

RoboMon NT/2000 - RAS Intelligent Solution Set

Automated management for Microsoft® Windows NT® Remote Access Service

Manage Any RAS Environment Better

RoboMon's RAS Intelligent Solution Set provides easily configurable proactive monitoring and problem solving for any size Remote Access Service (RAS) environment, from a standalone RAS server providing dial-up and/or VPN services, to multiple servers providing client/server services over Wide Area Networks. RoboMon's automated, out-of-the-box RAS Intelligent Solution Set operates through an integrated set of rules that detect and correct problems before your users experience failures or slowdowns, providing increased reliability and efficiency for crucial operations such as those of eBusiness. It monitors all aspects of RAS availability and performance, including:

- Basic operations, such as whether critical RAS services are running,
- Performance criteria, such as such as CPU, memory and I/O bottlenecks that may degrade RAS performance, and
- RAS-specific issues, such as high connection activity, failed connections, port errors, etc.

RoboMon can diagnose and correct problems on the spot, or escalate them to your attention at a central monitoring location.

RoboMon NT/2000 Event Monitor

The screenshot shows the RoboMon Event Monitor application window. The title bar reads "Robomon Event Monitor - All Events for RoboMon Event Database on \\BASE". The interface includes a menu bar (File, Monitor, View, Event, Detail, Tools, Help), a toolbar with various icons, and a main event list table. Below the table is a detailed view of a specific event, showing a severity level, a description of the problem, and a table of error counts for different error types.

EventDateTime	Class	SubClass	Computer	!	RuleName
10/28/99 04:02:58 PM	RAS	RAS PORT	CONTACT	!	RAS_PORT_ERRORS
10/28/99 04:00:18 PM	AUTOMATION	NETWORK	EAST	!	UNREACHABLE_COMPUTERS
10/28/99 04:00:18 PM	AUTOMATION	NETWORK	EAST	!	UNREACHABLE_COMPUTERS
10/28/99 02:01:32 PM	IIS	IIS CACHE	GLOBAL	!	IIS_CACHE_ALERT
10/28/99 02:01:28 PM	IIS	IIS PROCESS	GLOBAL	!	IIS_PROCESS_POOL_LEAK
10/27/99 11:00:09 PM	AUTOMATION	PAGE_FILE	EAST	!	PAGE_FILE_LOAD
10/27/99 11:00:01 PM	IIS	IIS SERVICES	EAST	!	IIS_SERVICES

Updated severity 1 problem for computer CONTACT at 10/28/99 04:02:58 PM.
Generated by rule RAS_PORT_ERRORS of type RAS PORT in RAS.

23 errors have occurred on port CONTACT during the past 5 minutes.

Error Type	Error Count
Alignment	0
Buffer Overrun	5
CRC	0
Serial Overrun	0
Timeout	18

Ready | 7 events | 10/28/99 4:15:26 PM

Key Benefits

- Works out of the box, with no setup time
- Configures to any size RAS environment
- Fixes problems automatically, focuses your staff's time on the issues you target
- Allows centralized monitoring of remote systems
- May be precisely customized for each environment
- Provides intuitive, graphical interface for management and customization
- Integrates with RoboMon's enterprise-wide total eBusiness infrastructure management solution (see below)

What RoboMon's RAS Intelligent Solution Set Monitors

RoboMon's RAS Intelligent Solution Set provides comprehensive monitoring and management of running RAS systems. Specific rules are designed to:

- Detect whether RAS is installed, check the status of RAS services and optionally restart them
- Check for high overall CPU and memory usage, and I/O, which may degrade RAS performance
- Analyze the I/O for each port on the RAS device, and warn of high rates, which may cause degradation of server performance due to memory and server loads
- Report processes using significant resources of the working set, CPU and page files
- Collect Windows NT system, application and security error events for RAS and raise an alert when these exceed specified thresholds
- Check each port for alignment, buffer overrun, CRC, serial overrun and timeout errors, helping to identify problems that can degrade RAS performance, such as overly high BPS connection rates, poor line quality, and excessive server workload
- Report unusually high rates of failed RAS connections, which may indicate security attacks, improperly configured or incompatible client hardware or software, or RAS script errors

What Rules Mean to You

RoboMon rules work out-of-the-box, with no tweaking, for any size RAS configuration. In addition, each RoboMon rule may be completely customized, allowing precise control over threshold settings through the Solutions Manager, as well as actions to be taken, required notifications and alerts. RoboMon's intuitive, graphical Rule Designer allows you to tailor rules and create new rules without writing a single line of code. Customized rules may be deployed to individual machines, domains or throughout the enterprise, via simple, efficient, drag & drop operations in the RoboMon Enterprise Manager.

The Total RoboMon Solution

RoboMon for Windows NT/2000 is automated eBusiness infrastructure management software that detects and corrects complex application, system and network problems to ensure the highest levels of availability and performance.

RoboMon includes a suite of pre-defined rules, called Intelligent Solution Sets, that work out of the box to detect and correct problems with applications, systems and networks, including Windows NT/2000, Microsoft BackOffice, and SNMP-based network components.

RoboMon may be configured to notify staff of problems in real time, or to take corrective action independently and monitor the results for success. RoboMon's many notification options include paging, e-mail, SNMP trap, net send messages, and centralized event reporting through the Event Monitor, enabling it to integrate with and supplement your current staff notification practices.

Where RoboMon's RAS Intelligent Solution Set Gets Its Data

- Perfmon counters
- NT event log

RoboMon's RAS Rules

RAS_Find_Connection_Events

Finds Windows NT system events for successful Remote Access Service connects.

RAS_Find_Connection_Fail_Events

Finds Windows NT system events for Remote Access Service connects that failed to authenticate and were then disconnected.

RAS_Find_Error_Events

Finds Windows NT system, application and security events for Remote Access Service errors.

RAS_High_Connection_Rate

Checks for a high rate of successful Remote Access Service connections.

RAS_Performance_Checks

Checks some basic performance indicators.

RAS_Port_Bytes_Recd_Rate

Checks the activity in bytes received per second against a maximum threshold for each port on the RAS device.

RAS_Port_Bytes_Sent_Rate

Checks the activity in bytes sent per second against a maximum threshold for each port on the RAS device.

RAS_Port_Errors

Checks for errors that may occur during a connection for each port on the RAS device.

- Alignment errors occur when a byte received is different from the byte expected. This may be due to a lost byte or a time-out error.
- Buffer overrun errors occur when the data is sent at a faster rate than can be received. This may be due to a BPS connection rate that is too fast.
- CRC (cyclic redundancy check) errors occur when the received frame contains corrupt data. This may be due to poor line quality.
- Serial overrun errors occur when the server cannot respond quickly enough to a transmission. This may be due to the server's workload.
- Timeout errors occur when an expected character is not received in time. The software will request the data to be re-sent.

RAS_Port_Frames_Recd_Rate

Checks the activity in frames received per second against a maximum threshold for each port on the RAS device.

RAS_Port_Frames_Sent_Rate

Checks the activity in frames sent per second against a maximum threshold for each port on the RAS device.

RAS_Process_Resources

Reports processes using significant resources.

RAS_Service_Not_Running

Checks for RAS services that are auto-started, but not running.

RAS_Too_Many_Error_Events

Checks for a high number of Windows NT system, application and security error messages for Remote Access Server.

RAS_Too_Many_Failed_Connections

Checks for a high number of Remote Access Server connections that failed to authenticate and were then disconnected.

Set_RAS_Flags

Reads the registry for the location of the RAS image and sets a flag indicating whether or not the service is installed.

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