



# Compliance Component

## DEFINITION

<i>Name</i>	Switch – Managed
<i>Description</i>	A switch is a network device that provides physical connection points to form multiple network segments. It operates at the Data Link Layer (Layer 2) of the Open Systems Interconnection (OSI) model. Switches are capable of inspecting the data packets, determining the source and destination device of that packet based on a physical (Media Access Control or MAC) address, and forwarding that packet to the appropriate port. Switches are used to limit broadcast domains.
<i>Rationale</i>	Switches provide the basic physical connectivity and communication between network devices on multiple network segments. They provided scalability, security, and manageability to a network.
<i>Benefits</i>	Switches provide the following benefits: <ul style="list-style-type: none"> <li>• Multiple network connection points</li> <li>• Improves network utilization compared to hubs</li> <li>• Allows for Port level security</li> <li>• Increased network scalability</li> <li>• Enables Virtual Local Area Networks (VLANs)</li> </ul>

## ASSOCIATED ARCHITECTURE LEVELS

<i>Specify the Domain Name</i>	Infrastructure
<i>Specify the Discipline Name</i>	Network
<i>Specify the Technology Area Name</i>	Network Hardware
<i>Specify the Product Component Name</i>	Switch

## COMPLIANCE COMPONENT TYPE

<i>Document the Compliance Component Type</i>	Standard
<i>Component Sub-type</i>	

## COMPLIANCE DETAIL

<i>State the Guideline, Standard or Legislation</i>	<p>Switches must have the following characteristics:</p> <ul style="list-style-type: none"> <li>• Multiple physical interfaces</li> <li>• Physical management interface (eg. Console Port)</li> <li>• An operating system</li> <li>• Remote management capabilities (telnet, http)</li> <li>• Security functions on a port level (enable/disable)</li> <li>• Be capable of forwarding traffic using TCP and UDP</li> <li>• Support the Simple Network Management Protocol (SNMP)</li> <li>• Support image upgrades</li> </ul> <p>Switches may have these additional features:</p>
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	<ul style="list-style-type: none"> <li>• Support Virtual Local Area Networks (VLANs)</li> <li>• Support Switch Trunking</li> <li>• Additional security features</li> <li>• Support additional feature sets for a variety of applications according to business needs</li> </ul>		
<i>Document Source Reference #</i>			
<b>Compliance Sources</b>			
<i>Name</i>	Internet Engineering Task Force	<i>Website</i>	<a href="http://www.ietf.org">www.ietf.org</a>
<i>Contact Information</i>	<a href="mailto:ietf-info@ietf.org">ietf-info@ietf.org</a>		
<i>Name</i>		<i>Website</i>	
<i>Contact Information</i>			
<b>KEYWORDS</b>			
<i>List Keywords</i>	Switch, Switching, MAC Address Forwarding, Ports, Data-Link Layer, OSI Model, Subnet, Broadcast Domain, SNMP, TCP, UDP		
<b>COMPONENT CLASSIFICATION</b>			
<i>Provide the Classification</i>	<input type="checkbox"/> <i>Emerging</i>	<input checked="" type="checkbox"/> <i>Current</i>	<input type="checkbox"/> <i>Twilight</i> <input type="checkbox"/> <i>Sunset</i>
<i>Sunset Date</i>			
<b>COMPONENT SUB-CLASSIFICATION</b>			
<b>Sub-Classification</b>	<b>Date</b>	<b>Additional Sub-Classification Information</b>	
<input type="checkbox"/> <i>Technology Watch</i>			
<input type="checkbox"/> <i>Variance</i>			
<input type="checkbox"/> <i>Conditional Use</i>			
<b>Rationale for Component Classification</b>			
<i>Document the Rationale for Component Classification</i>			
<b>Migration Strategy</b>			
<i>Document the Migration Strategy</i>			
<b>Impact Position Statement</b>			
<i>Document the Position Statement on Impact</i>			
<b>CURRENT STATUS</b>			
<i>Provide the Current Status</i>	<input type="checkbox"/> <i>In Development</i>	<input type="checkbox"/> <i>Under Review</i>	<input checked="" type="checkbox"/> <i>Approved</i> <input type="checkbox"/> <i>Rejected</i>
<b>AUDIT TRAIL</b>			
<i>Creation Date</i>	4-15-2004	<i>Date Approved / Rejected</i>	10-12-2004

<i>Reason for Rejection</i>			
<i>Last Date Reviewed</i>		<i>Last Date Updated</i>	9-23-04
<i>Reason for Update</i>			