



PRM



Network Performance Reporting

Today's mission-critical applications and services demand optimal network performance in addition to high network availability. Network performance reporting systems are necessary to ensure that these critical services are not being negatively affected. Service Level Agreements (SLAs), which guarantee that contracted levels of network performance will be met, are increasingly being implemented by enterprise and service provider IT staffs. Network users, whether enterprise end-users or service provider customers, are unconcerned with what's happening behind the network scenes. Rather, they care only that their applications are available and response times are reasonable. SLAs provide these customers with a way of holding those responsible for the network to quantitative measurements of performance.

Tavve's PRM™

(Performance Reporting Manager) Introducing PRM (Performance Reporting Manager), an application that gives network managers the ability to measure and improve network performance. PRM provides real-time monitoring as well as historical trending. With as few as four mouse clicks, network personnel can use PRM to determine exactly what kinds of problems—from throughput and utilization issues to latency and packet loss—are occurring. Network technicians can then take problem-resolution action before end-users are even aware of a problem. Enterprises and service providers can use PRM's reports and tools for troubleshooting and capacity planning, thereby achieving maximum network uptime and performance. Business managers can use PRM's graphs and charts to easily view network performance data, helping them ensure that their important business processes are not being negatively impacted.

How It Works

PRM uses the network management system's SNMP database to derive critical performance data on all configured nodes throughout the network. It then automatically creates an extensive network management system (NMS) Web site, allowing instant access to many key reports and graphs. These include reports on network status, service level availability, Top 25 performance and bottlenecks, and trends. Using advanced algorithms and linear regression techniques, PRM manipulates raw MIB data into meaningful reports for proactive network management tasks.

The Manageme<mark>nt Co</mark>mpany

PRM's NMS Web pages are automatically regenerated every night. The basic infrastructure pages and special reports are generated as static HTML files; graphs and graphical reports are dynamically created.

Key Features

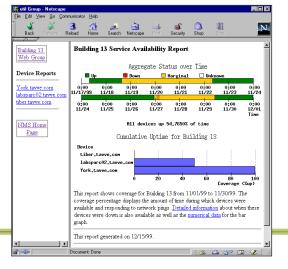
- Real-time data reporting
- Automatic, Web-based reports
- Reports designed to monitor SLAs
- Proactive bottleneck identification
- User-definable threshold reporting
- Views to reflect specific business organizations

Four Clicks to Problem Resolution

Using PRM, a user can, with as few as four mouse-clicks, determine exactly what problems are being experienced on the network. PRM automatically builds a large collection of Web-based reports detailing the overall state of the network as well as the status of each device. To access a report, users click the appropriate link on the NMS home page. PRM then dynamically generates the report as a Web page, using the data that is available at that moment. PRM's descriptions of network problems are useful for troubleshooting network outages, latency issues, and packet discards. By organizing all relevant data in one place, PRM makes it easy to drill down from network rollup reports to reports on user-defined groups of devices (such as servers and routers), to reports on particular devices and their interfaces. And all of the data presented in these reports is real-time, current information, not last night's data.

SLA Reporting

PRM provides industry-leading capabilities for reporting on SLAs. It delivers an aggregated percentage of network uptime for each group of equipment, along with helpful timelines, graphs, and outage details.









This information can be used not only to verify that SLAs have been met, but also to proactively manage SLA performance, ensuring that levels are not dropping below defined thresholds. By default, PRM reports SLAs for a 24x7 environment; however, it can be configured to report for specified, peak business hours only (i.e., 8am-5pm, Monday-Friday). Outages that occur outside of the specified hours would then be excluded. In addition, PRM can be set to ignore any scheduled downtimes so as not to penalize network staff being held to SLAs.

Identifying Bottlenecks

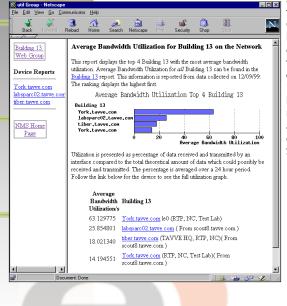
PRM identifies bottlenecks in the network by means of Top 25 Reports (which can be configured to Top 50, Top 75, and so on). Top 25 Reports reveal current bottlenecks for bandwidth utilization, interface discards, CPU utilization, and other parameters. Each Top 25 Report contains a bar graph with the worst bottleneck listed first, followed by progressively less severe bottlenecks. Device information and values for the displayed parameters are also shown. From any Top 25 Report, users can click to generate a graph and detailed analysis of the bottleneck. The graph shows the date and time of the problem; the analysis provides a textual interpretation of the graph and expert advice and recommendations.

Forecasting Failures

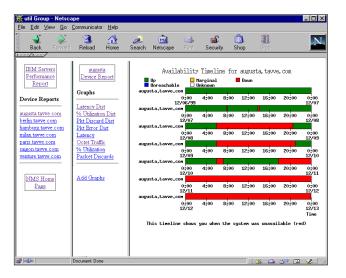
PRM forecasts network or component failures due to overutilization with Trend Reports. While Top 25 Reports *report* bottlenecks, Trend Reports *predict* bottlenecks based on user-defined thresholds. Each Trend Report displays a bar graph showing the number of days until various device thresholds will be reached. Also provided is textual information about the thresholds and devices, with links to graphs and further analysis. Trend Reports enable users to make proactive management decisions, such as upgrading equipment, before problems occur.

Business Views

Many of the reports in the PRM Web site can be organized by user-defined groups. These groups can range from device-



specific to arbitrary collections of unlike devices. Groups can be organized by device type, notification group, geographical location, or business unit. Users can thus view the network in ways that mirror their business organization, making it easy to monitor a specified group in terms of bottlenecks, trends, and SLA requirements.



Platform Requirements

- Tivoli NetView running on IBM AIX or Sun Solaris
- Hewlett-Packard OpenView Network Node Manager running on HP-UX or Sun Solaris

Hardware Requirements

20 MB disk space available

Memory Requirements

128 MB RAM available

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