

# SNMP Based Tools

## SNMP-based tools

The [Simple Network Management Protocol \(SNMP\)](#) is widely used for device monitoring over IP, especially for monitoring infrastructure components of those networks, such as routers, switches etc. There are many tools that use SNMP to retrieve network information such as the state and utilization of links, routers' CPU load, etc., and generate various types of visualizations, other reports, and alarms.

- [MRTG](#) (Multi-Router Traffic Grapher) is a widely-used open-source tool that polls devices every five minutes using SNMP, and plots the results over day, week, month, and year timescales.
- [Cricket](#) serves the same purpose as [MRTG](#), but is configured in a different way - targets are organized in a tree, which allows inheritance of target specifications. Cricket has been using [RRDtool](#) from the start, although MRTG has picked that up (as an option) as well.
- [RRDtool](#) is a *round-robin database* used to store periodic measurements such as SNMP readings. Recent values are stored at finer time granularity than older values, and RRDtool incrementally "consolidates" values as they age, and uses an efficient constant-size representation. RRDtool is agnostic to SNMP, but it is used by [Cricket](#), [MRTG](#) (optionally), and many other SNMP tools.
- [Synagon](#) is a Python-based tool that performs SNMP measurements (Juniper firewall counters) at much shorter timescales (seconds) and graphs them in real time. This can be used to look at momentary link utilizations, within the limits of how often devices actually update their SNMP values.

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