

**SNMPv2 Management Information Base  
for the User Datagram Protocol**

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## **1. Introduction**

A management system contains: several (potentially many) nodes, each with a processing entity, termed an agent, which has access to management instrumentation; at least one management station; and, a management protocol, used to convey management information between the agents and management stations. Operations of the protocol are carried out under an administrative framework which defines authentication, authorization, access control, and privacy policies.

Management stations execute management applications which monitor and control managed elements. Managed elements are devices such as hosts, routers, terminal servers, etc., which are monitored and controlled via access to their management information.

Management information is viewed as a collection of managed objects, residing in a virtual information store, termed the Management Information Base (MIB). Collections of related objects are defined in MIB modules. These modules are written using a subset of OSI's Abstract Syntax Notation One (ASN.1) [1], termed the Structure of Management Information (SMI) [2].

This document is the MIB module which defines managed objects for managing implementations of the User Datagram Protocol (UDP) [3].

The managed objects in this MIB module were originally defined using the SNMPv1 framework as a part of MIB-II [4]. This document defines the same objects for UDP using the SNMPv2 framework.

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## 2. Definitions

UDP-MIB DEFINITIONS ::= BEGIN

IMPORTS

```
MODULE-IDENTITY, OBJECT-TYPE, Counter32,
experimental,                                -- to be removed later
IpAddress, mib-2                            FROM SNMPv2-SMI
MODULE-COMPLIANCE, OBJECT-GROUP    FROM SNMPv2-CONF;
```

udpMIB MODULE-IDENTITY

LAST-UPDATED "9411010000Z"

ORGANIZATION "IETF SNMPv2 Working Group"

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DESCRIPTION

"The MIB module for managing UDP implementations."

REVISION "9103310000Z" +

DESCRIPTION +

"The initial revision of this MIB module was part of MIB-II."  
+  
-- to be assigned as {mib-2 xx} by IANA

::= { experimental xx }

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-- the UDP group

```
udp      OBJECT IDENTIFIER ::= { mib-2 7 }

udpInDatagrams OBJECT-TYPE
    SYNTAX      Counter32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The total number of UDP datagrams delivered to UDP users."
    ::= { udp 1 }

udpNoPorts OBJECT-TYPE
    SYNTAX      Counter32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The total number of received UDP datagrams for which there
         was no application at the destination port."
    ::= { udp 2 }

udpInErrors OBJECT-TYPE
    SYNTAX      Counter32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The number of received UDP datagrams that could not be
         delivered for reasons other than the lack of an application
         at the destination port."
    ::= { udp 3 }

udpOutDatagrams OBJECT-TYPE
    SYNTAX      Counter32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The total number of UDP datagrams sent from this entity."
    ::= { udp 4 }
```

-- the UDP Listener table

-- The UDP listener table contains information about this  
-- entity's UDP end-points on which a local application is  
-- currently accepting datagrams.

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```
udpTable OBJECT-TYPE
  SYNTAX      SEQUENCE OF UdpEntry
  MAX-ACCESS  not-accessible
  STATUS      current
  DESCRIPTION
    "A table containing UDP listener information."
  ::= { udp 5 }

udpEntry OBJECT-TYPE
  SYNTAX      UdpEntry
  MAX-ACCESS  not-accessible
  STATUS      current
  DESCRIPTION
    "Information about a particular current UDP listener."
  INDEX      { udpLocalAddress, udpLocalPort }
  ::= { udpTable 1 }

UdpEntry ::= SEQUENCE {
  udpLocalAddress  InetAddress,
  udpLocalPort     INTEGER
}

udpLocalAddress OBJECT-TYPE
  SYNTAX      InetAddress
  MAX-ACCESS  read-only
  STATUS      current
  DESCRIPTION
    "The local IP address for this UDP listener. In the case of
     a UDP listener which is willing to accept datagrams for any
     IP interface associated with the node, the value 0.0.0.0 is
     used."
  ::= { udpEntry 1 }

udpLocalPort OBJECT-TYPE
  SYNTAX      INTEGER (0..65535)
  MAX-ACCESS  read-only
  STATUS      current
  DESCRIPTION
    "The local port number for this UDP listener."
  ::= { udpEntry 2 }
```

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-- conformance information

udpMIBConformance OBJECT IDENTIFIER ::= { udpMIB 2 }

udpMIBCompliances OBJECT IDENTIFIER ::= { udpMIBConformance 1 }  
udpMIBGroups OBJECT IDENTIFIER ::= { udpMIBConformance 2 }

-- compliance statements

udpMIBCompliance MODULE-COMPLIANCE

STATUS current

DESCRIPTION

"The compliance statement for SNMPv2 entities which  
implement UDP."

MODULE -- this module

MANDATORY-GROUPS { udpGroup  
}

::= { udpMIBCompliances 1 }

-- units of conformance

udpGroup OBJECT-GROUP

OBJECTS { udpInDatagrams, udpNoPorts,  
udpInErrors, udpOutDatagrams,  
udpLocalAddress, udpLocalPort }

STATUS current

DESCRIPTION

"The udp group of objects providing for management of UDP  
entities."

::= { udpMIBGroups 1 }

END

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### 3. Acknowledgements

This document contains a modified subset of [RFC 1213](#).

### 4. References

- [1] Information processing systems - Open Systems Interconnection - Specification of Abstract Syntax Notation One (ASN.1), International Organization for Standardization. International Standard 8824, (December, 1987).
- [2] Case, J., McCloghrie, K., Rose, M., and Waldbusser, S., "Structure of Management Information for version 2 of the Simple Network Management Protocol (SNMPv2)", Internet Draft, SNMP Research, Inc., Cisco Systems, Dover Beach Consulting, Inc., Carnegie Mellon University, March 1995.
- [3] Postel, J., "User Datagram Protocol", STD 6, [RFC 768](#), USC-ISI, August 1980.
- [4] McCloghrie, K., and Rose, M., "Management Information Base for Network Management of TCP/IP-based internets: MIB-II", STD 17, [RFC 1213](#), March 1991.

## 5. Security Considerations

Security issues are not discussed in this memo.

## 6. Authors' Addresses

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