1. **Purpose**

Establishes enterprise-wide standards for router and switch technologies and the proper utilization of those technologies in a production environment.

2. **Scope**

This Information Technology Policy (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. **Policy**

Commonwealth agencies and delivery centers are to leverage existing router and switch technology as detailed in this policy. All Commonwealth router and switch technology implementations are to comply with the technology standards specified in Section 4. Standards.

All Commonwealth router and switch technology implementations are to comply with the protocols and requirements and make use of the evaluation criteria listed in GEN-NET002B, *Network Router and Switch Hardware/Software Business Requirements*.

The Office of Administration, Office for Information Technology, Enterprise Technology Services Office (ETSO) will review and approve router and switch designs, changes, and implementations (and waivers if applicable), to document the currently installed base and to determine the risks associated with non-standard implementations.

All IT projects related to router and switch technology will be subject to review for compliance with this standard through the appropriate project governance processes. Refer to ITP-EPM006 *IT Strategic Planning and Projects* for IT project guidance.

**Naming Standards**

Commonwealth Governor’s jurisdiction agencies are to adhere to OPD-NET002C *Network Device Naming Standards* (authorized CWOPA personnel only, contact RA-ITCentral@pa.gov for requests) which details the requirements for the configuration of network device and their naming conventions.

Any new network devices deployed on and after the Effective Date detailed in OPD-NET002C not in compliance with this policy must obtain a COPPAR waiver approval against this policy prior to deployment of said network devices into an operational environment. Refer to section 10 for guidance on that process.
4. Standards

Current Standards
(These technologies are supported by the current standards and meet the requirements of the architecture. They are recommended for use.)

<table>
<thead>
<tr>
<th>Product</th>
<th>IEEE Standard</th>
<th>Protocol</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/10/40 Gbps</td>
<td>802.3</td>
<td>See GEN-NET002B for approved protocols</td>
</tr>
<tr>
<td>IP version 4</td>
<td>802.3</td>
<td>See GEN-NET002B for approved protocols</td>
</tr>
</tbody>
</table>

Contain Standards
(These technologies no longer meet the requirements of the current architecture and are not recommended for use. They are to be phased out over time. No date has been set for their discontinuance.)

<table>
<thead>
<tr>
<th>Product</th>
<th>IEEE Standard</th>
<th>Protocol</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/100 Meg Switched-Layer 2</td>
<td>802.3</td>
<td>See GEN-NET002B for approved protocols</td>
</tr>
</tbody>
</table>

Emerging / Research Standards
(At the present time, they are to be used only in pilot or test environments where they can be evaluated. Use of these technologies is restricted to a limited production mode and requires approval of an ITP COPPAR waiver request.)

<table>
<thead>
<tr>
<th>Product</th>
<th>IEEE Standard</th>
<th>Protocol</th>
</tr>
</thead>
<tbody>
<tr>
<td>VOIP</td>
<td>802.3ae</td>
<td>See GEN-NET002B for approved protocols</td>
</tr>
<tr>
<td>IP Version 6</td>
<td>802.3</td>
<td>See GEN-NET002B for approved protocols</td>
</tr>
</tbody>
</table>

5. Responsibilities
Agencies and Delivery Centers are to adhere to the guidance set forth in this policy and its supplementals.

6. Related ITPs/Other References
Definitions of associated terms of this policy are published on the Office of Administration’s public portal: [http://www.oa.pa.gov/Policies/Pages/Glossary.aspx](http://www.oa.pa.gov/Policies/Pages/Glossary.aspx)

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](http://www.oa.pa.gov/Policies/Pages/default.aspx)

- Management Directive 205.34 Commonwealth of Pennsylvania Information Technology Acceptable Use Policy
- GEN-NET002B Network Router and Switch Requirements
- OPD-NET002C *Network Device Naming Standards* (authorized CWOPA personnel only, contact RA-ITCentral@pa.gov for requests)
- ITP-EPM006 *IT Strategic Planning and Projects*

7. **Authority**
   Executive Order 2016-06, Enterprise Information Technology Governance

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](https://itcentral.pa.gov) for Commonwealth personnel and on the Office of Administration public portal: [http://www.oa.pa.gov/Policies/Pages/default.aspx](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, for reasons such as the need to comply with requirements for a federally mandated system, a request for waiver may be submitted via the Commonwealth of PA Procurement and Architectural Review (COPPAR) process. Requests are to be entered into the COPPAR Tool located at [http://coppar.oa.pa.gov/](http://coppar.oa.pa.gov/). Agency CIO approval is required.

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

<table>
<thead>
<tr>
<th>Version</th>
<th>Date</th>
<th>Purpose of Revision</th>
<th>Redline Link</th>
</tr>
</thead>
<tbody>
<tr>
<td>Original</td>
<td>09/13/2005</td>
<td>Base Document</td>
<td>N/A</td>
</tr>
<tr>
<td>Revision</td>
<td>12/20/2010</td>
<td>ITP Refresh</td>
<td>N/A</td>
</tr>
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</table>
| Revision| 10/31/2018 | ITP reformatted  
Removed unnecessary language throughout  
Added reference to ITP-EPM006  
Merged STD-NET002A into ITP, rescinded STD-NET002A  
Updated Standards  
Added OPD-NET002C                                                                 | [Revised IT Policy Redline 10/31/2018](#) |