

RoboMon NT/2000 - MSMQ Intelligent Solution Set

Automated management for Microsoft® Message Queue

Manage Any MSMQ Environment Better

RoboMon's MSMQ Intelligent Solution Set provides easily configurable proactive monitoring and problem solving for any size network running Microsoft Message Queue. This provides increased reliability and efficiency for crucial operations such as those of eBusiness. RoboMon's automated, out-of-the-box MSMQ Intelligent Solution Set operates through an integrated set of rules that detect and correct problems before your users experience failures or slowdowns. It monitors all aspects of MSMQ availability and performance, including:

- Basic operations, such as whether the server is operable and critical services are running,
- Performance criteria, such as such as CPU, memory and I/O bottlenecks that may degrade MSMQ performance, and
- Message queue criteria, such as queue length, message size or growth rate that may signal application problems.

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

Key Benefits

- Works out of the box, with no setup time
- Configures to any size MSMQ 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 MSMQ Intelligent Solution Set Monitors

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

- Detect whether the MSMQ server is installed, what type of message service it is configured to provide, and test whether it is operable
- Check status of MSMQ services and, optionally restart them
- Collect Windows NT system, application and security error events for MSMQ and raise an alert when these exceed specified thresholds
- Check for high overall CPU and memory usage, and I/O, which may degrade messaging performance
- Report processes using significant resources of the working set, CPU and page files
- Raise an alert when message queues (including journal queues) approach quota limits, or exceed individual or total size or rate of growth limits, which may indicate problems with the receiving application
- Analyze the rate of incoming and outgoing messages for all queues on the server or client, and warn of high rates, which may cause degradation of server performance due to memory, disk space and network loads on the server
- Monitor the performance and size of the MQIS database, check for access errors and high activity, which may cause degradation of server performance due to memory, disk space and network loads on the server
- Track the growth of IP and IPX sessions and of active queues, which indicate high activity on the Message Queue system and may lead to server performance degradation

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 menu bar includes "File", "Monitor", "View", "Event", "Detail", "Tools", and "Help". Below the menu bar is a toolbar with various icons. The main area displays a table of events:

EventDateTime	Class	SubClass	Computer	Severity	RuleName
10/28/99 04:02:58 PM	MSMQ	SERVICE	ADAM	1	MSMQ_QUE_QUEUE_KBYTES
10/28/99 04:00:18 PM	AUTOMATION	NETWORK	EAST	1	UNREACHABLE_COMPUTERS
10/28/99 04:00:18 PM	AUTOMATION	NETWORK	EAST	1	UNREACHABLE_COMPUTERS
10/28/99 02:01:32 PM	IIS	IIS CACHE	GLOBAL	1	IIS_CACHE_ALERT
10/28/99 02:01:28 PM	IIS	IIS PROCESS	GLOBAL	1	IIS_PROCESS_POOL_LEAK
10/27/99 11:00:09 PM	AUTOMATION	PAGE_FILE	EAST	1	PAGE_FILE_LOAD
10/27/99 11:00:01 PM	IIS	IIS SERVICES	EAST	1	IIS_SERVICES

Below the table, a detailed view of the selected event is shown:

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Updated severity 1 problem for computer ADAM at 10/28/99 04:02:58 PM.
Generated by rule MSMQ_QUE_QUEUE_KBYTES of type SERVICE in MSMQ.

Large queue size for K127.

There are 103 kilobytes in the K127 queue.

This is the total number of kilobytes that reside on this queue and includes the
sizes of all the messages on this queue.

The presence of a message in the Dead Letter queue indicates that this
computer was unable to deliver the message to the next computer or that
the message has expired. This occurs when:

1) The destination queue is unknown
    
```

The status bar at the bottom shows "Ready", "7 events", and "10/28/99 4:15:26 PM".

What Rules Mean to You

RoboMon rules work out-of-the-box, with no tweaking, for any size MSMQ 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 MSMQ Intelligent Solution Set Gets Its Data

- Perfmon counters
- Win32 API
- C++ API provided by Microsoft for Message Queuing

RoboMon's MSMQ Rules

Check_MSMQ_Installed

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

Check_MSMQ_Messaging_Type

Reads the registry to determine the type of message service (PEC, PSC, BSC, Independent client, Routing server, RAS connector).

MSMQ_Find_Error_Events

Finds Windows NT system, application and security error events for MSMQ.

MSMQ_IS_MQIS_Access_Errors

Checks for a high number of MQIS database access errors.

MSMQ_IS_MQIS_Activity

Checks for high activity on the MQIS database, including

- 1) high rate of database accesses
- 2) high rate of replication and synchronization requests received
- 3) high rate of replication, synchronization and write requests sent

MSMQ_Performance_Checks

Checks for high values on basic performance indicators such as percent of time the CPU is busy, the file system read/write rates, the bytes transfer rate for the file system read/write operations and the percent of physical memory used.

MSMQ_Process_Resources

Reports processes using significant resources of the working set, CPU and page files.

MSMQ_QUE_Active_Queue_Growth

Checks for the growth of active queues over a number of consecutive intervals, where active queues are open public message queues that may or may not contain messages, or closed public message queues that contain messages.

MSMQ_QUE_Journal_Kbytes

Checks for a high number of kilobytes in the journal queue.

MSMQ_QUE_Journal_Msg_Growth

Checks for a high number of messages in the Journal queue. This rule also checks for message queue growth over a number of consecutive intervals.

MSMQ_QUE_Queue_Kbytes

Checks for a high number of kilobytes in each open private and public queue (including the dead letter queue).

MSMQ_QUE_Queue_Msg_Growth

Checks for a high number of messages in each open private and public queue (including the dead letter queue). This rule also checks for message growth over a number of consecutive intervals.

MSMQ_QUE_Server_Kbytes

Checks for a high number of kilobytes for all the public queues (including the dead letter and machine journal queues) on the local server.

MSMQ_QUE_Server_Msg_Growth

Checks for high queue length on all the public queues (including the dead letter and machine journal queues) on the local server. This rule also checks for message growth over a number of consecutive intervals.

MSMQ_Queue_Quota_Check

Collects the quota limit for each public queue on the local server or client and checks if the total message size for each is approaching the quota limit for that queue.

MSMQ_Server_Operability

Checks whether a server is operable. It will create a queue on the selected server, send a message to the queue and then read the message from the queue.

MSMQ_Service_Not_Running

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

MSMQ_SVC_Incoming_Msg_Rate

Checks for a high rate of incoming messages from all queues on the server or client.

RoboMon's MSMQ Rules cont.

MSMQ_SVC_Outgoing_Msg_Rate

Checks for a high rate of outgoing messages to all queues on the server or client.

MSMQ_SVC_Session_Growth

Checks for IP and IPX session growth over number of consecutive intervals, where session growth is the addition of one or more new IP and IPX sessions during each interval.

MSMQ_Too_Many_Error_Events

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

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