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# IBM LAN Adapter Management Agent User's Guide

The IBM LAN Adapter Management Agent makes IBM LAN adapters visible to management applications using industry-standard management techniques. The Agent provides manageability using either the Simple Network Management Protocol (SNMP) or the Desktop Management Interface (DMI).

SNMP is the most common management-oriented protocol. The IBM LAN Adapter Management Agent can be paired with the IBM Nways Workgroup Manager for Windows NT version 1.1 to remotely manage IBM LAN adapters resident in the Agent's workstation. The Agent can generally be managed by any SNMP-compliant management application.

DMI is a programming interface developed by members of the PC industry to bring management and control to PC systems. DMI browsers, supplied in the Agent package, utilize this local interface.

The Agent runs on Windows NT and OS/2 workstations and provides an easy-to-use installation process for each environment. Management using SNMP and DMI is available for each operating environment. These are some of the attributes provided by the Agent:

- General: product name, bus information, functional state
- Resources: memory areas, I/O ports, interrupt levels
- Counters: packets and bytes transmitted/received, ring utilization
- Drivers: name, version, specification level
- Addresses: universally administered, locally administered, multicast/functional
- Features: Wake on LAN, auto-sense, full-duplex
- Plus Route Switch and Transmit Priority information

The latest IBM LAN adapter device drivers provide the most information to the IBM LAN Adapter Management Agent.

## IBM LAN Adapter Management Agent for Windows NT

The IBM LAN Adapter Management Agent for Windows NT is installed by invoking the SETUP.EXE program from the installation media. The major components installed by SETUP are:

- DMI service provider
- DMI instrumentation for IBM LAN adapters
- SNMP extension agent
- DMI browser application

The DMI service provider and the DMI instrumentation are installed as Windows NT Services and originally given a Startup Type of Automatic. The DMI service provider has the service name "Win32sl". The SNMP extension agent is used in conjunction with Microsoft's SNMP extensible agent service to provide a mapping between SNMP and DMI. The DMI browser application provided is Intel's LANDesk\*\* DMI Explorer. The DMI browser application, this document and a de-install icon will be contained in the IBM LAN Adapter Management Agent folder.

## NT Software Requirements

The IBM LAN Adapter Management Agent for Windows NT requires that Windows NT Workstation or Windows NT Server Version 3.51 or higher be installed on the system.

In order to install the SNMP function of the IBM LAN Adapter Management Agent for Windows NT, the SNMP Service *must already be installed* at the Agent's station. This is because the Agent needs to add entries to the SNMP Service registry parameters. The SNMP Service enables a Windows NT end station to be administered remotely with an SNMP management tool. The DMI function of the IBM LAN Adapter Management Agent for Windows NT has no installation prerequisites.

## IBM LAN Adapter Management Agent for OS/2

The IBM LAN Adapter Management Agent for OS/2 is installed by running the INSTALL.EXE program from the installation media. The major components installed by INSTALL are:

- DMI service provider
- DMI instrumentation for IBM LAN adapters
- DMI-to-SNMP mapper
- SNMP daemon
- DMI browser application

For OS/2 Version 3.0, the DMI service provider and the DMI instrumentation are started automatically by commands in CONFIG.SYS. The DMI-to-SNMP mapper (DMISA.EXE) and SNMP daemon (SNMPD.EXE) start automatically from the system's Startup folder. The DMI browser can be started by locating it in the IBM LAN Adapter Management Agent for OS/2 folder and double-clicking on its icon.

If you have previously installed the SystemView Agent for OS/2 on your OS/2 Version 3.0 workstation, some of the SNMP and DMI management components will already exist. The DMI service provider is started automatically in CONFIG.SYS. The DMI-to-SNMP mapper (DMISA.EXE) and SNMP daemon (SNMPD.EXE) start automatically because they're in the system's Startup folder. The DMI browser can be started by locating it in the SystemView Agent for OS/2 folder and double-clicking on its icon. The DMI instrumentation for IBM LAN adapters is provided by the INSTALL program and configured to start automatically from CONFIG.SYS.

For OS/2 Version 4.0, some of the SNMP and DMI management components are already provided by the base operating system. The DMI service provider is always running. The DMI-to-SNMP mapper, SNMP daemon, and DMI browser are part of the System Management Agent folder, in the Utility program folder. The System Management Agent folder provides separate icons for startup and configuration of the System Management Agent. The DMI instrumentation for IBM LAN adapters is provided by the INSTALL program and configured to start automatically from CONFIG.SYS.

The IBM LAN Adapter Management Agent for OS/2 folder will always include this document and a de-install icon.

If you alter the adapter configuration in your OS/2 system, you can always use the MPTS Configuration program to bind the IBM LAN Adapter Management Agent for OS/2 to the LAN adapters of your choice. Go into the Adapter and Protocol Configuration menu and add the IBM LAN Adapter Management Agent for OS/2 for the adapters you want managed.

## OS/2 Software Requirements

The IBM LAN Adapter Management Agent for OS/2 requires that OS/2 Version 3.0 or higher and TCP/IP for OS/2 Version 3.0 or higher be installed on the system.

## IBM LAN Adapter Management Agent Usage Tips

- The IBM LAN Adapter Management Agent for OS/2 allows some of the packet/byte counters to be set, The IBM LAN Adapter Management Agent for Windows NT does not allow any attributes to be set.
- The IBM LAN Adapter Management Agent for OS/2 uses SNMPv2. The IBM LAN Adapter Management Agent for Windows NT uses SNMPv1.

When using an SNMP-based manager and its MIB browser, the general steps to follow are:

- Copy the MACDMI.MIB file from the <install dir>\SNMPMGRS path, to the appropriate directory on the manager station. The destination directory is most likely the same location where all the other \*.MIB files are located. For example, when using NetView for AIX, this is the \usr\OV\snmp\_mibs directory.
- Load/Install the MACDMI.MIB file into the manager's MIB database. When using NetView for AIX, start NetView for AIX, select OPTIONS and then the LOAD/UNLOAD option.
- View the information provided by the IBM LAN Adapter Management Agent by traversing the MIB tree and browsing to:

```
iso.org.dod.internet.private.enterprises.ibm.ibmArchitecture.  
  ibmDmi.mibsFromMifs.ibmLanAdapter.dmtfGroups or,
```

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1.3.6.1.4.1.2.5.11.1.8.1
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