

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"
CONTACT-INFO
```

```
    "          Keith McCloghrie
```

```
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                170 West Tasman Drive
                San Jose, CA 95134-1706
                USA
```

```
        Phone:  +1 408 526 5260
        Email:   kzm@cisco.com"
```

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  IpAddress,
    udpLocalPort     INTEGER
}
```

```
udpLocalAddress OBJECT-TYPE
```

```
SYNTAX          IpAddress
```

```
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 }
```

```
-- 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

```

[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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