

??? ???????????

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[??](#) · ?? 25  ????? 10 ??

??? ???????????

??? ???????????

????

???SELECT?INSERT?UPDATE?DELETE?TRUNCATE?????????????????????
????????????????SQL?????????
????????????????????????????

??

```
??/*#OPTIONS */(?/*#?????)?????????  

?????????  

?????????????  

??????JSON????????"key:value"????: /*#OPTIONS {"optionName":value} */?  

??????JSON?????????
```

```
?????????  

??JSON?????????????  

???json???/* ... */????SQLCODE -153??  

InterSystems SQL???JSON???????
```

```
#OPTIONS?????????  

JSON?????????????  

??SQL????????????SQL???JSON?????????  

?:myquery="SELECT Name FROM Sample.MyTest /*#OPTIONS {"optName":"","optValue""} */".
```

```
???SQL????????????????/*#OPTIONS */ comment??  

????????????????????????????????
```

```
????SQL????????/*#OPTIONS */ comment??  

????????????????????  

????????????????????last??????
```

?????????????:

- /*#OPTIONS {"BiasAsOutlier":1} */
- /*#OPTIONS {"DynamicSQLTypeList":"10,1,11"}
- /*#OPTIONS {"NoTempFile":1} */

??

```
/*#OPTIONS */ comment????SQL????????????????SQL????????
?????/*#OPTIONS */ comment????SQL????????????????????
?? /*#OPTIONS {"DynamicSQLTypeList": ...} */
```

```
/*#OPTIONS */ comment????Show Plan????????????????SQL????????
```

```
???/*#OPTIONS */ comment????????????????????
```

??????

```
????????????????????????????????
????????????????????
SQL????????????????????????????????????????????
????????????????????????????????????????????
????????????????????
???????????????????? %SYSTEM.Util.NumberOfCPUs()???
```

```
?????????????????:
- ??????????????auto parallel??
- ?????????FROM??????%PARALLEL????
```

```
?????????SELECT??
????????????????
```

????????????

```
?????????????????????????????:
- ?????????System Administration?????Configuration?????SQL?????????SQL?
????????????????????
????????????????????????????????????????
- ??SYSTEM.SQL.Util.SetOption()?????: SET status=$SYSTEM.SQL.Util.SetOption("AutoParallel",1,.oldval).
????1(????????)?
?????????????SYSTEM.SQL.CurrentSettings()??????%PARALLEL????????
```

```
????????????????????????????
?????????????????SQL????????????????????????
?IRIS 2019.1????????????????????
?IRIS 2018.1???IRIS 2019.1????????????????
```

```
SQL????????????????????????????
????????????????????(??)?????SYSTEM.SQL.Util.SetOption()?????????????????????????: SET
status=$SYSTEM.SQL.Util.SetOption("AutoParallelThreshold",n,.oldval)?
n????????????????????
????????????????????????????????????????????
?????3200?
?????0?
?????????????SYSTEM.SQL.CurrentSettings()?????%PARALLEL????????
```

```
????????????????????????????????????????????
```

????????????

???%PARALLEL?????FROM?????
?????IRIS?????(?????)?????
????????????COUNT?SUM?AVG?MAX?MIN?????/?groupby????????????????????
????????????????????
???SELECT AVG(SaleAmt) FROM %PARALLEL User.AllSales GROUP BY Region?????????

????????????????????“?”?????????????????GROUP BY???
??“?”?????????????????GROUP BY???
???SELECT Name,AVG(Age) FROM %PARALLEL Sample.Person????????????? SELECT Name,AVG(Age)
FROM %PARALLEL Sample.Person GROUP BY Home_State ????????

?????????????????%PARALLEL?????????????????ODBC???

??%PARALLEL????????????????
????????????????????%PARALLEL????????????????

????????????????????
?????????????????%parallel?????????????%VID?????????????

%PARALLEL???

%PARALLEL??SELECT?????????
?????????????????%PARALLEL?

?????????????????????????%PARALLEL?????
??:

SELECT name,age FROM Sample.Person AS p
WHERE 30<(SELECT AVG(age) FROM %PARALLEL Sample.Employee where Name = p.Name)

Screenshot of InterSystems SQL Developer showing a query window with the SQL code from the previous block and a results table with columns Name and Age. The table contains 9 rows of data.

???%PARALLEL?????
?????????????FOR SOME?FOR SOME %ELEMENT???

???????????

??AUTO PARALLEL?????????FROM?????????%PARALLEL???InterSystems IRIS?????????
??(?????)?RIS???Show
Plan??InterSystems IRIS?????????????????????????????????????

?????????????%PARALLEL??
- ??????FOR?????
- ?????????TOP?????ORDER BY???
??
??FROM??%NOTOPOPT optimization -option????????????????????????????????

```

????????????%PARALLEL?%NOTOPOPT????????????
- ??????????(?ON?????)?????, FROM %PARALLEL Sample.Person p LEFT OUTER JOIN
Sample.Employee e ON p.dob > e.dob. ???SQL????????????
????????%PARALLEL????
- %PARALLEL?%INORDER?????;
????????%PARALLEL????
- ?????????ID (%VID)?
- ???BITMAPEXTENT???COUNT(*)????
- %PARALLEL????????
????????
%PARALLEL????????
- %PARALLEL????????(ROWLEVELSECURITY)????
- %PARALLEL????
????????

```

???????

```

??????IRIS?????(IPQ)?
??IPQ????
????????????????????????????????
????????????????????????????
????????????

```

```

????????(gmheap)????
????SQL????gmheap??
????IPQ????4 x 64k = 256k?
InterSystems IRIS????SQL????CPU??
????gmheap:

```

<Number of concurrent parallel SQL requests> x <Number cores> x 256 = <required size increase (in kilobytes) of gmheap>

```

????????100%????????????
????????gmheap?

```

```

????gmheap????messages.log?
SQL????
????gmheap????

```

```

????gmheap????IPQ????System Operation????System usage????Shared Memory
Heap usage??;

```

以下项是各组件的共享内存堆使用情况:

最后一次更新: 2021-04-21 22:23:48.322

过滤器: 页面大小: 20 | 找到的项: 26 | 页面 | << 1 2 >> | 的 2

描述	已分配SMH/ST	SMH/ST可用	已使用SMH/ST	已使用SMT	已使用GST	均已使用
Miscellaneous	0	0	0	0	0	0
Audit System	0	0	0	14220	0	14220
Classes Instantiated	3407872	39424	3368448	208	0	3368656
Database Encryption Key Change	0	0	0	0	0	0
Semaphores objects	0	0	0	0	0	0
Event System	0	0	0	0	704	704
Global Mapping	196608	57886	138722	0	14272	152994
License Upgrade	0	0	0	0	0	0
Lock Table	196608	193904	2704	168	0	2872
National Language Support	0	0	0	609219	1672	610891
Performance Monitor	0	0	0	0	0	0
Process Table	0	0	0	380352	4096	384448
Routine Buffer In Use Table	65536	61696	3840	152	0	3992
Security System	65536	0	65536	11520	0	77056
Shadowing	0	0	0	10648	0	10648
Shared Library	0	0	0	0	896	896
TTY Hash Table	65536	32712	32824	0	0	32824
DB Name & Directory	65536	60766	4770	0	0	4770
iKnow Language Model Data	0	0	0	0	0	0
ECP	0	0	0	0	0	0

[\[下一页\]](#)

?????????gmheap(?????????SMH)????????????????????"????"????"??"????"????"????"????"????";

 主页	配置 »	系统配置 »	兼容性
	安全 »	连接 »	高级内存
	软件许可颁发 »	镜像设置 »	监视器
	加密 »	数据库备份 »	源控件
		CSP 网关管理	启动
		SQL 和对象设置 »	任务管理器电子邮件
		设备设置 »	
		国家/地区语言设置 »	
		Zen 报告 »	
		其他设置 »	

以下是高级系统内存设置的列表:

设置	值	编辑	帮助
ConsoleFile		编辑	帮助
LibPath		编辑	帮助
LineRecallBuffer	1024	编辑	帮助
LineRecallEntries	32	编辑	帮助
LockSharedMemory	假	编辑	帮助
LockTextSegment	假	编辑	帮助
MaxServerConn	1	编辑	帮助
MaxServers	2	编辑	帮助
Path		编辑	帮助
VMSConsoleTerminal		编辑	帮助
ZFSize	0	编辑	帮助
ZFString	0	编辑	帮助
errlog	500	编辑	帮助
gmheap	512000	编辑	帮助
ijcbuf	312	编辑	帮助
ijcnum	16	编辑	帮助
locksiz	419430400	编辑	帮助
netjob	真	编辑	帮助
nlstab	50	编辑	帮助
udevtabsiz	24576	编辑	帮助
vectors	32	编辑	帮助

备注: 在这些设置中部分设置的更改可能需要重启 Caché

?????????

????????????SQL????%PARALLEL??<NOROUTINE>???
????????????????????\$SYSTEM.SQL.Purge()????????????????
????????????????????????????

????????????????????
????????%PARALLEL????????????

SQL?????????

??%PARALLEL?SQL????????SQL??
??SQL????????Unfrozen/Parallel?
?????“???”/“???”????????????????

???

InterSystems Worldwide Response Center (WRC) customer support?????:

1. WRC?WRC?????Contact?WRC?WRC?????
2. ?"SQL?"?????X?????SQL?????3?????"?????"?????

?????"??....."?????
 ??View Process?????Process Details??
 ??????"?"?"?"?"?
 ??????Save?????
 ??????View process?????

3. ??????
 ??????Queries??
 ??????WRC?????
 ??????4?

?????Details??
 ??????SQL?????(?WRC????IRIS????)?????

- ??????"????"?????"?"?
 - ???WRC?????WRC?????WRC?????WRC?????
4. ??????WRC?????WRC?????Generate Report?????XML?????SQL int???

?????WRC?????WRC12345.xml?????WRCMultiple.xml?

?????Mail to?????WRC????/?????

[#SQL](#) [#Caché](#) [#InterSystems IRIS](#) [#InterSystems IRIS for Health](#)

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 ????

? URL: https://cn.community.intersystems.com/post/%E7%AC%AC%E4%BA%94%E7%AB%A0-%E4%BC%98%E5%8C%96%E6%9F%A5%E8%AF%A2%E6%80%A7%E8%83%BD%EF%BC%88%E5%9B%9B%EF%BC%89