Does the JVM Heap size need changed??

(running out of memory for WAS jobs?)

First determine if there is a need to increase the memory for JVM...or, maybe we should always increase if we have more than 1 instance...??

Is the client getting message indicating a memory issue?

Is the WAS instance job on the iSeries soaking up a lot of CPU? 70% or higher?

Does the client have a msg in system operator messages showing the WAS instance and the JAVA using 85% or higher of the HEAP as shown below:



Put the cursor on the msg and hit F1 to get additioanl info...

Additional Message Information					
Message ID : CPI8859 Date sent : 01/31/12 Time sent : 04:40:30					
Message : HEAP MONITOR ENDED FOR 930436/QEJBSVR/WAS61SVRM2 IN SUBSYSTEM QWAS61 IN POOL *BASE POOL ID=2 POOLSIZE(MB)=13111 RESERVED(MB)=38 HEAP TOTAL(MB)=256 FREE(MB)=30 USEDHEAP(MB)=225 MAXHEAP(MB)=256 INITHEAP(MB)=50					

Type in WRKSBS and enter

And roll down to the WAS subsystem as shown:

			Work	wit	h Sul	osys	stem	15			Sys	tem:	S06D784	5
Type	options, pres	s Enter.												
4=	End subsustem	5=Displau	u sub	sust	em de	escr	ript	ion						
8=	Work with subs	ustem iobs		1										
		· j - · · · · · · · · · · · · · · · · ·												
		Total	_			Si	ıbsy	jsten	1 Poc	ols-				
Opt	Subsystem	Storage (M	4)	1	2 3	3	4	5	6	7	8	9	10	
	QUSRWRK	. 0	90	2										
	QWAS61	. 0	90	2										

Place an 8 in front of the WAS subsystem and enter (QWAS61) $\,$

		l	√ork with	Subsystem Jobs	S06D7845				
Subs	02/01/12 11:45:21 Subsystem QWAS61								
Type 2= 8=	Type options, press Enter. 2=Change 3=Hold 4=End 5=Work with 6=Release 7=Display message 8=Work with spooled files 13=Disconnect								
0pt 	Job SERVER1 WAS61SVRM2	User GEJBSVR QEJBSVR	Туре ВАТСН ВАТСН	Status ACTIVE ACTIVE	Function PGM-jvmStartPa PGM-jvmStartPa				

Place a 5 on the job in the subsystem and enter as shown:

Take Opt 10 to display job log for this job...then F10 to display all messages and you will see the following:

													Sys	stem:		S06D7845
Job			WAS61	SVRM2	2	User			QEJB	SVR		Number				960659
	Job QV	960(IAS6:	659/QE 1 in (EJBSVR WAS61	≀∕WAS Jo	61SV b en	RM2 tere	star d sy	ted o jstem	n 01/ on 01	31/12 /31/1	at 04 2 at 0	: 42:)4: 42	05 in 2:05.	n ≘	subsystem
	Job	9600	659/QE	EJBSVR	.∕WAS	61SV	RM2	subm	itted							
>>	CALL /App ACGE Java Serv	PGI Serv TA VII er s	M(QWAS Ver/V8 for 98 rtual starti	61A/Q 31/Exp 0659/ Machi .ng wi	WASS press QEJB .ne i .th u	TRSV /pro SVR/ s IB ser	R) P file WAS6 M Te prof	ARM(s/WA 1SVR chnc ile	('-pro AS61SV RM2 no Dlogy QEJBS	fileP RM2' t jou for J VR an	ath' '-ser rnale ava. d JDK	'/QIBM ver' ' d; rea PID(2 1.5.0	I/Use WASE Ison 23931).	erData 31SVRI 1. L)	a/W M2'	lebSphere)

Then move your cursor onto the msg 'WebSphere application server WASxxxxx ready...to see the following port:

Ad	ditional Message Information
Message ID : Date sent :	WAS0106 01/31/12 Time sent : 04:42:41
Message : WebSph	ere application server WAS61SVRM2 ready.
Cause : WebSph 960659/CEJBSVR/WAS61SVRM 10016.	ere application server WAS61SVRM2 in job 2 is ready to handle administrative requests on port

Now type the following in a browser session... using the port # in the message.

http://192.169.0.8:10016/admin (admin MUST be lower case)

log in/user ID qsecofr

Click on Servers on the left panel

Select application servers

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Favorites 🖉 Integrated Solutions Cons	ole	🟠 💌 🔝 👻 🖃 🖶 💌 Page 🕶 Safe
Integrated Solutions Console Welcome qsecofr		Help Logout
View: All tasks	Welcome	
= Welcome	Welcome	About this Integrated Solutions Console
Guided Activitie		Tabarahad Osh Kasa Osaraha C.C.
E Servers	Integrated Solutions Console provides a common administration console for multiple products. The table lists the product suites that can be administered	Build Date: 3/1/11
Applications	through this installation. Select a product suite to view more information.	LICENSED MATERIALS PROPERTY C
Resources	Suite Name Version	5724-i63, 5724-H88, 5655-N01 (C International Business Machines C
Security	WebSphere Application Server 6.1.0.37	
Environment		
System administration		
Monitoring and Tuning		
Troubleshooting		
Service integration		
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Select Applications server and then click on the server listed in the window on the right

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Integrated Solutions Console Welcome qsecofr			Help Logout				
View: All ta Integrated Solutions Console	pplication servers						
Welcome	Application servers						
Guided Activities	Application servers						
Servers	Use this page to view a list of the appli	cation servers in your environment and	the status of each of these servers. Yo				
 Application servers 	can also use this page to change the s	tatus of a specific application server.					
Web servers WebSphere MO servers	+ Preferences						
	*** *						
Applications	Name 📚	Node 🗘	Version 🗘				
Resources	WAS61SVRM2	S06D7845_WAS61SVRM2	Express 6.1.0.37				
Security	Total 1						
Environment							
System administration							
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Troubleshooting Troubleshooting							
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View favorites, feeds, and history (Alt+C)						
Integrated Solutions Console Welcome qsecofr		Help Logou				
View: All tasks	Runtime Configuration					
= Welcome						
Guided Activities						
Servers	General Properties	Container Settings				
Application servers	WAS61SVRM2	Session management				
Web Servers WebSphere MQ servers	Node Name	SIP Container Settings				
Applications	S06D7845_WAS61SVRM2	Web Container Settings				
Resources	Run in development mode	Portlet Container Settings				
E Security	Parallel start	EJB Container Settings				
Environment	Access to internal server classes	Container Services				
System administration	Allow 🔻	Business Process Services				
🕑 Users and Groups	Server-specific Application Settings	Applications				
Monitoring and Tuning	Classloader policy Multiple 🔻	Installed applications				
Troubleshooting	Class loading mode	Server messaging				
Service integration	Parent first 💌	Messaging engines				
IDDI		Messaging engine inbound transports				
	Apply OK Reset Capcel	WebSphere MQ link inbound transports				
		SIB service				
		Server Infrastructure				
		Java and Process Management				
		Administration				
		Communications				
		Ports				
1	1 1	—				

Now go to 'Server infrastructure' and select 'Java and process mgmt'

Select 'process definition'...

Server Infrastructure						
Java and Process Management						
Class loader						
Process Definition						
Process Execution						
Administration						

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Then the following screen will appear. Go to additional properties on the right...and select JVM (Java Virtual machines)

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Integrated Solutions Console Welcome qsecofr		Help Logout
View: All tasks	Application servers	
Welcome	Application servers	
Guided Activities	Application servers > WAS61SVRM2 > Process Definiti	ion
Servers	Use this page to configure a process definition. A proces	ss definition defines the command line information necessary
 Application servers 	to start or initialize a process.	
 Web servers WebSphere MO servers 	Configuration	
Applications	General Properties	
Resources	Executable name	Additional Properties
Security		Java Virtual Machine
Environment	Executable arguments	Environment Entries
System administration		Process Execution
Users and Groups		Process Logs
Monitoring and Tuning		Logging and Tracing
Troubleshooting	startCommand	
Service integration		
I UDDI	startCommandArgs	
	starCommand	
	stopCommandArgs	

The next screen will show the 2 fields that need changed. The 'initial heap size' and the 'maximum heap size'. By default the values are 50 and 256 respectively...and will also be blank if the default is the current setting.

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Servers		
 Application servers Web servers WebSphere MQ servers 	Boot Classpath	
Applications		
Resources	Verbase class landing	
Security		
Environment	Verbose garbage collection	•
System administration	Verbose JNI	
Users and Groups	Initial Heap Size	
Monitoring and Tuning	128	
	Maximum Heap Size	
Service integration	512	
	Run HProf	
	HProf Arguments	
	Debug Mode	
	Debug arguments	
	-Djava.compiler=NONE -Xdebu	
	Generic JVM arguments	
	Executable JAR file name	
	Disable JIT	
	Operating system time os400	
	Apply OK Reset Cancel	

Change the values to 128 for Initial heap size and 512 for Maximum heap size.

Then click 'APPLY'

Roll to the top to see the SAVE message appear. It will be highlighted.

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View: All tasks	Application servers	
 Welcome 	Application servers	2 =
Guided Activities	Messages	
Servers Application servers Web servers WebSphere MQ servers	 Changes have been made to your local configuration. You can save directly to the master configuration. <u>Review</u> changes before saving or discarding. The server may need to be restarted for these changes to 	ın: take effect.
Applications Resources	Application servers > WAS61SVRM2 > Process Definition > Java Virtual Machine	
Environment	Use this page to configure advanced Java(TM) virtual machine settings. Configuration Runtime	

Click on 'Save'.

Wait until it clears...then you can get out.

(if the SAVE window does not clear, try 'refreshing' and then screen will come back. Then clkick on 'save' again...it should clear. Roll down to verify the settings are there...and then go out and back in to re-verify.

NOTE: MUST restart for JVM changes to take effect....