Session: C68

IBM

iSeries Operations Navigator:
The New Work Management

*IBM **e**server iSeries*

Presenter: Dennis Schmidt   **dschmidt@us.ibm.com**

Authors: **Tim Rowe**   **timmr@us.ibm.com**
                 Greg Hintermeister   **gregh@us.ibm.com**

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Course Description

IBM **e**server iSeries

Freedom for system operators!

- Overview of the new Work Management support in Operations Navigator
- New tools to simplify the life of a system operator!
- Green screens are becoming a thing of the past
  - ▶ WRKACTJOB given new life
  - ▶ WRKJOB made easy
  - ▶ The evolution of WRKSBS
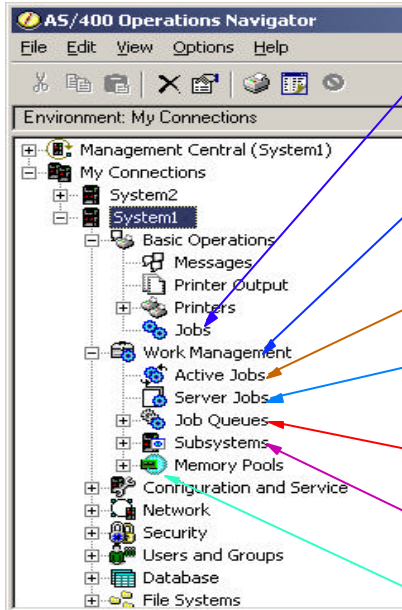 - ▶ Not your mother's WRKSHRPOOL

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What's New? - Everything!

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Jobs container has been moved under Basic Operations

'Job Management' has been renamed 'Work Management'

New WRKACTJOB container

Server Jobs has been updated to reflect the new support

Manage the jobs still on job queues

Work with jobs in a specific subsystem

Manage the system's memory pools

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Who is our Target User?

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I would like to introduce Dan, our target user.

Active Jobs

"Who is Dan?", you ask. Good question. Dan is a system operator responsible for the daily maintenance for a network of iSeries servers. His tasks include:

Monitoring system performance

Job performance

Job monitoring

Responding quickly to user problems

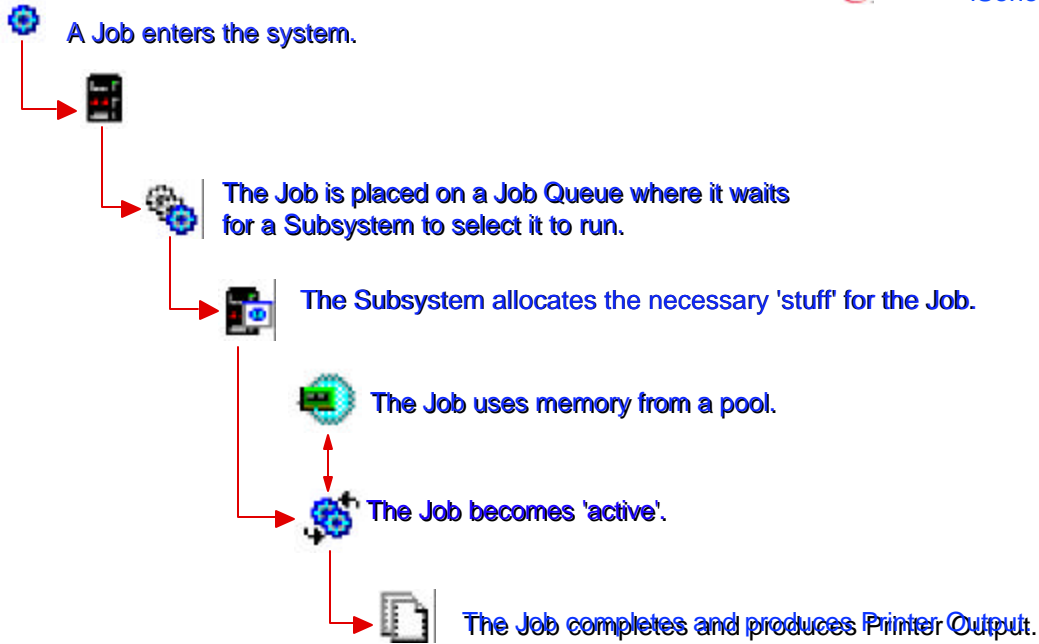Trouble shooting problem jobs

Fixing stuck jobs

Fixing system problems - memory allocation

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The Life of a Job

A Job enters the system.

The Job is placed on a Job Queue where it waits
for a Subsystem to select it to run.

The Subsystem allocates the necessary 'stuff' for the Job.

The Job uses memory from a pool.

The Job becomes 'active'.

The Job completes and produces Printer Output.

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Job Queues

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Lists all job queues allocated
to active subsystems

Lists all job queues on the system

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Active Job Queues

Name of the job queue

Library where the job queue resides

Current status of the job queue

Number of jobs on the job queue waiting to run

Subsystem that the job queue has been allocated to

The job queues that have been allocated to active subsystems

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Job Queue - Context Menu

Menu Item	Description
Explore	Shows the list of jobs waiting on the queue in the right pane of the main Operations Navigator window.
Open	Shows the list of jobs waiting on the queue in a separate window.
Create Shortcut	Places a shortcut to the job queue on your desktop.
Hold	Holds the job queue. When the job queue is held, the subsystem cannot select jobs off the queue to run.
Release	Releases the job queue. The subsystem can select jobs off the queue to run.
Clear	Removes all jobs from the job queue.
Properties	Shows properties for the job queue.

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Job Queue - Create Shortcut

IBM @server iSeries
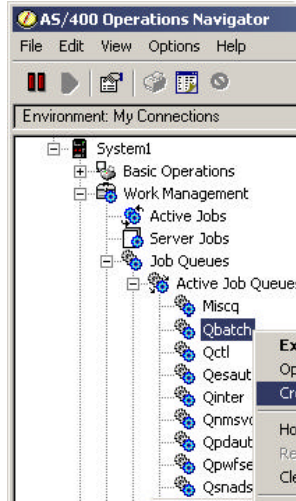
You can create icons on your desktop for job queues that need regular attention.

The icons are system independent. Create shortcuts for the same queue on multiple systems!

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Drag and Drop - Changing Priority

IBM @server iSeries
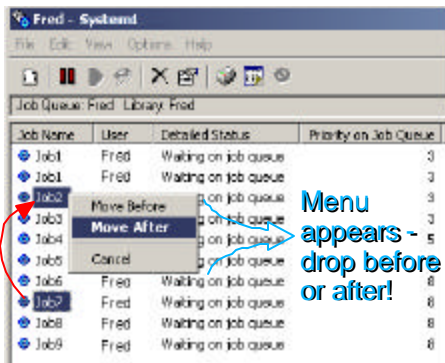
Job7 needs to run after Job2 - Right click on the job and drop it where you want it.

Menu appears - drop before or after!

Job7 is moved between Job2 and Job3

Priority is changed for you!

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Drag and Drop - Moving to Another Job Queue

IBM @server iSeries
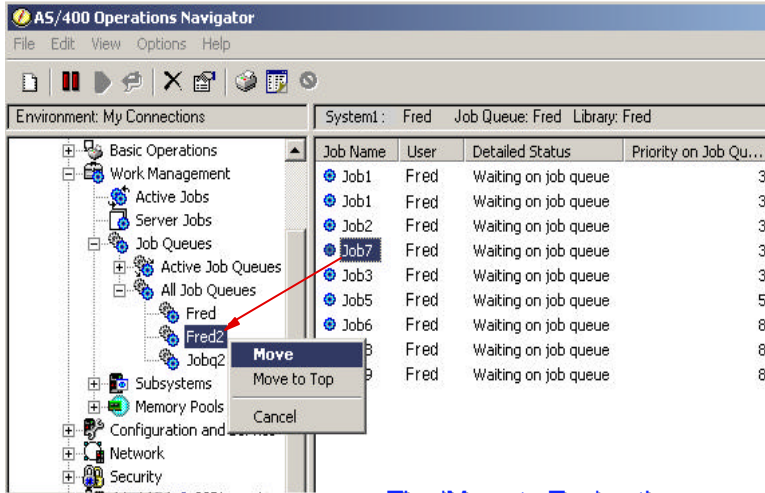
Job7 will be moved from job queue "Fred" to job queue 'Fred2'. The default action places Job7 with the other priority 3 jobs in job queue 'Fred2'.

The 'Move to Top' option moves the selected job to the top of the target job queue. The priority is changed to reflect the change to the top! If the job was held, it will be released!

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Job Queue - General Properties

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Job queue name and library

Job queue description

Job queue status

Number of jobs on the job queue

Subsystem that has the job queue allocated

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Job Queue - Authority Properties

IBM @server iSeries

Testlib/Testjobq Properties - System1

General | Authority | Activity

Authority required to control the job queue:

Job control system privilege:	Yes
Owner authority:	Yes
Object authority:	No

Job control system privilege

Owner authority

Object authority
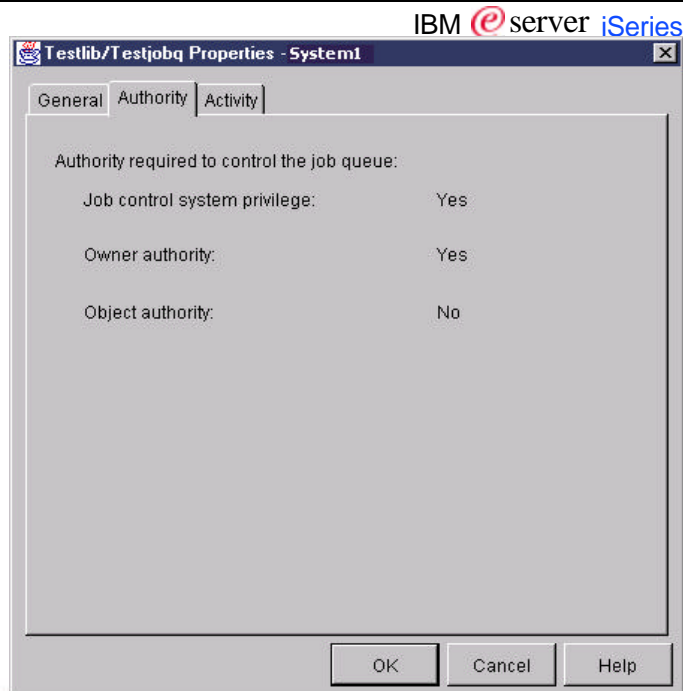
OK   Cancel   Help

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Job Queue - Activity Properties

IBM @server iSeries

Testlib/Testjobq Properties - System1

General | Authority | Activity

Sequence number:	10
Jobs on queue:	35
Active jobs:	48
Maximum active jobs:	52

Sequence number

Jobs on queue

Active jobs
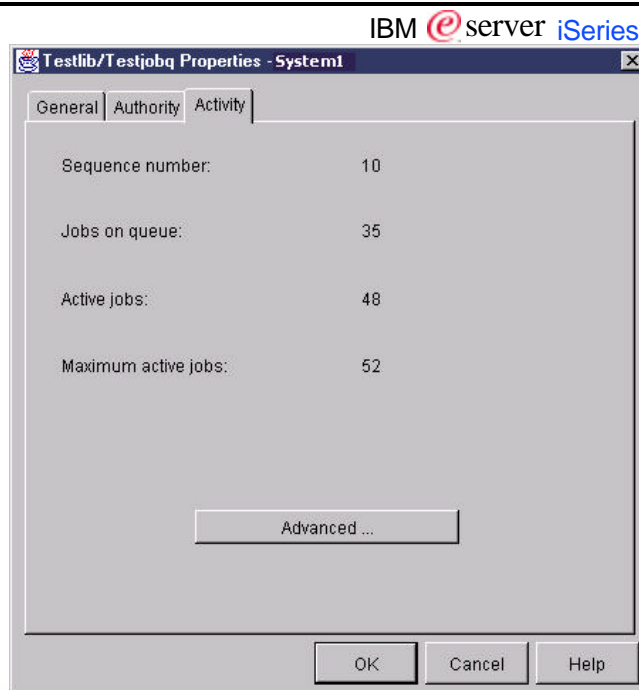
Maximum active jobs

Advanced ...

OK   Cancel   Help

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Job Queue - Advanced Activity Properties

Shows all the priority levels
for jobs on the job queue.

Jobs currently active

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Maximum number of
jobs that can be active
for each priority

Jobs waiting to run

Advanced Job Queue Activity Propreties

Job queue activity by job priority:

Priority on Queue	Jobs on Queue	Active Jobs	Maximum Active Jobs
0	4	14	No Maximum
1	6	2	15
2	2	3	No Maximum
3	0	5	10
4	5	5	No Maximum
5	12	6	No Maximum
6	1	2	No Maximum
7	3	8	No Maximum
8	2	3	No Maximum
9	1	2	No Maximum

OK   Cancel   Help

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Subsystems

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Current status of
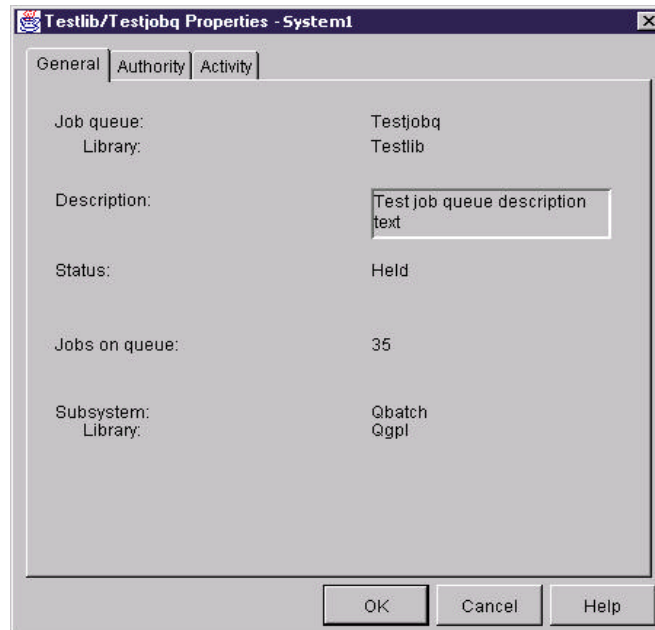the subsystem

Number of jobs currently
running in the subsystem

Name of the
subsystem

Description of the
subsystem

AS/400 Operations Navigator

File Edit View Options Help

Environment: My Connectors

System1:   Active Subsystems

Subsystem	Status	Active Jobs	Description
Bldshipss	Active	1	Build Subsystem
Bldtestss	Active	1	Build Subsystem
Joybldcks	Active	1	Build Subsystem
Qbatch	Active	0	Batch Subsystem
Qcmn	Active	7	Communications Subsystem
Qctl	Active	1	Controlling Subsystem
Qinter	Active	7	Interactive Subsystem
Qserver	Active	17	File Server Subsystem
Qsnads	Active	6	SNA Distribution Subsystem
Qspl	Active	0	Spooling Subsystem
Qsyswrk	Active	63	System subsystem
Qusrwrk	Active	10	User subsystem

- Management Central (System1)
- My Connections
  - System2
  - System1
    - Basic Operations
    - Work Management
      - Active Jobs
      - Server Jobs
      - Job Queues
      - Subsystems
        - Active Subsystem
      - Memory Pools
    - Configuration and Service
    - Network
    - Security
    - Users and Groups
    - Database
    - File Systems

All subsystems
currently active on
the system

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Subsystem - Start

Search for a specific
subsystem description

Start Subsystem

Subsystem to start:

Name: Qbatch   Browse...

Library: Qgpl

The STRSBS command in
the GUI!

OK   Cancel   Help

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Active Subsystems

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System1:   Qbatch   Subsystem: Qbatch   Elapsed time: 00:01:42

Job Name	Detailed Status	Current User	Type
Qbatch	Waiting for dequeue	Qsys	Subsystem
Job1	Delayed 400 seconds	Fred	Batch
Job2	Delayed 400 seconds	Fred	Batch
Job3	Delayed 400 seconds	Fred	Batch
Job4	Delayed 400 seconds	Fred	Batch
Job5			

Controlling
subsystem
has a
unique icon

Explore
Open
Create Shortcut

Job Queues
Stop...
Reset Statistics

Properties

Menu Item	Description
Explore	Shows the list of jobs running in the subsystem in the right pane of the main Operations Navigator window.
Open	Shows the list of jobs running in the subsystem in a separate window.
Create Shortcut	Places a shortcut to this subsystem on the desktop.
Job Queues	Shows a separate window listing the job queues for this subsystem.
Stop	Ends the subsystem - Same as ENDSBS.
Properties	Shows properties for the subsystem.

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Subsystem - Stop

Stop Subsystem

Subsystems to stop:

Subsystem	Library	Description
Qbatch	Qsys	Batch Subsystem

How to stop: Controlled

Time limit for controlled stop: No limit   seconds

When jobs are ended:

☑ Create job logs
☐ Reduce run priority
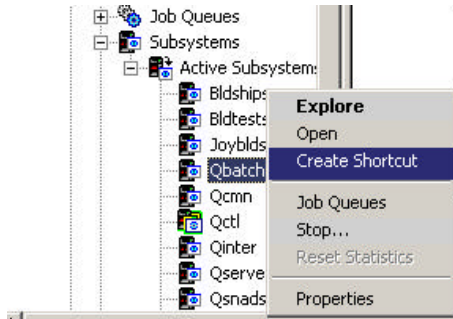☐ Reduce timeslice

[Stop] [Cancel] [Help] [?]

Stop subsystems in a controlled manner or stop them using the immediate option. Replaces the ENDSBS command!

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Subsystem - Create Shortcut

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Shortcuts save time accessing systems in your network!
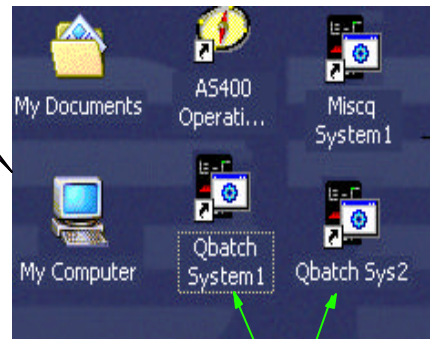
Easy access to your problem subsystems.

Fewer mouse clicks to get the list of jobs for a subsystem.

Better performance retrieving lists of jobs.

Look at Qbatch for each system in the network!

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Manage the jobs on your system and stay employed

Active Jobs - Features

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Time period over which elapsed performance statistics are calculated

CPU percentage, just like WRKACTJOB

Easily identifiable system name

The user profile the job is currently running under

System1 :	Active Jobs	Elapsed time: 00:01:00		
Job Name	Detailed Status	Current User	Type	CPU %
Qbatch	Waiting for dequeue	Qsys	Subsystem	0.0
Qacsotp	Waiting for lock	Fred	Prestart – Server	2.1

Different icons for important types of jobs

Server jobs are easily identified

Real words describe what the job is currently doing and help you determine what action to take.

Meaningful names replace cryptic job types. PJ does not mean the job is getting ready for bed!

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Active Jobs - Get a Job!

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Find jobs quickly with the Find function.

Searches the entire list for the entered phrase, even entries not currently in view!

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Active Jobs - Column Sort

Click on a column heading to sort the list in ascending order. Click the column again to sort in descending order.

Quickly find the CPU hogs!

AS/400 Operations Navigator

File Edit View Options Help

2 minutes old

Environment: My Connections | System1 : Active Jobs Elapsed time: 00:07:14

Job Name	Detailed Status	Current User	Type	CPU %
Qypssrv	Waiting for dequeue	Qsys	Batch - Server	9.6
Qpadev000b	Running	Fred	Interactive	9.1
Qzrcsrvs	Running	Fred	Prestart batch - Server	9.1
Tcpiploc	Waiting for event	Qgate	Batch	6.9
Scpf	Waiting for event	Qsys	System	3.3
Rcjoybld	Waiting for message	Fred	Batch	3.0
Rcbldtest	Waiting for dequeue	Fred	Batch	1.2
Rcbldship	Waiting for dequeue	Fred	Batch	1.1
Rcbldlaw	Waiting for message	Fred	Batch	1.0
Q400filsvr	Waiting for dequeue	Qsys	System	0.0
Qzsosmapd	Waiting for select	Quser	Batch - Server	0.0

- Management Central (System1)
- My Connections
  - System2
  - System1
    - Basic Operations
    - Work Management
      - Active Jobs
      - Server Jobs
      - Job Queues
      - Subsystems
      - Memory Pools
    - Configuration and Service
    - Network

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Active Jobs - Advanced Sort

Do complex sorts using multiple job attributes.

Values are saved for this Operations Navigator session, but not between sessions.

Remove all columns from right side to return to default WRKACTJOB sort.

Active Jobs - Sort

Columns available for sort:

CPU %
Current User
Detailed Status
Job Name
Run Priority
Thread Count
Type

Sort based on the following:

Add Before -->

Add After -->

Remove <--

OK   Cancel   Help ?

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Active Jobs - Include

IBM @ server iSeries
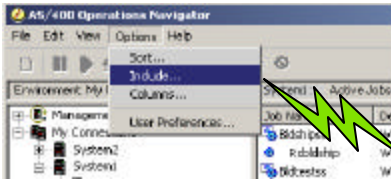
Need to find all the batch jobs that user 'Fred' (Dan's cousin) is running? Include will return only the jobs that meet your selection criteria!

Active Jobs - Include

Include

Not sure what you are looking for? Click the Browse button.

Job:

Name: All

Include jobs with a specific name or generic name

User: All   Browse...

Number: All

Include a specific type of jobs, such as batch jobs

Type: All

Subsystem: All   Browse...

Include jobs that user 'Fred' is running

Current user: All   Browse...

Values are saved between Operations Navigator sessions!

OK   Cancel   Help

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Active Jobs - Include

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Name	Name of jobs to include in the list (ALL , specific name, or generic names with trailing asterisk allowed)
User	User whose jobs should be included in the list (ALL, current signed-on user, specific name, or generic name allowed)
Number	System generated job number for jobs to include in the list (ALL or a specific number)
Type	Type of jobs to include in the list (ALL, Autostart, Batch, Interactive, Prestart, System, etc.)
Subsystem	Jobs that are running under the specified subsystem or subsystems are included in the list (one or more subsystems can be specified)
Current User	Jobs running under the current user are included in the list (ALL, current signed-on user, specific name, or generic name allowed)

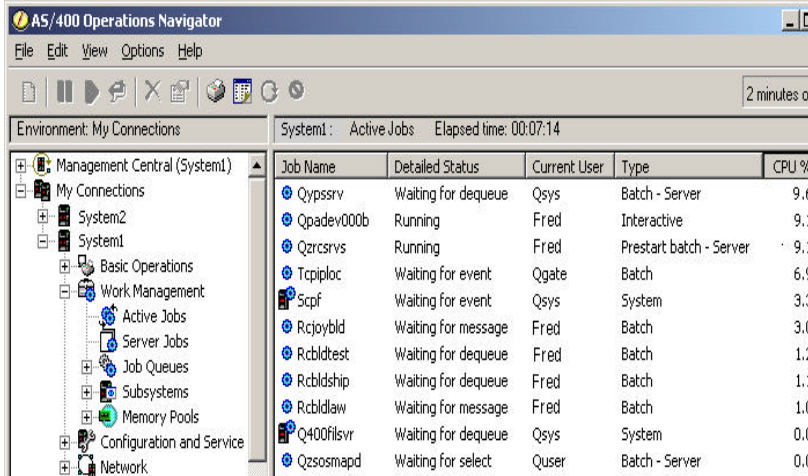IBM @server. For the next generation of e-business.

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Active Jobs - Columns

IBM *e* server iSeries
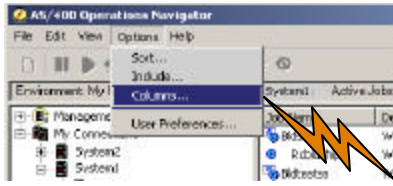
Customize the list to display the columns that are important to you, in the order you want to see them!

Select the columns that are important to you.

Use 'Add Before' and 'Add After' to specify the order the columns are displayed in.

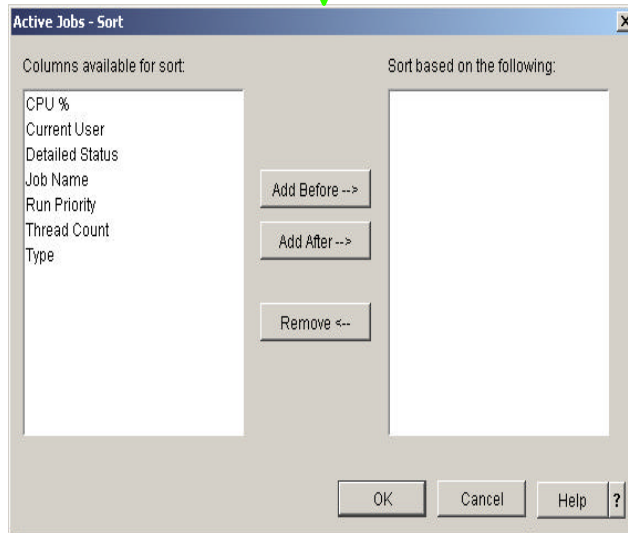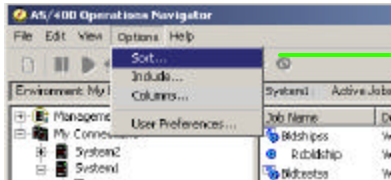**Values are saved between Operations Navigator sessions!**

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Active Jobs - Columns 1

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Asynchronous Disk I/O Rate	Average number per second, of Asynchronous (physical) disk I/Os performed during the elapsed time
Average Response Time	Average internal transaction response time, in seconds, during the elapsed time
CPU%	Percentage of available processing unit time used by the job during the elapsed time
CPU DB%	Percentage of total CPU used for database processing during the elapsed time
CPU DB time	Amount of CPU time, in milliseconds, used for database processing during the elapsed time
CPU Time	Amount of CPU time, in milliseconds, used by the job during the elapsed time
Current User	Name of the user under which the job is running
Detailed Status	Current detailed status of the job
Disk I/O Count	Number of disk I/O operations performed by the job during the elapsed time
Disk I/O Rate	Average number, per second, of disk I/O operations performed by the job during the elapsed time
Entered System	Date and time the job was placed on the system
Function	Last high level function initiated by the job
Interactive Transactions	Number of user interactions that have occurred for the job during the elapsed time
Job Name	Name representing the job
Job User Identity	User name by which the job is known to other jobs on the system

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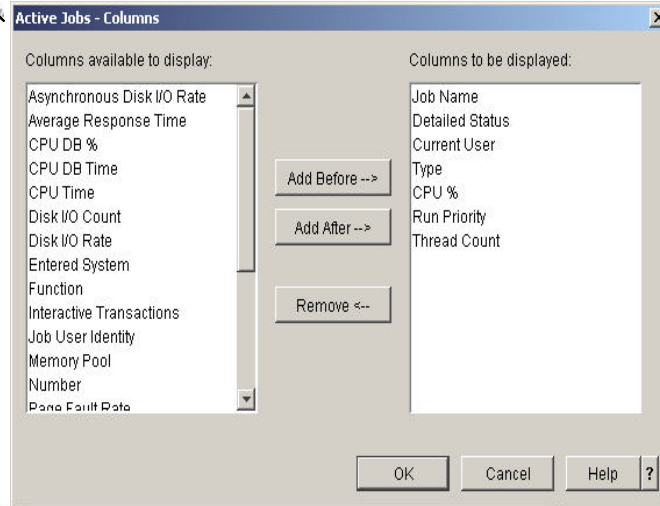8 2001 IBM Corporation, All Rights Reserved.

Active Jobs - Columns 2

Memory Pool	Memory pool where the job is running
Number	System assigned job number
Page Fault Rate	Average number of times per second, a program references an address that is not in main storage
Run Priority	Value indicating the importance of the job relative to the other jobs running on the system
Server	Type of server job
Status	Current overall status of the job
Subsystem	Subsystem in which the job is running
Subsystem Library	Library for the subsystem description
Synchronous Disk I/O Rate	Average number, per second, of synchronous disk I/O operations performed by the job during the elapsed time
Thread count	Number of active threads in the job
Total CPU DB Time	Total amount of CPU time, in milliseconds, the job has used for database processing across all routing steps
Total CPU Time	Total amount of CPU time, in milliseconds, the job has used across all routing steps
Total Disk I/O Count	Total number of disk I/O operations performed by the job across all routing steps
Type	Type of job
User	User name under which the job was started

Active Job - WRKJOB Reinvented
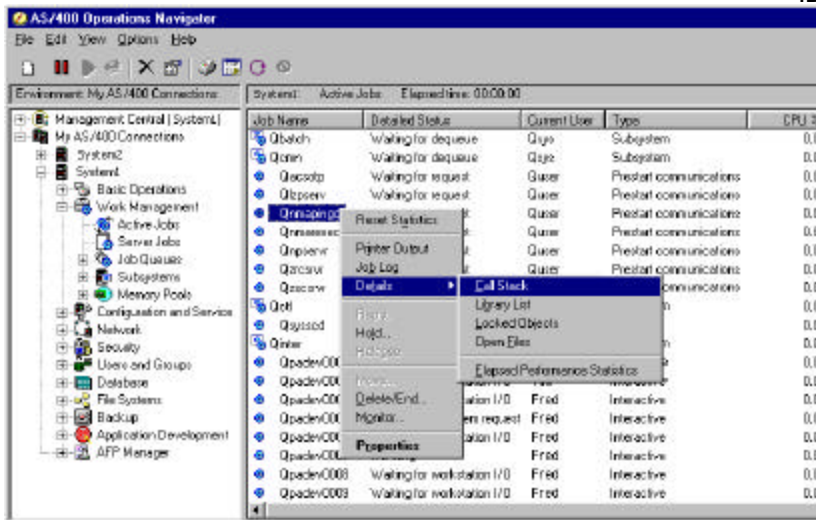
Printer Output
Hold
Reset Statistics
Call Stack
Library List
Delete/End
Open Files
Release
Elapsed Performance Statistics
Reply
Monitor
Move
Locked Objects
Job Log
Properties

Active Job - Action Descriptions

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Menu Item	Description	Menu Item	Description
Reset Statistics	Refreshes the list and resets the time period over which statistical data is calculated	Reply	Allows you to reply to a message waiting on a job
Printer Output	Displays printer output for the selected jobs	Hold	Holds the selected jobs
Job Log	Shows the job log for the selected jobs	Release	Releases the selected jobs
Call Stack	Shows the current list of programs that are being run	Move	Moves the selected job to another job queue
Library List	Shows the library search list for the job	Delete/end	Deletes/ends selected jobs
Locked Objects	Show the objects that the job currently has a lock on or is waiting for a lock on	Monitor	Creates and opens a new monitor
Open Files	Shows the files that the job currently has open	Properties	Displays the properties of the selected jobs

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Active Jobs - Printer Output

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Open the output and view its contents.

Easily change the printer.

Change when the output will be printed.

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Active Jobs - Job Log

IBM **@** server *iSeries*

Find specific messages.

Print the job log.

View detailed information about a specific message.

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Active Jobs - Call Stack

IBM **@** server *iSeries*

List can easily be changed from ascending to descending order

For you 'Trekkies' out there: The Starship Enterprise!

Call Level added to make identification of an entry easier

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Active Jobs - Library List

IBM @ server iSeries

001205/Fred/Qpadev0004 Library List - System1

File   Edit   View   Options   Help

Job: Qpadev0004   User: Fred   Number: 001205   Thread: Initial

Library	Type	Description
Qsys	System	System Library
Qsys2	System	System Library for CPI's
Qhlpsys	System	
Qusrsys	System	System Library for Users
Qwert	Current	Current lib for QWERT
Qgpl	User	General Purpose Library
Qtemp	User	
Lib1	User	Test library 1
Lib2	User	Test library 2
Lib3	User	Test library 3

1 - 10 of 10 objects

Reset Statistics
Printer Output
Job Log
Details ▶   Call Stack
        Library List
Hold   Locked Objects
       Open Files
       Elapsed Performance Statistics
Delete/End...
Monitor...
Properties

This is the list of libraries that the job will search through when looking for a specific object.

Newly expanded User library list section can now contain up to 250 user libraries!

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Active Jobs - Search Library List

IBM @ server iSeries

Debug tool - Very useful with the increased user library list size!

001205/Fred/Qpadev0004 Library List

File   Edit   View   Options   Help

Job: Qpadev0004 User: Fred Number: 001

Library	Type
Qsys	System
Qsys2	System

Search Library List

Object: Fred*

Type: Job queue

Search

Search results: 2 objects

Object	Type	Library
Fred	Job queue	Fred
Fred2	Job queue	Fred

OK   Cancel   Help   ?

Generic names are supported!

Real words describe the type of object you are looking for

Search results are returned in the order the job would find them

Wondering what object a job is actually using? Search Library List looks through the libraries in the job's library list and returns the specified objects.

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Active Jobs - Locked Objects

Shows the objects a job has a lock on or has requested to get a lock on.

001205/Fred/Qpadev0004 Locked Objects - System1

File   Edit   View   Options   Help

Job: Qpadev0004 User: Fred Number: 001205

Locked Object	Library	Object Type	Lock Status	Lock Request Type
Qdui80	Qsys	File - display	Held	Shared - No update
Qgmhgsd	Qsys	Panel group	Held	Shared - No update
Qgpl	Qsys	Library	Held	Shared - Read
Qhlpsys	Qsys	Library	Held	Shared - Read
Qpadev0007	Qsys	Device description - virtual display	Held	Exclusive - Read
Qsys2	Qsys	Library	Held	Shared - Read
Qsys	Qsys	Library	Held	Shared - Read
Qusrsys	Qsys	Library	Held	Shared - Read
Fred	Qsys	User profile	Held	Shared - Read
Fred		ge queue	Held	Exclusive - No read

Reset Statistics

Printer Output
Job Log
Details ▶ Call Stack
         Library List
Hold... Locked Objects
         Open Files
         Elapsed Performance Statistics

Move...
Delete/End...
Monitor...

Properties

Jobs with Locks

Properties

Need to see which other jobs on the system have a lock on an object? Right click on the object and select 'Jobs with Locks'.

Active Jobs - Jobs with Locks

001205/Fred/Qpadev0004 Locked Objects - System1

File   Edit   View   Options   Help

Job: Qpadev0004 User: Fred Number: 001205

Locked Object	Library	Object Type	Lock Status	Lock Request Type
Qdui80	Qsys	File - display	Held	Shared - No update
Qgmhg		group	Held	Shared - No update
Qgpl			Held	Shared - Read
Qhlpsy:			Held	Shared - Read
Qpadev0007	Qsys	Device d		
Qsys2	Qsys	Library		
Qsys	Qsys	Library		
Qusrsys	Qsys	Library		
Fred	Qsys	User pro		
Fred	Qusrsys	Message		

Jobs with Locks

Properties

Full function list of jobs!

Jobs with Locks on Qsys/Qdui80 - System1

File   Edit   View   Options   Help

Object: Qdui80 Library: Qsys Type: File

Job Name	User	Job Status	Lock Status	Lock Request Type	Scope
Qpadev0002	Fred	Waiting for workstation I/O	Held	Shared - No update	Job
Qpadev0002	Fred	Waiting for workstation I/O	Held	Shared - No update	Job
Qpadev0003	Fred	Waiting for workstation I/O	Held	Shared - No update	Job
Qpadev0006	Fred	Waiting for workstation I/O	Held	Shared - No update	Job
Qpadev0007	Fred	Waiting for workstation I/O	Held	Shared - No update	Job
Qpadev0008	Fred	Waiting for workstation I/O	Held	Shared - No update	Job
Qpadev0009	Fred	Waiting for workstation I/O	Held	Shared - No update	Job
Scpf	Qsys	Waiting for event	Held	Shared - No update	Job

Shows all jobs on the system that currently have a lock on the object.

Active Jobs - Open Files

See the list of files that this job has opened! Check the usage of the files.

001205/Fred/Qpadev0004 Open Files - System1

File Edit View Options Help

Job: Qpadev0004   User: Fred   Number: 001205

File	Library	Type	Member/Device	Record Format	I/O Count
Qaokl03a	Qusrsys	Logical	Qaokl03a		42
Qasnadsr	Qusrsys	Physical	Qasnadsr		
Qasnadsq	Qusrsys	Physical	Qasnadsq		80
Qasnadsa	Qusrsys	Physical	Qasnadsa		

1 - 4 of 4 objects

Reset Statistics

Printer Output
Job Log
Details ▶ Call Stack
            Library List
Reply...   Locked Objects
Hold...   Open Files
Release   Elapsed Performance Statistics
Move...
Delete/End...
Monitor...

Properties

IBM @server. For the next generation of e-business.

Active Jobs - Elapsed Performance Statistics

Reset Statistics

Printer Output
Job Log
Details ▶ Call Stack
            Library List
Reply...   Locked Objects
Hold...   Open Files
Release
            Elapsed Performance Statistics
Move...
Delete/End...
Monitor...

Properties

001205/Fred/Qpadev0004 Elapsed Performance Statistics

Job: Qpadev0004   User: Fred   Number: 001205

Elapsed time: 00:00:28

Performance statistics calculated over elapsed time

CPU:		
Percentage:	0.9	%
Time:	281	milliseconds
Database percentage:	0.0	%
Database time:	0	milliseconds
Disk I/O rate:	31.9	per second
Synchronous:	31.9	per second
Asynchronous:	0.0	per second
Disk I/O count:	895	
Synchronous:	895	
Asynchronous:	0	
Page fault rate:	31.5	per second
Average response time:	0.5	seconds
Interactive transactions:	2	

Refresh Now | Timed Refresh... | Reset Statistics

Close | Help | ?

Does one job seem to be causing problems? Monitor performance values for just the single job!

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Active Jobs - Reply

Reset Statistics

Printer Output
Job Log
Details ▶

Reply...
Hold...
Release

Move...
Delete/End...
Monitor...

Properties

Reply   ✕

Message ID: CPA4086

Date sent: 3/30/01

Time sent: 3:46:43 PM

Message:
Device TAP01 was not ready or next volume was not loaded. (C R)

Message help:

Cause . . . . . : Either the device TAP01 is not ready or the next tape volume is
not loaded on TAP01. Recovery . . . : Do one of the following: -- Type C to
cancel processing. -- Make device TAP01 ready, and type R to try the open
operation again. -- Put the next volume on device TAP01, and type R to try the
open operation again. Possible choices for replying to message . . . .
. . . : R -- Try the volume open operation again. C -- Cancel processing.

Reply:

C

[Reply]   [Cancel]   [Help]   [?]

**Easily respond to messages
that a job is waiting on.**

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Active Jobs - Hold/Release

Reset Statistics

Printer Output
Job Log
Details ▶

Reply...
Hold...
Release

Move...
Delete/End...
Monitor...

Properties

**Release jobs
that have been
held.**

Reset Statistics

Printer Output
Job Log
Details ▶

Reply...
Hold...
Release

Move...
Delete/End...
Monitor...

Properties

Hold   ✕

Jobs to hold:

Job Name	User	Number	Type
⊙ Qpadev0007	Fred	001577	Interactive

☐ Hold printer output for selected jobs

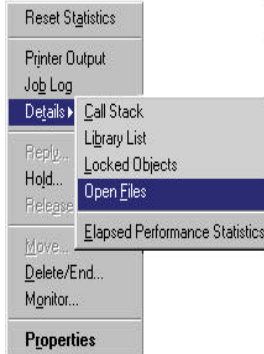[OK]   [Cancel]   [Help]   [?]

**Hold the
selected jobs.**

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Active Jobs - Delete/End

IBM @server iSeries

Provides all the function of ENDJOB.

End the job either Controlled or Immediate.

Reset Statistics

Printer Output
Job Log
Details ▶

Reply...
Hold...
Release

Move...
Delete/End...
Monitor...

Properties

Confirm Delete/End ☒

Jobs to end:

Job Name	User	Number	Type
○ Qpadev0007	Fred	001577	Interactive

How to end: Controlled ▼

Time limit for controlled end: 30 ⬍ seconds

Delete printer output: No ▼

Maximum job log entries: Use job value ▼

Action for related interactive jobs: Do not end ▼

Delete   Cancel   Help   ?

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A Word About Monitors

IBM @server iSeries

We now interrupt our regular programming for a word about monitors.

IBM @server. For the next generation of e-business.

Job Monitors

IBM *e* server iSeries

Job monitors allow you to be alerted when the jobs do not run within your predetermined metric thresholds.

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Job Monitors - Metrics

IBM *e* server iSeries

Select the metrics to use in monitoring for the selected jobs

Enable triggering and automation to occur when criteria is met

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Job Monitors - Actions
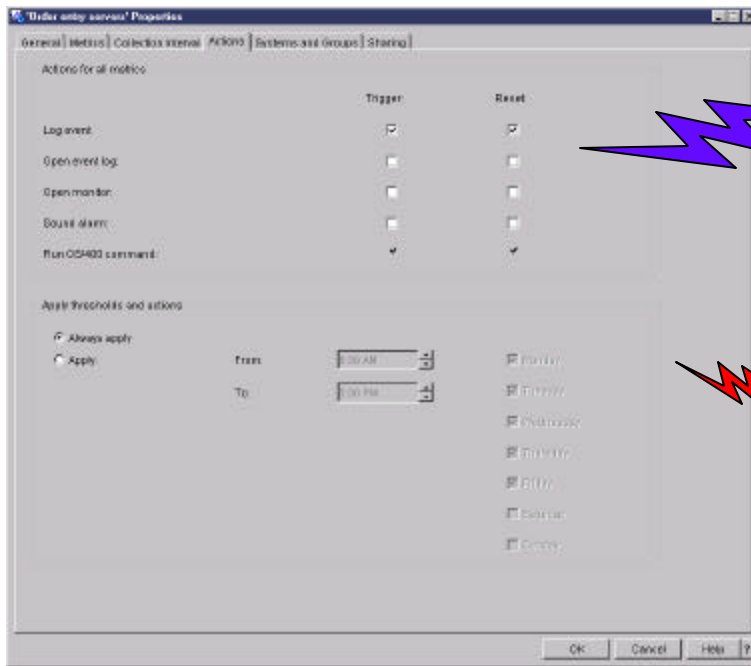
IBM @server iSeries

Select actions to let you know jobs need attention

Decide when the monitor should "pay attention".

This way the monitor always runs, but only triggers during critical times in the day

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Job Monitors - Status
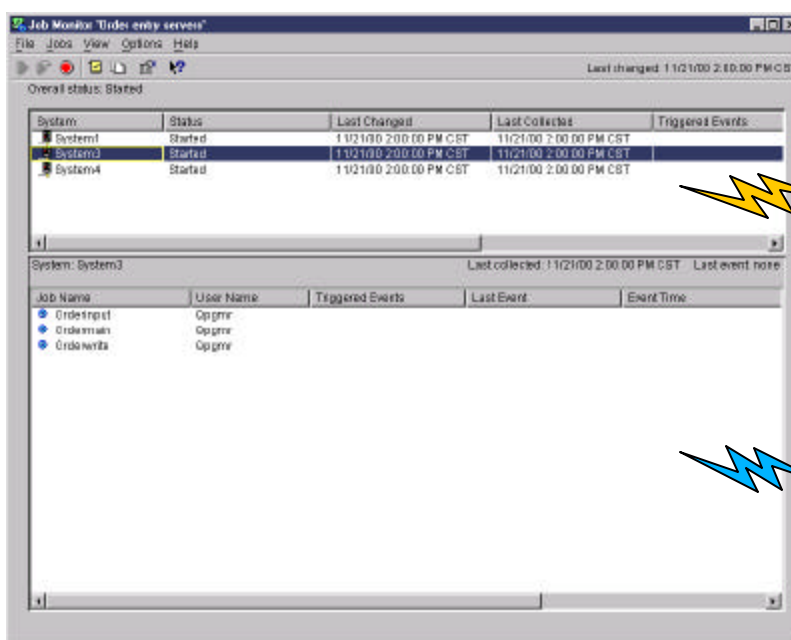
IBM @server iSeries

The systems the jobs are being monitored on. Also shows system level status.

Shows the jobs that matched the metric criteria. Select a job and work with it using all Active Job actions!

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C68 - iSeries Operations Navigator: The New Work Management   ibm.com/eServer/iSeries/Oper_Nav

Job Monitors - Event Log

IBM @server iSeries
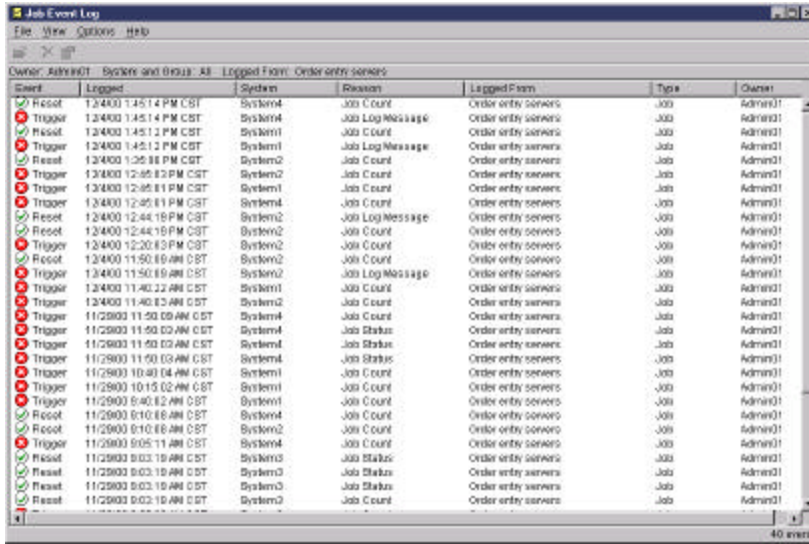
Events showing when a monitor triggered and reset.

View all job monitor events in one window!

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Job Monitors - Location

IBM @server iSeries
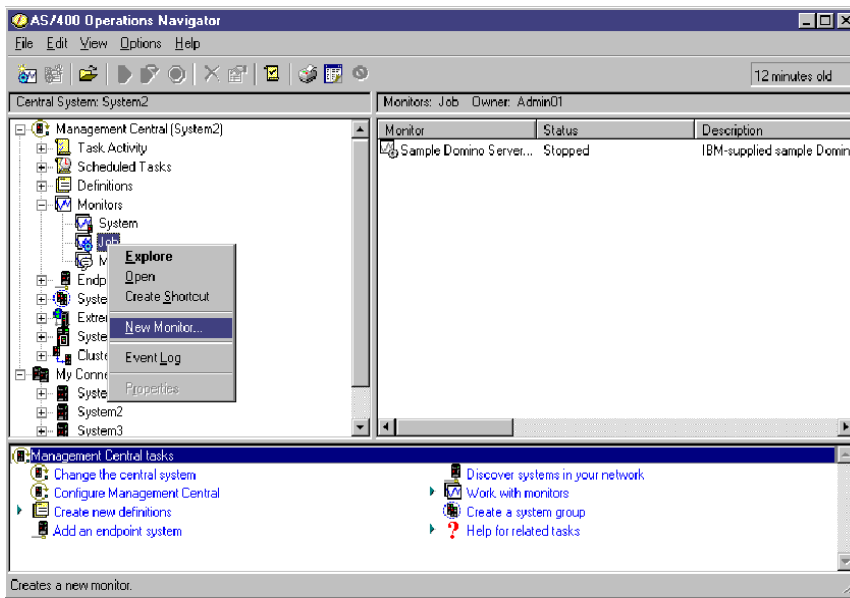
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Message Monitors

IBM @ server iSeries

Monitor messages from any message queue.

You can specify which messages that the monitor will trigger on. This can be done by specifying one or more message selection criteria.

Run a command when trigger occurs, or even remove the message

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Other Management Central Functions

IBM @ server iSeries

Here are other Management Central functions that are very useful for managing your work across multiple systems:

- Monitor jobs
- Monitor messages
- Monitor system level performance metrics
- Compare and Update system values
- Graphically view performance metrics over long periods of time
- Run commands
- Manage products, fixes, users and groups
- Distribute files and folders

www.ibm.com/eserver/iseries/sftsol/mgmtcentral.htm

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Now Back To Active Jobs
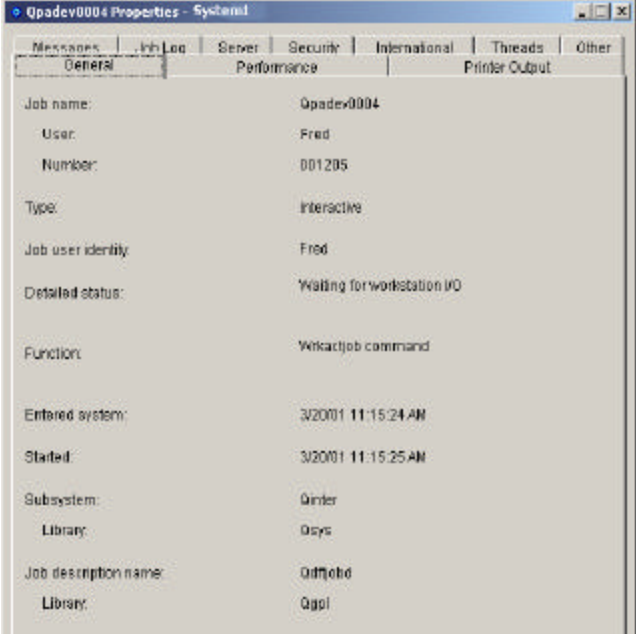
We now return to Active Jobs

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Active Jobs - General Properties

Job Name

Job User Identity

Detailed Status

Entered
System

Subsystem

Qpadev0004 Properties - System1

| Messages | Job Log | Server | Security | International | Threads | Other |
| General | | Performance | | | Printer Output | |

Job name:	Qpadev0004
User:	Fred
Number:	001205
Type:	Interactive
Job user identity:	Fred
Detailed status:	Waiting for workstation I/O
Function:	Wrkactjob command
Entered system:	3/20/01 11:15:24 AM
Started:	3/20/01 11:15:25 AM
Subsystem:	Qinter
Library:	Qsys
Job description name:	Qdftjobd
Library:	Qgpl

Type

Function

Started

Job Description
Name

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Active Jobs - Performance Properties

IBM @ server iSeries

Run priority

Timeslice

Default wait time

CPU time - total

CPU time - total database

CPU time - maximum

Memory pool

Total disk I/O count

Total lock wait time

Temporary storage used

Temporary storage maximum

Qpadev0004 Properties - System1

| Messages | Job Log | Server | Security | International | Threads | Other |
| General | | Performance | | | Printer Output | |

Run priority (1-99):   20   1 = highest
Time slice (1-9999999):   2,000   milliseconds
Default wait time (1-9999999):   30   seconds

Memory pool: Interactive

Performance statistics calculated since job started
CPU time:
  Total: 3891 milliseconds
  Total database: 0 milliseconds
  Maximum: No maximum
Total disk I/O count: 6476
Total lock wait time: 0 milliseconds
Temporary storage:
  Used: 3 MB
  Maximum: No maximum

Elapsed Performance Statistics

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Active Jobs - Printer Output Properties

IBM @ server iSeries

Printer

Output queue

Priority on output queue

Printed page footer

Format when using Print key

Qpadev0004 Properties - System1

| Messages | Job Log | Server | Security | International | Threads | Other |
| General | | Performance | | | Printer Output | |

Printer: Prt01   Browse...
Output queue: Use printer value   Browse...
  Library:
Priority on output queue: 5
Printed page footer:
Format when using Print key: Print header

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Active Jobs - Messages Properties

Inquiry messages handling

Break message handling

Status message handling
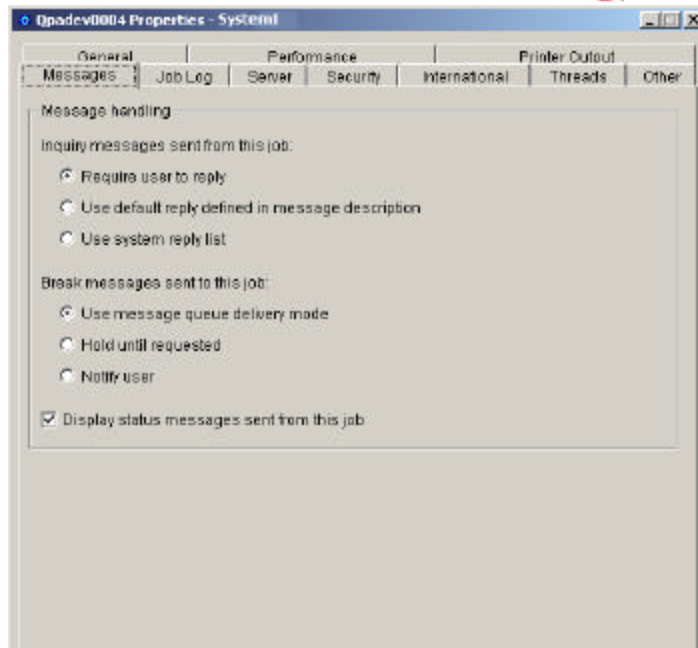
Qpadev0004 Properties - System1

| General | Performance | Printer Output |
| Messages | Job Log | Server | Security | International | Threads | Other |

Message handling

Inquiry messages sent from this job:
- Require user to reply
- Use default reply defined in message description
- Use system reply list

Break messages sent to this job:
- Use message queue delivery mode
- Hold until requested
- Notify user

☑ Display status messages sent from this job

Active Jobs - Job Log Properties

Maximum job log size

Maximum job log action

Log CL messages

Keep messages in job log

Create printer output for job log if job ends normally

Qpadev0004 Properties - System1

| General | Performance | Printer Output |
| Messages | Job Log | Server | Security | International | Threads | Other |

Maximum job log size: 16 MB

When maximum size is reached: Do not wrap - end job

☐ Log commands from CL programs

☑ Keep messages in job log

Messages to keep

Logging level   Level 4

✔ Messages with severity >= message severity

✔ All requests and any commands from CL programs

   Messages for requests with a high level message >= message severity

   Messages to external message queue with severity >= message severity

Message severity (0-99)   0   99 = highest

☐ Create printer output for job log if job ends normally
- First message, cause, and recovery
- First message only

Active Jobs - Server Properties

IBM @server iSeries

Server

Job user identity

Client IP address
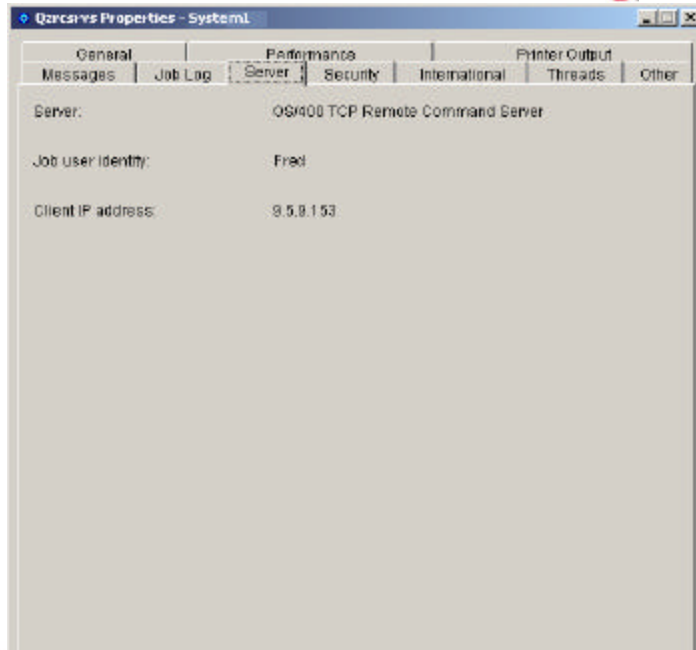
Qzrcsrvs Properties - System1

| General | Performance | Printer Output |
| Messages | Job Log | Server | Security | International | Threads | Other |

Server: OS/400 TCP Remote Command Server

Job user identity: Fred

Client IP address: 9.5.9.153

Active Jobs - Security Properties

IBM @server iSeries

Job user identity

Job user identity setting

Current user

Groups
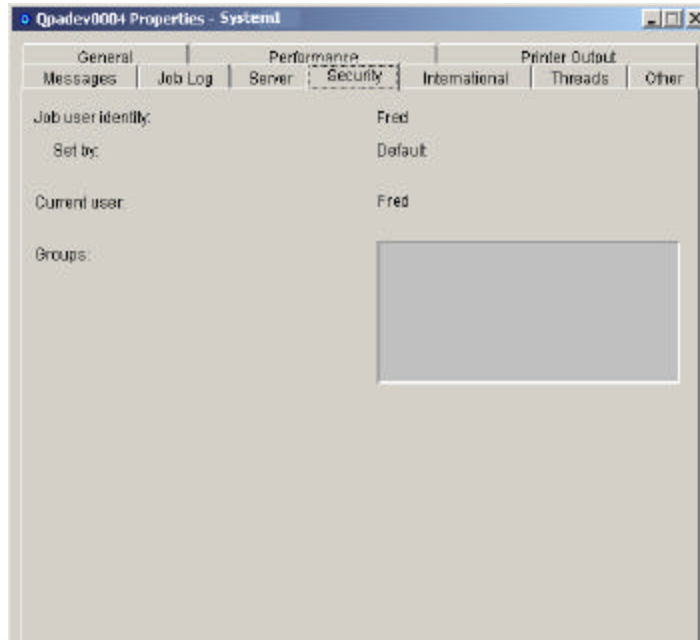
Qpadev0004 Properties - System1

| General | Performance | Printer Output |
| Messages | Job Log | Server | Security | International | Threads | Other |

Job user identity: Fred
   Set by: Default

Current user: Fred

Groups:

Active Jobs - International Properties

Date format

Date separator

Time separator

Decimal format

Coded character set ID

Default coded character set ID

Character identifier control

Country

Language

Sort sequence table

Double-byte capable

Qpadev0004 Properties - System1

General | Performance | Printer Output
Messages | Job Log | Server | Security | International | Threads | Other

Date format:	Month Day Year
Date separator:	/
Time separator:	:
Decimal format:	1,000.04 .04
Coded character set ID:	65535
Default	37
Character identifier control:	Device description
Country:	United States of America
Language:	US English
Sort sequence table:	None
Library:	
Double-byte capable:	No

Browse...

Browse...

Active Jobs - Threads Properties

Allow multiple user threads

Current threads

Maximum threads

Qpadev0004 Properties - System1

General | Performance | Printer Output
Messages | Job Log | Server | Security | International | Threads | Other

Allow multiple user threads:	No
Current threads:	1
Maximum threads:	No maximum

Active Jobs - Other Properties

IBM @server iSeries

Accounting code

Keep DDM connections active

Job date

Switches settings

Device recovery action
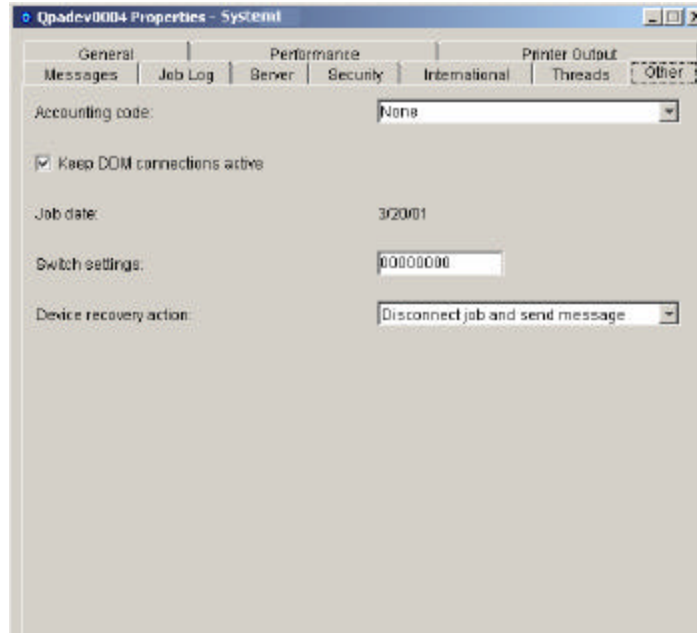
Qpadev0004 Properties - System1

| Messages | Job Log | Server | Security | International | Threads | Other |
| General | | Performance | | | Printer Output | |

Accounting code: None

☑ Keep DDM connections active

Job date: 3/20/01

Switch settings: 00000000

Device recovery action: Disconnect job and send message

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Server Jobs

IBM @server iSeries

Job name

User this server is doing work for

Current server status

Description of the type of server

AS/400 Operations Navigator

File Edit View Options Help

0 minutes old

Environment: My Connections   System1 :   Server Jobs   Status: Active jobs

Job Name	Current User	Detailed Status	Server
Management Central (System1)			
My Connections	⊕ Qgldpuba	Qdirsrv	Waiting for signal	LDAP Publishing Agent
System2	⊕ Qgldpube	Qdirsrv	Waiting for signal	LDAP Publishing Engine
System1	⊕ Qtftp00424	Qtcp	Waiting for dequeue	FTP
Basic Operations	⊕ Qtftp00560	Qtcp	Waiting for dequeue	FTP
Work Management	⊕ Qtftp00588	Qtcp	Waiting for time interval	FTP
Active Jobs	⊕ Qtlpd00886	Qtcp	Waiting for time interval	LPD
Server Jobs	⊕ Qtlpd00898	Qtcp	Waiting for dequeue	LPD
Job Queues	⊕ Qypssrv	Qsys	Waiting for dequeue	Management Central Server
Subsystems	⊕ Qpwfservs2	Quser	Waiting for request	Network Drives server - TCP/IP
Memory Pools	⊕ Qzlsfile	Quser	Waiting for request	AS/400 Netserver (AS/400 Sup...
Active Pools	⊕ Qzlsserver	Qpgmr	Waiting for event	AS/400 Netserver (AS/400 Sup...
Shared Pools	⊕ Qrwtlstn	Quser	Waiting for select	OS/400 DDM/DRDA Server - TC...
Configuration and Service	⊕ Qrwtsrvr	Quser	Waiting for request	OS/400 DDM/DRDA Server - TC...
Network	⊕ Qzscsrvs	Quser	Waiting for request	OS/400 TCP Central Server
Security	⊕ Qzscsrvsd	Quser	Waiting for select	OS/400 TCP Central Server
Users and Groups	⊕ Qzdasoinit	Quser	Waiting for request	OS/400 TCP Database Server
Database				

Jobs are grouped by server type

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Memory Pools

IBM @server iSeries

Real name

User-defined description

Current pool size

Number of threads currently running in the pool

Pool	Description	Current Size (MB)	Current Threads
Machine	Used by internal machine functions	78.38	42
Base	Default system pool	155.38	118
Interactive	Used for interactive work	26.00	6
Spool	Used for printing	.25	0

Organized similar to the WRKSYSSTS command.

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Memory Pools - Features

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Shows all jobs currently running in the memory pool

Pool	Description	Current Size (MB)	Current Threads
Machine	Used by internal machine functions	78.38	42
Base	Default system pool	155.38	118
Intera	interactive work	26.00	6
Spool	printing	.25	0

Jobs
Subsystems
Deallocate...
Properties

Shows all subsystems whose jobs run in the memory pool

Deallocates the memory pool

Displays additional information about the memory pool

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Memory Pools - Shared Pools

Real name

Current status

User-defined description

Defined size

Current size

AS/400 Operations Navigator

File Edit View Options Help

1 minutes old

Environment: My Connections   System1 :   Shared Pools   Elapsed time: 00:01:16

Pool	Description	Status	Defined Size...	Current Size (MB)
Machine	Used by internal machine functions	Active	86.41	86.41
Base	Default system pool	Active		147.35
Interactive	Used for interactive work	Active	26.00	26.00
Spool	Used for printing	Active	.25	.25
Shared 1		Inactive	.00	.00
Shared 2		Inactive	.00	.00
Shared 3		Inactive	.00	.00
Shared 4		Inactive	.00	.00
Shared 5		Inactive	.00	.00
Shared 6		Inactive	.00	.00
Shared 7		Inactive	.00	.00
Shared 8		Inactive	.00	.00
Shared 9		Inactive	.00	.00

Tree (left pane):
- Management Central (System1)
- My Connections
  - System2
  - System1
    - Basic Operations
    - Work Management
      - Active Jobs
      - Server Jobs
      - Job Queues
      - Subsystems
      - Memory Pools
        - Active Pools
        - Shared Pools
    - Configuration and Service
    - Network

Memory Pool - General Properties

Pool name

Changeable pool description

Status

Interactive Properties - System1

General | Configuration | Performance | Tuning

Pool name: Interactive

Description:

Used for interactive work

Status: Active

Memory Pools - Configuration Properties

IBM @server iSeries

Change minimum size

Current size

Reserved size

Maximum eligible
threads

Current threads

Current ineligible
threads

Change paging option

Base Properties - System1

General | Configuration | Performance | Tuning

Size
- Minimum: 13.00 MB
- Current: 155.38 MB
- Reserved: .08 MB

Activity level
- Maximum eligible threads: 15
- Current threads: 118
- Current ineligible threads: 0

Paging option: Fixed

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Memory Pools - Performance Properties

IBM @server iSeries

State transactions
per minute

Active->Wait
Wait->Ineligible
Active->Ineligible

Database faults
per second

Database pages
per second

Non-database
faults per
second
Non-database
pages per second

Base Properties - System1

General | Configuration | Performance | Tuning

State transitions per minute
- Active -> Wait: 103.7
- Wait -> Ineligible: .0
- Active -> Ineligible: .0

- Database faults per second: .0
- Database pages per second: .0
- Non-database faults per second: 131.3
- Non-database pages per second: .0

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Memory Pools - Tuning Properties

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System tuners setting

Tuning values
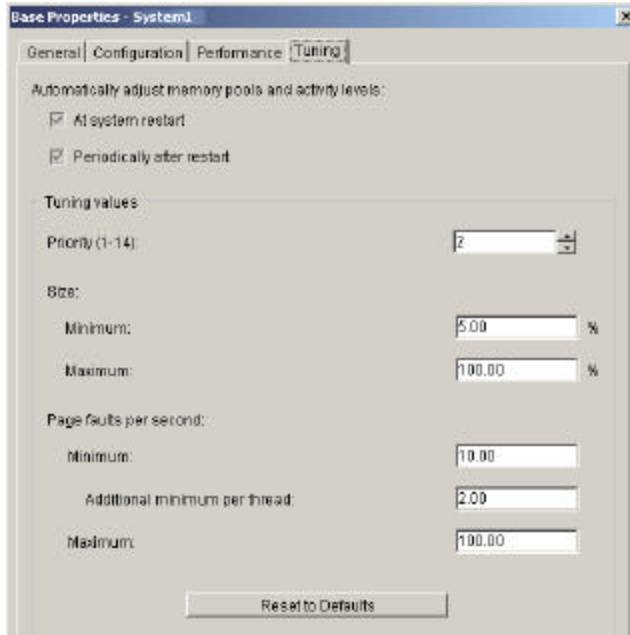
Priority

Minimum size

Maximum size

Page faults per second
Minimum
Additional minimum per thread
Maximum

Reset defaults
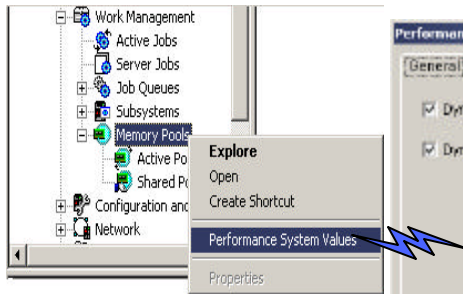

IBM @server. For the next generation of e-business.
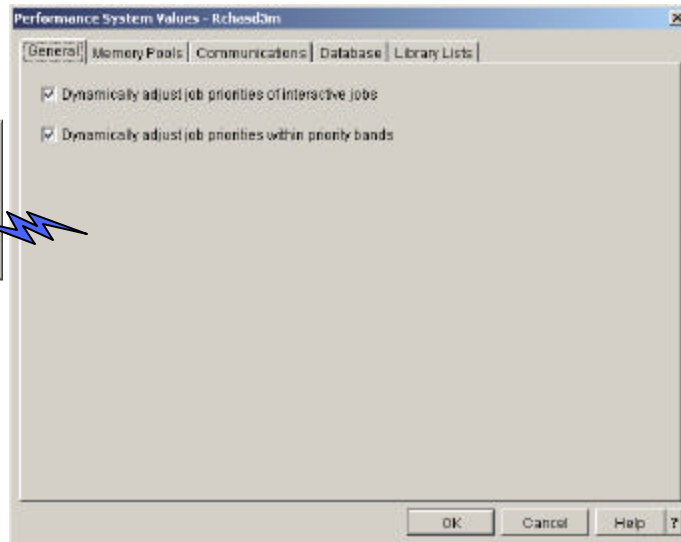
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Memory Pools - System Values

IBM @server iSeries

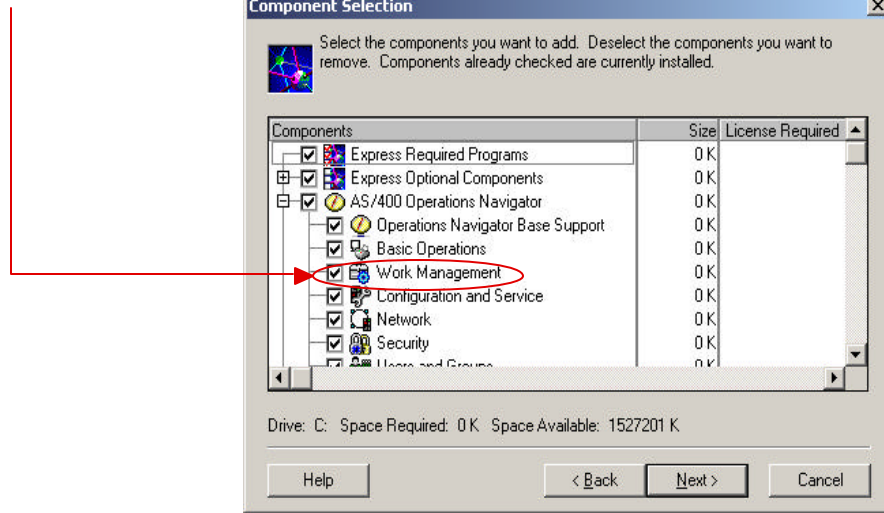**Easy access to the System Values that control performance.**

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How Do I Get this Support?

Great question! Select the Work
Management component during selective
install of V5R1 Operations Navigator.

Component Selection

Select the components you want to add. Deselect the components you want to
remove. Components already checked are currently installed.

Components	Size	License Required
☑ Express Required Programs	0 K	
☐☑ Express Optional Components	0 K	
☐☑ AS/400 Operations Navigator	0 K	
☑ Operations Navigator Base Support	0 K	
☑ Basic Operations	0 K	
☑ Work Management	0 K	
☑ Configuration and Service	0 K	
☑ Network	0 K	
☑ Security	0 K	
☑ Users and Groups	0 K	

Drive: C: Space Required: 0 K Space Available: 1527201 K

| Help | | < Back | Next > | Cancel |

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In Conclusion

IBM @ server iSeries

More functionality than previous
Operations Navigator support.

More flexible than green screen.

Powerful time saving tools
to help identify and solve
problems.

The function you have been
waiting for has arrived!

Management Central
integration!

See, Dan likes it! So will you.

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Other Information

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Work Management:
Web page: http://publib.boulder.ibm.com/pubs/html/as400/v5r1/ic2924/info/rzaks/rzaks1.htm

Management Central:

Web page: www.ibm.com/eserver/iseries/sftsol/mgmtcentral.htm

Redbook: Management Central: A Smart Way to Manage AS/400 Systems, SG24-5407-00
View online at: www.redbooks.ibm.com/pubs/pdfs/redbooks/sg245407.pdf

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