Simple and easy to support standard NAC
  - Include support for IETF NEA RFCs in products



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## Next Steps for IETF NEA WG

### Agree on IETF NEA Transport Standards

- Last missing piece for IETF NEA standards
- Expected in late 2010 or early 2011
- TCG has proposed the TNC transport protocols

### Productization

- Full interoperability based on IETF NEA RFCs not yet possible
  - Need IETF to agree on Transport Standards
- Expect products based on IETF NEA RFCs in 2011

### Certification

- TCG certification for IETF NEA RFCs will follow



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## TNC: NAC Standards Here Today

### TCG's TNC Standards

- Full suite of network security standards
- Available in dozens of products since 2005
- Deployed and used by millions of users

### Relationship between IETF NEA RFCs and TNC Standards

- All IETF NEA RFCs will also be TNC standards
- But TNC standards go beyond IETF NEA RFCs (IF-MAP, etc.)

### Certification

- TCG is preparing certification for current TNC standards
- TCG certification for IETF NEA RFCs will follow



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## Summary

### TCG and IETF Released 2 New NAC Standards

- Agreed on by all NAC parties
- Extend and build on existing TCG standards (TNC)
- More work still to be done
  - NAC transport standards, expected in 2010-2011

For Now, Customers Should Use TCG Standards (TNC)

Eventually, TCG and IETF Standards Will Be Complete

- Should lead to broader support for these standards



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## More Information

TNC specifications are on the TCG web site

[http://www.trustedcomputinggroup.org/developers/trusted\\_network\\_connect](http://www.trustedcomputinggroup.org/developers/trusted_network_connect)

IETF standards are on the IETF web site

<http://www.ietf.org/>

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## Backup Slides



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## TCG Background

### Trusted Computing Group (TCG)

- Industry Standards Group
  - More than 100 members
  
- Creates Standards for Secure Computing
  - Trusted Platform Module (TPM)
  - Trusted Network Connect (TNC)
  - Self-Encrypting Drives (SED)
  - Others



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## IETF Background

### Internet Engineering Task Force

- Open International Community of Network Designers, Vendors, Operators, and Researchers
  - Thousands of participants
  
- Creates Standards for Internet
  - Internet Protocol (IP)
  - Transmission Control Protocol (TCP)
  - Transport Layer Security (TLS)
  - Others



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## What is TNC?

### Trusted Network Connect (TNC)

- Open Standards for Network Security
  - Includes Network Access Control (NAC)
  
- Released in 2005
  
- Widely Implemented
  - Enterasys, HP, Juniper, Microsoft, etc.
  - Thousands of customers, millions of seats



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## TNC and NEA Timeline (2004-2007)

2004: TCG TNC-WG formed

2005: TCG releases first TNC standards

- TNC Architecture, IF-IMC, IF-IMV, IF-PEP

First products shipped that implement TNC standards

2006: TCG releases more TNC standards

- IF-TNCCS, IF-T for EAP, IF-PTS

IETF NEA WG formed

2007: TCG and Microsoft announce TNC support built into Windows

- Included in Windows XP SP 3, Windows Vista, Windows 7, and Windows Server 2008

IETF NEA WG agrees on requirements



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## TNC and NEA Timeline (2008-2009)

2008: TCG releases revolutionary IF-MAP standard

- Expands TNC to coordinate all security systems
- NEA WG solicits proposals for first 2 NEA standards
- TCG proposes 2 TNC standards to NEA WG
- IF-TNCCS and IF-M
- NEA WG accepts TCG proposals

2009: TCG adds support for Clientless Endpoints,

- Clientless Endpoints, Federated TNC, IF-T for TLS
- NEA WG tweaks TNC standards
- Changed names, improved performance and error handling
- NEA WG solicits proposals for NAC transport standards



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## TNC and NEA Timeline (2010-2011)

2010: TCG proposes 2 TNC transport standards to NEA WG

- IF-T for EAP, IF-T for TLS
- IETF approves earlier standards as RFCs

----- Next Steps? TCG Predicts....-----

2010: NEA WG accepts TCG proposals for transport standards

NEA WG tweaks the TNC transport standards

TCG continues its work

- Improving and expanding the TNC standards
- Easing customer deployments of TNC technology

2011: IETF approves TNC transport standards as RFCs



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