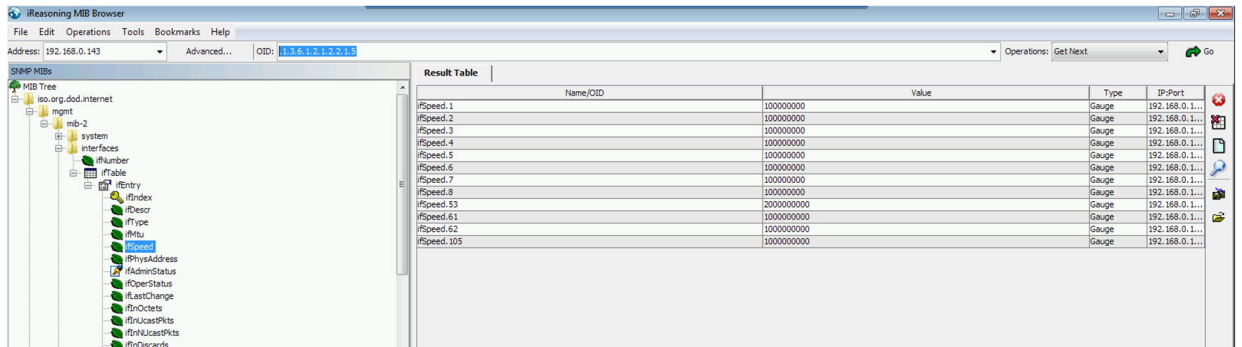


通过 SNMP 如何读取 SCALANCE X 10G 接口速率

除了在交换机的管理界面中去查看某个接口的当前速率外，还可以通过 SNMP 网管软件去读取交换机的接口参数，一般会利用标准 IF-MIB (rfc2863) 中的 OID .1.3.6.1.2.1.2.2.1.5 (ifSpeed) 来读取交换机的接口速率，如下图所示：



The screenshot shows the iReasoning MIB Browser interface. The address bar displays 192.168.0.143 and the OID is set to .1.3.6.1.2.1.2.2.1.5. The left pane shows the MIB tree with the ifSpeed object selected. The right pane displays a result table with the following data:

Name/OID	Value	Type	IP-Port
ifSpeed.1	100000000	Gauge	192.168.0.1...
ifSpeed.2	100000000	Gauge	192.168.0.1...
ifSpeed.3	100000000	Gauge	192.168.0.1...
ifSpeed.4	100000000	Gauge	192.168.0.1...
ifSpeed.5	100000000	Gauge	192.168.0.1...
ifSpeed.6	100000000	Gauge	192.168.0.1...
ifSpeed.7	100000000	Gauge	192.168.0.1...
ifSpeed.8	100000000	Gauge	192.168.0.1...
ifSpeed.53	2000000000	Gauge	192.168.0.1...
ifSpeed.61	1000000000	Gauge	192.168.0.1...
ifSpeed.62	1000000000	Gauge	192.168.0.1...
ifSpeed.105	1000000000	Gauge	192.168.0.1...

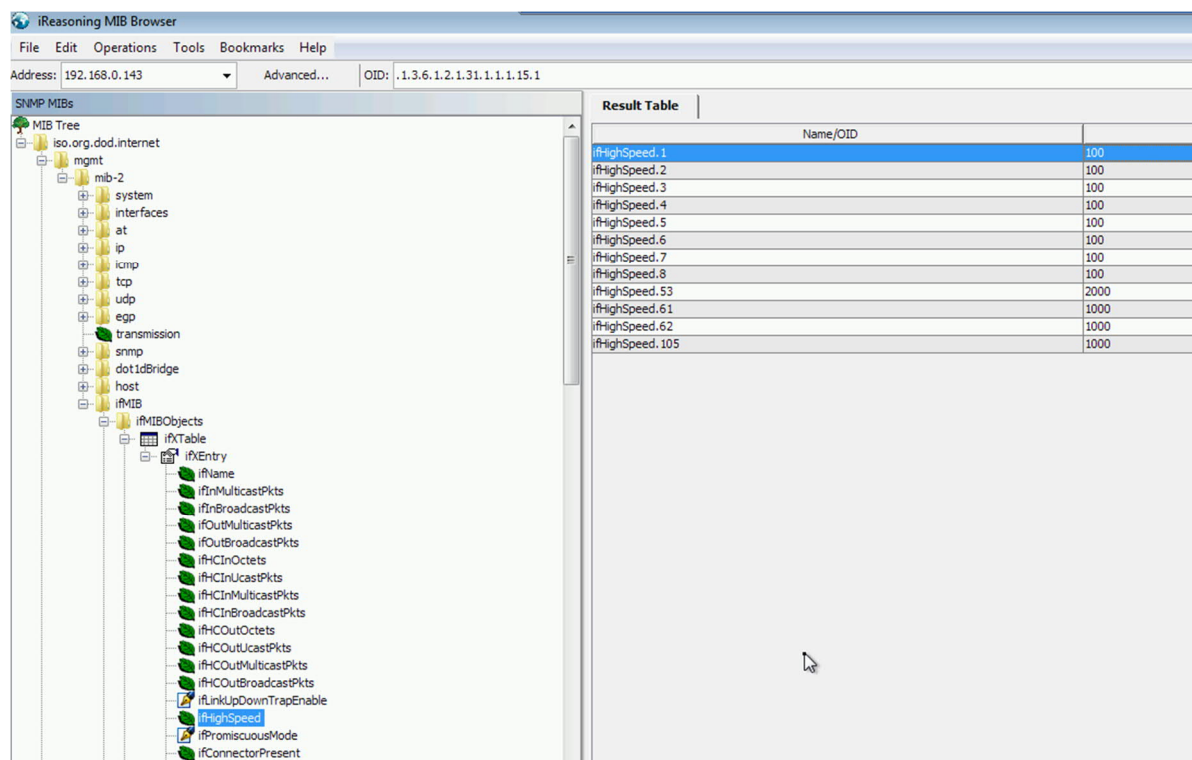
读取的结果，例如 100Mbps 的接口，结果为 100000000。

关于“ifSpeed”的说明如下：

An estimate of the interface's current bandwidth in bits per second. For interfaces which do not vary in bandwidth or for those where no accurate estimation can be made, this object should contain the nominal bandwidth. If the bandwidth of the interface is greater than the maximum value reportable by this object then this object should report its maximum value (4,294,967,295) and ifHighSpeed must be used to report the interface's speed. For a sub-layer which has no concept of bandwidth, this object should be zero.

这个“ifSpeed”是一个无符号 32 位的整形数据，其单位是 bps，其表示的范围是 0~4,294,967,295，也就是说，如果端口的速率是 10G 的时候，通过这个参数读取的时候，是无法正确表示的。

此时，就可以用另一个 OID .1.3.6.1.2.1.31.1.1.1.15 (ifHighSpeed) 来读取交换机接口速率：



如上图所示，如果读取 100Mbps 接口的速率，结果为 100。

关于“ifHighSpeed”的说明如下：

An estimate of the interface's current bandwidth in units of 1,000,000 bits per second. If this object reports a value of 'n' then the speed of the interface is somewhere in the range of 'n-500,000' to 'n+499,999'. For interfaces which do not vary in bandwidth or for those where no accurate estimation can be made, this object should contain the nominal bandwidth. For a sub-layer which has no concept of bandwidth, this object should be zero.

ifHighSpeed 是一个无符号 32 位的整形数据，其单位是 bps 其单位是 Mbps, 因此，对于 10G 的接口，读取的结果为 10000。