
SNMP MIBs

Nowadays network devices have become very complex systems, and it needs a lot of experience and skills from human beings to configure them properly.

In most cases vendors provide the following ways of configuring devices:

- CLI (via CLI, or via "login" programs);
- WEB interface;
- SNMP.

Two first ways of configuring mostly vendor-specific, and if one becomes familiar with a set of commands provided by one vendor, they still need to get used to working with some other device from different vendor.

On the other hand, SNMP is a standard and vendor-independent way of configuring remote systems via the network.

SNMP provides a concept of MIB, which in general is a set of attributes that could be used for changing or getting configuration or statistics information of the device.

SNMP MIBs do not depend on the SNMP protocol version being used for accessing them, so that this Service Definition does not take into account the theme of configuring SNMP server to work properly. This feature is stated in a separate document: "SNMP Agent configuring".

Our company has experience in supporting the following MIBs:

- MIB-II
- ATM
- DSX
- Frame Relay
- DOCSIS Cable Device MIB
- CableHome MIBs
- 802.11-MIB (IEEE 802.11)

We have experience in design and implementation of customer private MIBs.

The Service is assumed that the customer has an environment that makes it possible to support MIB.

First of all there should be SNMP Agent with framework for creating MIBs. Most SNMP Agents are supplied with a set of tools to simplify the way of MIB implementation. We have experience in working with the following SNMP Agents:

- EMANATE®/Lite SNMP Agent by SNMP Research International, Inc. [<http://www.snmp.com>];

- NET-SNMP Agent [<http://net-snmp.sourceforge.net>];
- WindNet SNMP Agent by WindRiver [<http://www.windriver.com>].

It is expected that there is a way of getting (setting) attributes from (to) the system like:

- function based API;
- message based API;
- file system based interface (like "proc" file system);
- ioctl requests;
- socket API interface (for example routing sockets for ipRouteTable from MIB-II);
- some database.

In parallel with MIB implementation we design and implement tests on our implementation (if they do not exist) using OKTET Labs Test Environment [[/test_env.rhtml](#)] tool, which has been used in all the projects related to SNMP MIB implementation.