

The Road To

Message Management

With **Robot/CONSOLE**

Automating System i Message and Resource Management

Tom Huntington

Vice President of Technical Services

Help/Systems

Introduction

Automated, centralized message control and resource monitoring can help you manage your System i more easily and with fewer staff. This white paper describes some of the tasks you'll face, some tips to help you get started, and the benefits of automating your system management with Robot/CONSOLE®, the message and resource management software from Help/Systems. Help/Systems is the world's leader in software solutions for IBM Power Systems™ servers running IBM i (System i®, iSeries®, AS/400®).

Message Management

Every event on the System i generates a least one message. Some sources for messages include applications, system hardware, storage management, devices, security events, and the operating system. However, not all messages are important. Some messages can be ignored; other messages can be handled the same way each time they occur—these messages can be automated easily. Still other messages should be redirected to someone who has the correct experience or knowledge to answer them. If messages are dealt with correctly at the time they occur, the small events that produced them remain small. However, if messages are ignored, the small events can turn into big events, which in turn can make your System i operations inefficient, cumbersome, and unavailable. Robot/CONSOLE helps keep small events small.

To manage your System i, your basic goal is to automate your message processing. The System i is message-driven—events trigger messages that are sent to various queues. The main message queue is QSYSOPR. If you can organize and automate your QSYSOPR message traffic, you can manage your System i.

The key to cutting through the clutter of unwanted messages is to automate the exceptions. First, you use Robot/CONSOLE to locate the exceptions and then you automate how they are handled. Robot/CONSOLE monitors the message queues you tell it to—including QSYSOPR and printer, device, and user message queues—and uses your specifications to react to the messages it finds.

Message Centers, Message Sets, and Message Groups

A Robot/CONSOLE **message center** is your hub for answering and working with messages. On a message center, you see messages sent to the message queues assigned to the message center, as well as messages copied or redirected from other message centers (including messages copied or redirected from other systems in your System i network). Robot/CONSOLE makes sure you see important messages. If the message center is not displayed, a pop-up window notifies you that a message is waiting and allows you to respond to it. Robot/CONSOLE comes with some predefined message centers to help you get started. You can review these message centers to create rules for automating your messages, and you can create additional message centers for your specific needs.

A Robot/CONSOLE **message set** is a set of procedures used to process a message automatically or to guide a user to react correctly to a message. When a message is received, Robot/CONSOLE selects one or more message sets to process the message based on the message ID and message queue.

You can use message sets to perform a number of actions, including:

- Suppress useless messages
- Answer certain messages automatically
- Control who can respond to a message
- Change the text of the message to make it more understandable
- Change the color of the message so it stands out on the display
- Use OPERator Assistance Language® (OPAL®), Robot/CONSOLE's powerful operations language, for sophisticated message processing

Robot/CONSOLE provides some defined message sets to help you get started. You can use these message sets to control your basic message traffic, and then easily create additional message sets for your specific needs.

You also can use Robot/CONSOLE **message groups** as an optional method to organize messages logically based on the source of the message. For example, you can group messages by user, job name, program name, or message file. Grouping messages lets you redirect messages based on their source. You define each message group and the selection criteria for the group. You can even use message groups to specify which message sets should process a message based on the source of the message.

How Robot/CONSOLE Handles Messages

Robot/CONSOLE monitors the message queues you tell it to. When a message is received, Robot/CONSOLE executes the specific message set for the message and any other message sets that apply. If a message group exists, Robot/CONSOLE executes the message sets in the group that apply to the message. Based on the message set instructions, Robot/CONSOLE can do any of the following actions:

- Suppress a message
- Reply to a message automatically
- Convert an informational message to a response-required message
- Use OPAL to perform sophisticated message processing procedures:
 - Search text for keywords to respond to a message
 - Convert to SNMP messages for enterprise monitors
 - Change text to make messages more understandable

If no message set exists, Robot/CONSOLE places the message on the message center assigned to the message queue.

Tips

- Identify messages that should become response-required to handle critical events sooner.
- Use OPAL's powerful IF-THEN-ELSE logic to respond to a message based on its contents. You can even use OPAL to execute System i commands, such as restarting a job.

Implementing Robot/CONSOLE

Robot/CONSOLE is easy to implement with its standard, four-step strategy:

1. Start Robot/CONSOLE to collect a history of message IDs and message counts on your system.
2. Run the Robot/CONSOLE Most Common Messages and Good Morning reports to analyze your message traffic and use them to build rules for handling the messages that occur frequently.
 - a. Analyze the Most Common Messages Report to determine good candidates for automation—common messages that occur regularly—and create message centers, sets, and groups to organize and process them.
 - b. Review the Good Morning Report to track and evaluate how well your automation is progressing.
3. Continue with Step 2 until you are satisfied with your Robot/CONSOLE setup.
4. Move your Robot/CONSOLE setup into production.

Resource Management

Resource management is a problem area for many companies. Without an automated resource management system in place, operators must monitor resources manually, or programmers waste time writing programs to monitor issues such as:

- Is a subsystem available?
- Is the HTTP server running?
- Is the Domino server running?
- Is a certain printer available or offline?

Robot/CONSOLE handles all of these requests. It can monitor subsystems, jobs, job queues, output queues, lines, and much more. Robot/CONSOLE makes it easy to automate the process of monitoring resources. Just specify the resource and the monitoring interval to Robot/CONSOLE. It assigns each resource a unique message ID and then checks the resources at the specified intervals. You can even use Robot/SCHEDULE®, the job scheduling and batch job management software, to schedule your resource checks.

Tips

- Review your operator run book to determine which manual resource management processes you can automate.
- Robot/CONSOLE converts events from resources into messages that you can manage automatically using message sets.

Problem Notification and Escalation

For messages that can't be suppressed or handled automatically, Robot/CONSOLE helps you respond quickly. The Robot/CONSOLE graphical user interface, the Robot/CONSOLE Explorer, makes it easy to display message centers to view and respond to messages. In addition, Robot/CONSOLE can sound an alarm and display a pop-up window when a critical message needs a reply. You can reply to the message just by clicking on the window.

For problem notification escalation, Robot/CONSOLE works with Robot/ALERT®, the system event notification software. Robot/ALERT supports popular messaging protocols such as TAP, SMS, SNMP, and SMTP, and works with cell phones, PDAs, laptops, PCs, pagers, and other devices to send and receive e-mail, text, or pager messages.

Robot/ALERT can send a message to any person, group, or location you specify. For example, you can send messages to the expert on call and have them respond directly from the messaging device. With Robot/ALERT, you can resolve problems fast, no matter where you are.

When you need quick resolution across a network of systems or partitions, look at Robot/NETWORK®, the System i network management software. Robot/NETWORK works with Robot/CONSOLE to send status messages across systems to its Host. You can spot any message quickly

and respond to it from the Host's Map Center or Status Center. You enjoy complete, centralized network message management.

Tips

- Reply to messages directly from your desktop using Robot/CONSOLE's message notification window or your message centers.
- Robot/CONSOLE can notify you, or a list of users, whenever a new message arrives that needs attention.
- Robot/CONSOLE can redirect important messages to an expert.
- Robot/ALERT uses broadcast lists to escalate problems for resolution. If the first person on the list doesn't acknowledge a message within a specified time, Robot/ALERT notifies the next person, and so forth.
- If you use two-way messaging, you can respond to your System i messages, including e-mail messages, directly from your messaging device.
- Use the Robot/NETWORK Status Center to consolidate critical events to a central location for all your partitions.

Summary

As you automate your message and resource management, you'll uncover many more automation opportunities—anytime you manage by exception, you reveal hidden issues. And, because your System i can change, automation is an ongoing process. So, keep a list of the issues you uncover and review it regularly. As you review the list for potential automation candidates, consider the following points:

- There is a big difference between monitoring and automating. You *monitor* the System i to pinpoint problems or exceptions to automate. You *automate* the System i to remove the need for human intervention to handle problems or exceptions.
- Allow enough time and don't be discouraged if your initial automation efforts take longer than you first estimated. After you're done, you'll find it hard to believe that you ever lived without automation as you enjoy your organized, reliable, economical, and smooth-running System i.

Get Started Now!

It's time to start down the road to automated message and resource management. Call us at **1-800-328-1000** and ask for a FREE Robot/CONSOLE Information Kit, a FREE Webinar demo, or a FREE 30-day trial. Or, visit www.helpsystems.com for more information. But hurry—your road to "lights-out" System i operations is waiting!

