



COMPLIANCE COMPONENT TEMPLATE

DEFINITION

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|--------------------|--|
| <i>Name</i> | OSI Layer 3 - Network Layer |
| <i>Description</i> | The network layer defines the network address, which differs from the MAC address. Some network layer implementations, such as the Internet Protocol (IP), define network addresses in a way that route selection can be determined systematically by comparing the source network address with the destination network address and applying the subnet mask. Because this layer defines the logical network layout, routers can use this layer to determine how to forward packets. Because of this, much of the design and configuration work for internetworks happens at Layer 3, the network layer. |
| <i>Rationale</i> | The Open System Interconnection (OSI) reference model describes how information from a software application in one computer moves through a network medium to a software application in another computer. The OSI reference model is a conceptual model composed of seven layers, each specifying particular network functions. The model was developed by the International Organization for Standardization (ISO) in 1984, and it is now considered the primary architectural model for intercomputer communications. |
| <i>Benefits</i> | The OSI model divides the tasks involved with moving information between networked computers into seven smaller, more manageable task groups. A task or group of tasks is then assigned to each of the seven OSI layers. Each layer is reasonably self-contained so that the tasks assigned to each layer can be implemented independently. This enables the solutions offered by one layer to be updated without adversely affecting the other layers. |

ASSOCIATED ARCHITECTURE LEVELS

| | |
|---|----------------|
| <i>Specify the Domain Name</i> | Infrastructure |
| <i>Specify the Discipline Name</i> | Network |
| <i>Specify the Technology Area Name</i> | Protocols |
| <i>Specify the Product Component Name</i> | |

COMPLIANCE COMPONENT TYPE

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

COMPLIANCE DETAIL

| | |
|---|---|
| <i>State the Guideline, Standard or Legislation</i> | <p>RFC 791: Internet Protocol (IP) RFC 792: Internet Control Message Protocol (ICMP) RFC 826: Ethernet Address Resolution Protocol RFC 903: Reverse Address Resolution Protocol RFC 950: Internet Standard Subnetting Procedure RFC 951: Bootstrap Protocol RFC 1349: Type of Service in the Internet Protocol Suite RFC 1701: Generic Routing Encapsulation (GRE) RFC 2131: Dynamic Host Configuration Protocol</p> <p>Internetwork Packet Exchange (IPX) AppleTalk</p> <p>RFC 827: Exterior Gateway Protocol (EGP) RFC 1771: Border Gateway Protocol (BGP) RFC 2328: Open Shortest Path First (OSPF) RFC 2453: Routing Information Protocol (RIP)</p> <p>Enhanced Interior Gateway Routing Protocol (EIGRP) [Cisco Proprietary] Interior Gateway Routing Protocol (IGRP) [Cisco Proprietary]</p> |
| <i>Document Source Reference #</i> | |

Compliance Sources

| | | | |
|----------------------------|---------------------------------|----------------|---|
| <i>Name</i> | Internet Engineering Task Force | <i>Website</i> | http://www.ietf.org |
| <i>Contact Information</i> | | | |
| <i>Name</i> | Cisco Systems | <i>Website</i> | [http://www.cisco.com/univercd/cc/ttd/doc/cisintwk/ito_doc/introint.htm] |
| <i>Contact Information</i> | | | |

KEYWORDS

| | |
|----------------------|--------------------------------------|
| <i>List Keywords</i> | Network, Layer 3, OSI model, routing |
|----------------------|--------------------------------------|

COMPONENT CLASSIFICATION

| | |
|-----------------------------------|---|
| <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> | |

COMPONENT SUB-CLASSIFICATION

| Sub-Classification | Date | Additional Sub-Classification Information |
|--|------|---|
| <input type="checkbox"/> <i>Technology Watch</i> | | |
| <input type="checkbox"/> <i>Variance</i> | | |
| <input type="checkbox"/> <i>Conditional Use</i> | | |

Rationale for Component Classification

| | |
|--|--|
| <i>Document the Rationale for Component Classification</i> | |
|--|--|

Migration Strategy

Document the Migration Strategy

Impact Position Statement

Document the Position Statement on Impact

CURRENT STATUS

Provide the Current Status

In Development *Under Review* *Approved* *Rejected*

AUDIT TRAIL

| | | | |
|-----------------------------|--------|---------------------------------|---------|
| <i>Creation Date</i> | 9/2/04 | <i>Date Approved / Rejected</i> | 9/14/04 |
| <i>Reason for Rejection</i> | | | |
| <i>Last Date Reviewed</i> | | <i>Last Date Updated</i> | |
| <i>Reason for Update</i> | | | |