



DELAWARE STATE-WIDE INFORMATION TECHNOLOGY AND ARCHITECTURE STANDARDS

Standard ID:	AC-Wireless-001
Title:	Wireless Standard
Domain:	Architecture
Discipline:	Network
Revision Date:	11/2/2017
Revision no.:	8
Original date:	7/1/2001

I. Authority, Applicability and Purpose

- A. **Authority:** Title 29, Chapter 90C provides broad statutory authority to the Department of Technology and Information (DTI) to implement statewide and inter-organization technology solutions, policies, standards, and guidelines for the State of Delaware's technology infrastructure. "Technology" means computing and telecommunications systems, their supporting infrastructure and interconnectivity used to acquire, transport, process, analyze, store, and disseminate information or data electronically. Technology includes systems and equipment associated with e-government and Internet initiatives.
- B. **Applicability:** This applies to all State of Delaware communications and computing resources. DTI is an Executive Branch Organization and has no authority over the customers in Legislative and Judicial Branches, School Districts, and other Federal and Local Government entities that use these resources. However, all users must agree to abide by all policies and standards promulgated by DTI as a condition of funding and continued use of these resources.
- C. **Purpose:** The purpose of this standard is to ensure that all access points are secure before attaching to the existing network. The main considerations should be classification of use, intended user, and network security.

II. Scope

- A. **Audience:** State IT personnel are the only intended users of this document.
- B. **Applicability:** This standard will cover all wireless network access to State resources.

These standards are adopted by the Department of Technology and Information (DTI), through the Technology and Architecture Standards Committee (TASC), and are applicable to all Information Technology use throughout the State of Delaware. Any questions or comments should be directed to dti_tasc@state.de.us.



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III. Process

- A. **Adoption:** DTI adopted these standards through the Technology and Architecture Standards Committee (TASC). They are applicable to all Information Technology use throughout the State of Delaware.
- B. **Revision:** Technology is constantly changing. It is the intent of TASC to review each standard yearly. Your Information Resource Manager (IRM) will channel your suggestions and comments to TASC.
- C. **Contractors:** DTI requires all contractors or other third parties to comply with these standards when proposing technology solutions to other State entities. Failure to do so could result in rejection by the Delaware Technology Investment Council. For further guidance, or to seek review of a non-rated component, contact TASC at dti_tasc@state.de.us.
- D. **Implementation responsibility:** DTI and/or the organization's technical staff will implement this standard during the course of normal business activities, including business case review, architectural review, project execution and the design, development, or support of systems.
- E. **Enforcement:** DTI will enforce this standard during the course of normal business activities, including business case and architectural review of proposed projects and during the design, development, or support of systems. This standard may also be enforced by others during the course of their normal business activities, including audits and design reviews.
- F. **Contact us:** Please direct any questions or comments to dti_tasc@state.de.us.

IV. Definitions/Declarations

A. Declarations

- Where authentication is warranted, time-stamped logging of access is required. When user based authentication is used, the logs should map usernames to IP addresses. When device based authentication is used device to IP address mapping must be retained. These logs should be retained for a minimum of three months.
- Proper placement of Access Point (AP) and power levels must be such that it will mitigate, as much as possible, the wireless signal extending into public spaces that are not State owned.



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V. Definition of Ratings

COMPONENT RATING	USAGE NOTES
<p>STANDARD – DTI offers internal support and/or has arranged for external vendor support as well (where applicable). DTI believes the component is robust and DTI believes the component is robust and solidly positioned in its product life cycle.</p>	<p>These components can be used without explicit DTI approval for both <u>new projects</u> and <u>enhancement</u> of existing systems.</p>
<p>DECLINING – Deprecated - DTI considers the component to be a likely candidate to have support discontinued in the near future. A deprecated element is one becoming invalid or obsolete.</p>	<p>Via the State’s waiver process, these components must be explicitly approved by DTI for <u>all projects</u>. They must not be used for <u>minor enhancement</u> and <u>system maintenance</u> without explicit DTI approval via the State’s waiver process.</p>
<p>DISALLOWED – DTI declares the component to be unacceptable for use and will actively intervene to disallow its use when discovered.</p>	<p>No waiver requests for new solutions with this component rating will be considered.</p>

- A. **Missing Components:** No conclusions should be inferred if a specific component is not listed. Instead, contact TASC to obtain further information.

VI. Component Assessments

- A. **Scope:** The below assessments are to be utilized when the State’s wireless services are not available and a specific wireless deployment is being designed.

Access Point	Rating	Comments
Aerohive AP250	Standard	This model current as of July 2017. Please consult with DTI before acquiring.
Cisco Aironet 1852i	Standard	This model current as of July 2017. Please consult with DTI before acquiring.

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Protocol	Rating	Comments
802.11n	Standard	Adds MIMO, Uses 2.4 Ghz or 5Ghz. 600Mb/s
802.11ac	Standard	Wave 1: 80MHZ channel width , 1.3Gbps, single user MIMO Wave 2: 160Mhz channel width, 2.6Gps, multi-user MIMO
802.11g	Declining	Uses 2.4Ghz. Maximum of 54Mb/s
802.11a	Declining	Uses 5Ghz. Maximum of 54Mb/s
802.11b	Disallow	Does not support AES; therefore is no longer allowed.

Encryption Algorithms	Rating	Comments
WPA2 AES-CCMP	Standard	Wireless security standard v2 using AES
WEP	Disallow	Wireless security standard using TKIP
WPA	Disallow	Wireless security algorithm using RC4

Authentication	Rating	Comments
802.1X	Standard	Port-based access control method
PEAP/MS-CHAPv2	Standard	Authentication process using username/password
PEAP-EAP-TTLS	Standard	Authentication process using username/password
PEAP-EAP-TLS	Standard	Client certificate authentication

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Pre-shared key	Standard	Depends on the situation.
No authentication	Standard	Depends on the situation.

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