

Information Technology Policy

Commonwealth External and Internal Domain Name Services (DNS)

ITP Number ITP-NET005	Effective Date March 1, 2006
Category Network	Supersedes None
Contact RA-ITCentral@pa.gov	Scheduled Review March 2021

1. Purpose

The purpose of this Information Technology Policy (ITP) is to establish an enterprise-wide policy for external and internal Domain Name Services (DNS) design standards. This policy will ensure DNS uniformity across all Commonwealth agencies and to ensure efficient name resolution within the Commonwealth network.

2. Scope

This ITP applies to all departments, boards, commissions and councils under the Governor's jurisdiction. Agencies not under the Governor's jurisdiction are strongly encouraged to follow this ITP.

3. Definitions

3.1 Domain Controller: A server that responds to security authentication requests within a Windows Server domain.

3.2 Domain Name Request: ITSM service request for DNS related requests.

3.3 Domain Name Service (DNS): An internet service that translates domain names into IP addresses.

3.3.1 Record: A database record used to map a URL to an IP address.

3.3.2 Zone: Any distinct, contiguous portion of the domain name space in the domain name system for which administrative responsibility has been delegated to a single manager.

4. Policy

The Office of Administration, Office for Information Technology (OA/OIT) has the responsibility and authority to centrally manage DNS names for the Commonwealth's external and internal domains. A service ticket must be used for all DNS services requests.

Agencies are to follow the procedures outlined in OPD-NET005A *Procedures for DNS Record Service Requests* for all DNS service requests. Agencies are required to complete and obtain approval of OPD-NET005B *Domain Exception Request Form* and the approved form must be included in any DNS service request. OA/OIT may decline unacceptable DNS service requests if the requests do not adhere to this policy. OA/OIT will work with the requester to resolve declined requests.

The following are DNS service request examples:

- Request assistance to migrate non-Commonwealth, non-compliant, and/or vanity domains (.com, .net, .org, etc.) to PA.GOV.

- Request a DNS Zone or Record
- Modify or delete a DNS Zone or Record
- DNS troubleshooting

Agencies must use the following DNS design standards:

External DNS Design Standards

- Agencies must use the PA.GOV domain for all new Domain Name Requests.
- Modernization efforts should be made to migrate STATE.PA.US domains to PA.GOV.
- Agencies must obtain a policy waiver against this ITP to continue using STATE.PA.US (refer to Section 9 for details). The policy waiver request must include the following:
 - Business justification for continued use of STATE.PA.US; and
 - High-level strategy and estimated timeframes for migration to PA.GOV.
- Prior to an agency purchasing or requesting a domain, agencies must receive approval using the OPD-NET005B *DNS Records Request Approval Form*. Refer to Section 8 for exemption guidance. An IT policy waiver approval is required after receiving approval of the OPD-NET005B.

Internal DNS Design Standards

- All internal server systems are to resolve DNS to their local Commonwealth Domain Controller. Acceptable server standards are detailed in ITP-PLT005 *Server Operating System Policy*.
- If an agency has an in-house DNS solution, those servers must forward to their local Commonwealth Domain Controllers.
- All Commonwealth Domain Controllers must forward to the Commonwealth internal DNS servers for resolution not in the PA.LCL domain.
- Commonwealth internal DNS servers must forward non-internal or internet requests to Commonwealth external DNS servers.

Governance Requirements

- For new PA.GOV-based DNS Records, agencies must obtain approval from the Governor's Office via the agency digital director prior to submitting a request for DNS Record provisioning. Agencies are to use OPD-NET005B *DNS Records Request Approval Form* to request and obtain approval from the Governor's Office.
- If obtaining a new or modifying a non-PA.GOV DNS Record, in addition to obtaining Governor's Office approval via OPD-NET005B, a policy waiver against this ITP must be approved prior to submitting a request for DNS Record provisioning. The approved OPD-NET005B form must be submitted as part of the waiver request.

5. Responsibilities

Office of Administration, Office for Information Technology (OA/OIT):

- Create, modify, and delete DNS Records/Zones;
- Delegate Zones as necessary to other authorities;
- Troubleshoot DNS resolution;
- Maintain the DNS infrastructure;
- Resolve all DNS queries not resolved by Commonwealth Domain Controllers; and

- Block DNS resolution for domains that are considered cybersecurity threats or any other risk.

The following personnel hold decision rights to block a domain:

- Commonwealth Chief Information Officer;
- Commonwealth Chief Information Security Officer; and
- Commonwealth Chief Technology Officer.

Commonwealth Agencies:

- Advance Commonwealth branding initiatives by requesting DNS Records under the PA.GOV domain;
- Submit requests for DNS changes at least five (5) business days in advance; and
- Develop migration strategies for the decommission of all non-PA.GOV domains, including, but not limited to, vanity domains and state.pa.us.

6. Related ITPs/Other References

Commonwealth policies, including Executive Orders, Management Directives, and IT Policies are published on the Office of Administration's public portal:

<http://www.oa.pa.gov/Policies/Pages/default.aspx>

- Management Directive 205.34 *Commonwealth of Pennsylvania Information Technology Acceptable Use Policy*
- OPD-NET005A *Procedures for DNS Record Service Requests*
- OPD-NET005B *Domain Exception Request Form*
- ITP-PLT005 *Server Operating System Policy*
- ITP-SEC000 *Information Security Policy*
- ITP-SFT002 *Commonwealth of PA Website Standards*
- NIST SP 800-81-2 *Secure Domain Name System (DNS) Deployment Guide*

7. Authority

Executive Order 2016-06 *Enterprise Information Technology Governance*

Executive Order 2019-04 *Establishing a "Citizen-First" Government and Promoting Customer Service Transformation*

8. Publication Version Control

It is the user's responsibility to ensure they have the latest version of this publication, which appears on <https://itcentral.pa.gov> for Commonwealth personnel and on the Office of Administration public portal: <http://www.oa.pa.gov/Policies/Pages/default.aspx>. Questions regarding this publication are to be directed to RA-ITCentral@pa.gov.

9. Exemption from This Policy

In the event an agency chooses to seek an exemption from the guidance within this IT policy, a request for a policy waiver is to be submitted via the enterprise IT policy waiver process.

Refer to [ITP-BUS004 IT Waiver Review Process](#) for guidance.

This chart contains a history of this publication's revisions. Redline documents detail the revisions and are available to CWOPA users only.

Version	Date	Purpose of Revision	Redline
Original	03/01/2006	Base Document	N/A
Revision	04/16/2009	Added PA.GOV	N/A
Revision	06/22/2009	Updated Policy and Exemption sections	N/A
Revision	01/21/2011	Updated to include specific policy for external and internal and DNS Supplement documents have been rescinded	N/A
Revision	09/13/2017	ITP Reformat Clarified OA/OIT authority on DNS management Removed <i>state.pa.us</i> as acceptable domain except for legacy sites Added References and Responsibilities section	N/A
Revision	03/17/2020	Added Definitions Added OPD-NET005A and OPD-NET005B guidance Added Decision Rights on blocking domains	Revised IT Policy Redline <03/17/2020>