

Kyocera SNMP White Paper

What is it?

SNMP stands for Simple Network Management Protocol, and was designed to enable communication between different types of network and allow different types and brands of network peripheral (hubs, bridges, routers, etc) to be managed by a single piece of network management software. It was created by a group comprising the Network Printing Alliance (NPA), Desktop Management Task Force (DMTF) and Internet Engineering Task Force (IETF).

The theory behind SNMP is that a network administrator should be able to send and receive messages to and from all peripheral devices on his network without leaving his workstation. Under SNMP, the administrator should be able to:

- Know the status of the peripheral device
- Configure the device parameters
- Receive notification of any failure
- Understand the nature of the failure

How does it work?

Each device on the network has its own Management Information Base or MIB, which contains details of device-specific functionality. The MIB resides in the firmware of the device but must also be mirrored in the host management system, by importing a corresponding database file into the overall network management database.

The printer MIB was developed by printer manufacturers working together and was standardised on 29th May 1995. Any printer with the printer MIB resident in its firmware can therefore managed by any network management software which employs SNMP.

SNMP is the command set that makes communication with the MIB possible. SNMP itself is transported across the network in traditional packets using standard network protocols.

What are the benefits?

Many organisation are now moving towards an "open systems" environment. SNMP is independent of operating system or hardware type and effectively bridges the gaps between them, to provide enhanced compatibility.