



# DELAWARE STATE-WIDE INFORMATION TECHNOLOGY AND ARCHITECTURE STANDARDS

Standard ID:	<b>AC-DNS-001</b>
Title:	<b>Domain Naming Standards</b>
Domain:	<b>Access</b>
Discipline:	<b>Branding</b>
Revision Date:	<b>9/27/2019</b>
Revision no.:	<b>6</b>
Original date:	<b>06/01/2004</b>

## I. Authority, Applicability and Purpose

- A. Authority:** [Title 29](#) Chapter 90C Delaware Code, §9004C – General Powers, duties and functions of DTI “2) Create, implement and enforce statewide and agency technology solutions, policies, standards and guidelines, including as recommended by the Technology Investment Council on an ongoing basis and the CIO”
- B. Applicability:** Applies to all State of Delaware communications and computing resources. DTI is an Executive Branch Agency and has no authority over the customers in Legislative and Judicial Branches, as well as School Districts, and other Federal and Local Government entities that use these resources. However, all users, including these entities, must agree to abide by all policies, standards promulgated by DTI as a condition of funding, access and continued use of these resources.
- C. Purpose:** With the mounting threat of cyber crime and the opening up of the .us domain name by the Federal Government, it is imperative that the State of Delaware present a clear distinction to the citizen of what is protected and controlled by their government. To this end, it is important that domain names be standard and consistent to reduce confusion on the part of the public.

## II. Scope

- A. Internet Domain Names** – There are numerous web servers, applications and services that provide services to citizens and businesses. This standard addresses all of those areas.
- B. Internal Domain Names** – Due to the MS-Exchange infrastructure that has been established, this standard will address internal domain names as well.

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](mailto:dti_tasc@state.de.us).



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- C. **Publication** – This standard extends to the use of domain names and URL's. Prior to any publication of a URL (regardless of media), the domain name must adhere to this standard.

If pre-existing domain names or URL's are already used in publications, a reasonable transition period will be granted to allow for an orderly change of media. The [Domain Name Request process](#) will be the method used to grant this transition period.

### III. Process

- A. **Adoption** – These standards have been 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.
- B. **Revision** – Technology is constantly evolving; therefore the standards will need to be regularly reviewed. It is the intent of the TASC to review each standard annually. The TASC is open to suggestions and comments from knowledgeable individuals within the state, although we ask that they be channeled through your Information Resource Manager (IRM).
- C. **Contractors** – Contractors or other third parties are required to comply with these standards when proposing technology solutions to DTI or 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 component that is not rated below, contact the TASC at [dti\\_tasc@state.de.us](mailto: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** – Any questions or comments should be directed to [dti\\_tasc@state.de.us](mailto:dti_tasc@state.de.us).

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### IV. Definitions

- A. **Domain Name** - A name associated with one or more IP addresses that provides a more understandable means of locating the desired service over the Internet or Intranet. Domain names are stored by Domain Name Servers that translate the name into the IP address required by the Internet or Intranet. Every domain name has a suffix that indicates which top-level domain (TLD) it belongs to. There are only a limited number of such domains, such as the following. For our purposes, the most meaningful are the .gov and .us domains.

gov – <http://www.dotgov.gov/>  
us – [United States domain](#) with a geographic hierarchy, 2<sup>nd</sup> level is state, 3<sup>rd</sup> is locality  
edu – Educational institutions  
org – <http://www.pir.org/>  
mil – [Military](#)  
com – Commercial business  
net – Network organizations

The overall structure of a domain name can be described as:  
**{sub domain} . {root domain} . {top-level domain}**

For example, the primary domain name for the National Institute for Standards and Technology is [nist.gov](#). However, the NIST's Advanced Technology Program has a domain name of [atp.nist.gov](#). In most cases, domain names do not include more than one sub domain name.

For reference, RFC 1591 provides a complete discussion of Domain Name Services and RFC 1480 provides a complete discussion of the US domain.

- B. **Domain Name Server** – In simplest terms, a Domain Name Server (or DNS server) translates the domain name into the IP address that is required by the network. The State's DNS servers are managed exclusively by DTI, and updates to the Internet DNS servers outside the State network are coordinated by DTI.
- C. **Domain reservation** – The process of obtaining rights from the official administrator organization to use a given domain name by paying appropriate fees. The State of Delaware has a defined domain name registration process.
- D. **Internet / Intranet / Extranet** –
- Internet: (or World Wide Web)** – Technically, the Internet is merely the massive TCP/IP networking infrastructure enabling connected computers to effectively communicate with one another using standard protocols such as web browsing, telnet, ftp, etc. The World Wide Web is the set of services using HTTP protocol to enable users to easily navigate the Internet. In common language, many people use these two terms interchangeably.
- Intranet:** An entity-wide collection of networks and gateways that use the TCP/IP suite of protocols to communicate with one another behind a firewall and accessible only to people who are members of the same company or organization - not available to the public.
- Extranet** – A private network segment that uses Internet protocols and network connectivity to securely share part of an organization's information between business partners.

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- E. **URL (Uniform Resource Locator)** – The way of specifying the address of documents and other resources on the World Wide Web. The first part of the address indicates what protocol to use, and the second part specifies the domain name where the resource is located. For example, the URL below specifies that the HTTP protocol should be used to access the server at the IP address associated with domain name www.nist.gov, and process the file named metric.htm in directory public\_affairs/kids.

[http://www.nist.gov/public\\_affairs/kids/metric.htm](http://www.nist.gov/public_affairs/kids/metric.htm)



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### V. Definition of Ratings

Individual components within a Standard will be rated in one of the following categories.

COMPONENT RATING	USAGE NOTES
<p><b>STANDARD</b> – DTI offers internal support and/or has arranged for external vendor support as well (where applicable). DTI believes the component is robust and can be expected to enjoy a useful life of 3+ years from the Effective Date.</p>	<p>These components can be used without explicit DTI approval for both <b><u>new projects</u></b> and <b><u>enhancement</u></b> of existing systems.</p>
<p><b>DECLINING</b> – 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 <b><u>all projects</u></b>. They must not be used for <b><u>minor enhancement</u></b> and <b><u>system maintenance</u></b> without explicit DTI approval via the State’s waiver process.</p>
<p><b>DISALLOWED</b> – 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>

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

### VI. Component Assessments

- A.** Submitting an Internet Domain Name Request – New Internet Domain Name Requests must be submitted by the organization's IRM. State organizations must follow the [Domain Name Request Process](#) for any non-delaware.gov external names. Note that technical updates to the DNS servers are a separate request.
- B.** New internal sub-domain names – A State organization with a previously assigned internal domain can create a new sub-domain without explicit approval from DTI. However, technical updates to the DNS servers are still required.
- C.** Acceptable domain use for emails: All State user email will utilize the 'state.de.us' domain. Specific account mapping to resource accounts, distribution lists, can utilize either the 'state.de.us' or 'delaware.gov' domains. This would be applicable for resource accounts, which have been assigned to receive email originated by an external customer interface.



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#	Component	Rating	Comments
1	Use of the <b>delaware.gov</b> domain name for: Internet, Extranet for external access via Identity Access Management (IAM) Ex. dti.delaware.gov	Standard	<ul style="list-style-type: none"> <li>Required for all new services.</li> <li>All new web-based applications must use unique subdomains.</li> <li>To request a sub-domain directly under 'delaware.gov' (i.e. newname.delaware.gov), submit a Domain Name Request</li> </ul>
2	Use of the <b>de.gov</b> domain name exclusively for the Delaware state portal, and solely as a redirect to <b>delaware.gov</b> . That is, the only allowable use of de.gov is de.gov. Not dti.de.gov or any sub domain.	Standard	<ul style="list-style-type: none"> <li>All use of <b>de.gov</b> must be coordinated through the Delaware Government Information Center, including publications</li> </ul>
3	Use of subdomains in <b>state.de.us</b> for: Intranet, Extranet within the State, Extranet via SSL-VPN	Standard	<ul style="list-style-type: none"> <li>Required for all new services. Intranet only. (See # 5 below).</li> </ul>
4	Use of subdomains in <b>k12.de.us</b> internet and intranet services. Ex. <a href="http://christina.k12.de.us/">christina.k12.de.us/</a>	Standard	<ul style="list-style-type: none"> <li>Required for all new services.</li> </ul>
5	Use of subdomains in <b>state.de.us</b> for internet and extranet services outside of the State. Ex. legis.state.de.us	Disallowed	<ul style="list-style-type: none"> <li>Submit a Domain Name Request endorsed by your organizational head for an exception, which must be approved by the State CIO.</li> </ul>
6	Use of the <b>*.gov</b> top level domain name (other than <b>delaware.gov</b> ) for internet and extranet services. Ex. delottery.gov	Disallowed	<ul style="list-style-type: none"> <li>Submit a Domain Name Request endorsed by your organizational head for an exception, which must be approved by the State CIO. Requires the '.gov' approval as well.</li> </ul>
7	Use of *.net, *.org, *.com domain names. Ex. visitdelaware.com	Disallowed	<ul style="list-style-type: none"> <li>Submit a Domain Name Request endorsed by your organizational head for an exception, which must be approved by the State CIO.</li> </ul>

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