

# Hardcopy Network Access Control

TCG HCWG request for PWG  
consideration

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# Hardcopy Network Access Control

- Enterprises are beginning to deploy network access controls
  - Prevent unauthorized network devices from being connected to a network
  - Port-based network access control using 802.1x is being deployed on wired Ethernet networks
    - Limited to use of credentials for authentication
  - Attribute-based “assessment” uses characteristics of the device to provide authentication. Multiple efforts are underway:
    - Cisco: Network Admission Control (NAC)
    - Microsoft: Network Access Protection (NAP)
    - Trusted Computing Group: Trusted Network Connect (TNC)
    - IETF: Network Endpoint Assessment (NEA) under development

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- Today, printers do not integrate with NAC/NAP/TNC environments
  - Printers do not have the agents required to authenticate in these environments
  - Printers require explicit exceptions to avoid defaulting to remediation networks
  - Manual configuration is costly
  - Exception lists pose threat of attacking network through spoofed MAC addresses
- Anticipate customer requirements will cause hardcopy manufacturers to support NAC/NAP/TNC
  - Desire to avoid proliferation of proprietary attributes by hardcopy manufacturers through standardization
  - Desire consistent attributes across NAC, NAP, and TNC

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- Network access “assessment” attributes
  - NAC/NAP/TNC rely on attributes of the device for making network access authentication policy decisions
  - Examples:
    - PC requires specific operating system, security patches, and current anti-virus definitions be installed
    - Other software policies
  - Potential hardcopy attributes:
    - Minimal: device model identifier, firmware version, etc.
    - Extended: device configuration, installed 3<sup>rd</sup> party software, etc.
    - Should accommodate vendor extensions

# Hardcopy Network Access Control

- Request formation of PWG project to:
  - Define set of common assessment attributes for hardcopy devices
  - Work across NAC, NAP, TNC, and NEA to include support for common printer attributes

# References

- Network Access Control
  - [http://en.wikipedia.org/wiki/Network\\_Access\\_Control](http://en.wikipedia.org/wiki/Network_Access_Control)
- Network Admission Control (NAC), Cisco
  - <http://www.cisco.com/go/nac>
- Network Access Protection (NAP), Microsoft
  - <http://www.microsoft.com/technet/network/nap/default.mspx>
- Trusted Network Connect (TNC), Trusted Computing Group
  - <https://www.trustedcomputinggroup.org/groups/network/>
- Network Endpoint Assessment (NEA), IETF
  - <http://www.ietf.org/html.charters/nea-charter.html>