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A Closer Look at MIB-II

MIB-II is a very important management group because every device that supports SNMP must also support MIB-II. Therefore, we will use objects from MIB-II in our examples throughout this book. We won't go into detail about every object in the MIB; we'll simply define the subtrees. The section of *RFC1213-MIB* that defines the base OIDs for the *mib-2* subtree looks like this:

```
mib-2      OBJECT IDENTIFIER ::= { mgmt 1 }
system     OBJECT IDENTIFIER ::= { mib-2 1 }
interfaces OBJECT IDENTIFIER ::= { mib-2 2 }
at         OBJECT IDENTIFIER ::= { mib-2 3 }
ip         OBJECT IDENTIFIER ::= { mib-2 4 }
icmp       OBJECT IDENTIFIER ::= { mib-2 5 }
tcp        OBJECT IDENTIFIER ::= { mib-2 6 }
udp        OBJECT IDENTIFIER ::= { mib-2 7 }
egp        OBJECT IDENTIFIER ::= { mib-2 8 }
transmission OBJECT IDENTIFIER ::= { mib-2 10 }
snmp       OBJECT IDENTIFIER ::= { mib-2 11 }
```

mib-2 is defined as *iso.org.dod.internet.mgmt.1*, or *1.3.6.1.2.1*. From here, we can see that the *system* group is *mib-2 1*, or *1.3.6.1.2.1.1*, and so on. **Figure 2-4** shows the MIB-II subtree of the *mgmt* branch.

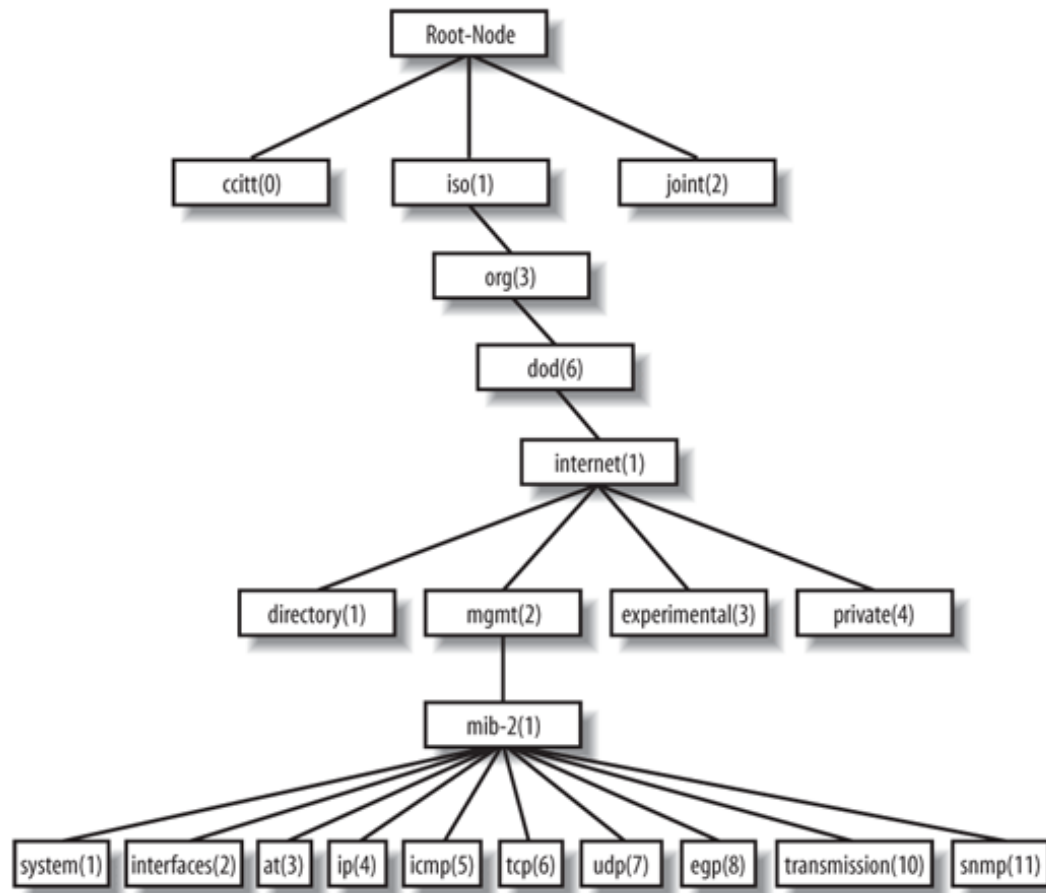


Figure 2-4. MIB-II subtree

Table 2-5 briefly describes each management group defined in MIB-II. We don't go into great detail about each group since you can pull down RFC 1213 and read the MIB yourself.

Table 2-5. Brief description of the MIB-II groups

Subtree name	OID	Description
system	1.3.6.1.2.1.1	Defines a list of objects that pertain to system operation, such as the system uptime, system contact, and system name.
interfaces	1.3.6.1.2.1.2	Keeps track of the status of each interface on a managed entity. The <i>interfaces</i> group monitors which interfaces are up or down and tracks such things as octets sent and received, errors and discards, etc.
at	1.3.6.1.2.1.3	The address translation (<i>at</i>) group is deprecated and is provided only for backward compatibility.
ip	1.3.6.1.2.1.4	Keeps track of many aspects of IP, including IP routing.
icmp	1.3.6.1.2.1.5	Tracks things such as ICMP errors, discards, etc.
tcp	1.3.6.1.2.1.6	Tracks, among other things, the state of the TCP connection (e.g., <i>closed</i> , <i>listen</i> , <i>synSent</i> , etc.).
udp	1.3.6.1.2.1.7	Tracks UDP statistics, datagrams in and out, etc.
egp	1.3.6.1.2.1.8	Tracks various statistics about the Exterior Gateway Protocol (EGP) and keeps an EGP neighbor table.
transmission	1.3.6.1.2.1.10	No objects are currently defined for this group, but other media-specific MIBs are defined using this subtree.
snmp	1.3.6.1.2.1.11	Measures the performance of the underlying SNMP implementation on the managed entity and tracks things such as the number of SNMP packets sent and received.