# Compliance Component

| DEFINITION | |
|---|---|
| *Name* | Hub |
| *Description* | A hub is a network device that provides physical connection points to form a single network segment. It operates at the Physical Layer (Layer 1) of the Open Systems Interconnection (OSI) model. Hubs do not read any of the data passing through them and are not aware of source or destination addresses. A hub simply receives incoming packets, possibly amplifies the electrical signal, and broadcasts these packets out to all devices on the network segment. |
| *Rationale* | Hubs provide the basic physical connectivity and communication between network devices within a single network segment. |
| *Benefits* | Hubs provide the following benefits:<br>• Multiple network connection points<br>• Communication link between device<br>• Single network segment |
| **ASSOCIATED ARCHITECTURE LEVELS** | |
| *Specify the Domain Name* | Infrastructure |
| *Specify the Discipline Name* | Network |
| *Specify the Technology Area Name* | Network Hardware |
| *Specify the Product Component Name* | Hub |
| **COMPLIANCE COMPONENT TYPE** | |
| *Document the Compliance Component Type* | Standard |
| *Component Sub-type* | |
| **COMPLIANCE DETAIL** | |
| *State the Guideline, Standard or Legislation* | Hubs must have the following characteristics:<br>• Multiple physical interfaces<br>• Be capable of forwarding traffic using TCP and UDP<br><br>Hubs may have these additional features (although these features may be better served in a switch, see below for recommended usage):<br>• Virtual Local Area Networks (VLANs)<br>• Signal amplification<br>• Simple Network Management Protocol (SNMP) Support<br>• Additional security features |

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| | Suggested usage:<br>• Port mirroring<br>• Creating additional network ports<br>• Branch offices with low port densities<br>• Testing environments<br>• Unmanaged device is desirable for security reasons<br><br>The use of hubs should be limited to the situations listed above, or similar situations. Ethernet switches should be used in place of hubs in normal operations. |
| *Document Source Reference #* | IETF RFC 1812, 1716, 793, 791, and 768 |

| **Compliance Sources** | | | |
|---|---|---|---|
| *Name* | Internet Engineering Task Force | *Website* | www.ietf.org |
| *Contact Information* | *ietf-info@ietf.org* | | |
| *Name* | | *Website* | |
| *Contact Information* | | | |

| **KEYWORDS** | |
|---|---|
| *List Keywords* | Hub, Physical Layer, Ports, OSI Model, Network Segment, SNMP, TCP, UDP |

| **COMPONENT CLASSIFICATION** | | | | |
|---|---|---|---|---|
| *Provide the Classification* | ☐ *Emerging* | ☐ *Current* | ☒ *Twilight* | ☐ *Sunset* |
| *Sunset Date* | | | | |

| **COMPONENT SUB-CLASSIFICATION** | | |
|---|---|---|
| **Sub-Classification** | **Date** | **Additional Sub-Classification Information** |
| ☐ *Technology Watch* | | |
| ☐ *Variance* | | |
| ☐ *Conditional Use* | | |

| **Rationale for Component Classification** | |
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| *Document the Rationale for Component Classification* | |

| **Migration Strategy** | |
|---|---|
| *Document the Migration Strategy* | |

| **Impact Position Statement** | |
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| *Document the Position Statement on Impact* | |

| **CURRENT STATUS** | | | | |
|---|---|---|---|---|
| *Provide the Current Status* | ☐ *In Development* | ☐ *Under Review* | ☒ *Approved* | ☐ *Rejected* |

| **AUDIT TRAIL** | | | |
|---|---|---|---|
| *Creation Date* | 4-15-2004 | *Date Approved / Rejected* | 9-14-04 |

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|---|---|---|---|
| *Reason for Rejection* | | | |
| *Last Date Reviewed* | | *Last Date Updated* | |
| *Reason for Update* | | | |