

Global Scanning & Slicing

Article



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Global Scanning & Slicing

This is a coding example working on IRIS 2020.1 and on Caché 2018.1.3
It will not be kept in sync with new versions
It is also NOT serviced by InterSystems Support !

In most cases, a global used by default storage has just 1 subscript level that represents the IDKEY.
For an index-globals we may see 2 or more subscript levels.
Arrays, or parent-child relationships or persistent classes extending a base data class are examples where we see more levels. Though all these globals are quite uniform.

And then we see globals not related to classes or tables like ^SPOOL, or ^ERRORS, or ^%SYS where the structure depends on various levels of subscripts with special meaning.

Analysis of those non-conform globals is a challenge and just dumping it doesn't necessarily help to understand the dependencies.

This example is oriented at the old joke: "How do you eat an elephant?" ==> "Cut in thin slices !"

That's the offer:

By an SQL statement, you can display the structure of any global level by level.
You provide global name and the maximum level to display and get back the related subscripts, \$Data of the node, the number of next subnodes and - if available - the content stored at that level.

example: **SELECT * FROM rcc_G.scan where rcc_G.Scan('^%SYS',1)=1**

Reference	Level	\$D	SubN	Value
^%SYS	0	10	25	
("CSP")	1	10		
("CSPAppSec")	1	1	64	
("CacheTempDir")	1	1		"c:\intersystems\iris\mgr\iristemp\"
("DBRefByName")	1	10		
("Ensemble")	1	11		"2020-04-25 18:37:18"
("ErrorPurge")	1	1	30	
("FIPSMODE")	1	1	0	
("IRISTempDir")	1	1		"c:\intersystems\iris\mgr\iristemp\"
("JOURNAL")	1	11	0	
("LANGUAGE")	1	10		
("LASTSESSIONGUID")	1	1		"EÊcRùçGMÊô"_\$c(127)"¹9¼ÒÆ"
("LOCALE")	1	10		
("ModuleRoot")	1	10		
("NLS")	1	10		
("SERVICE")	1	10		

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```
("SSPort")          1 1      51773
("StreamLocation") 1 10
("SystemMode")     1 1      "TEST"
("TempDir")        1 1      "C:\InterSystems\IRIS\mgr\Temp"
("WebServer")      1 10
("bindir")         1 1      "c:\intersystems\iris\bin\"
("shutdownlogerrors") 1 1 0
("sql")           1 10
("sysdir")         1 1      "c:\intersystems\iris\mgr\"
("tercap")         1 10
26 lines
```

SELECT * FROM rcc_G.scan where rcc_G.Scan('^%SYS',2)=1

Reference	Level	\$D	SubN	Value
^%SYS	0	10	25	
("CSP")	1	10	1	
("CSP", "LastUpdate")	2	1		"65553,44452"
("CSPAppSec")	1	1	0	64
("CacheTempDir")	1	1	0	"c:\intersystems\iris\mgr\iristemp\"
("DBRefByName")	1	10	9	
("DBRefByName", "CACHE")	2	1		"^c:\intersystems\iris\mgr\cache\"
("DBRefByName", "CACHEUSER")	2	1		"^c:\intersystems\user\"
("DBRefByName", "ENSLIB")	2	1		"^c:\intersystems\iris\mgr\enslib\"
("DBRefByName", "IRISAUDIT")	2	1		"^c:\intersystems\iris\mgr\irisaudit\"
("DBRefByName", "IRISLIB")	2	1		"^c:\intersystems\iris\mgr\irislib\"
("DBRefByName", "IRISLOCALDATA")	2	1		"^c:\intersystems\iris\mgr\irislocaldata\"
"				

< 60 lines more >

SELECT * FROM rcc_G.scan where rcc_G.Scan('^ERRORS',37)=1 and id['Jour'

Reference	Level	\$D	SubNodes	Value
(65588,1,"*STACK",1,"V","%00000","N","""JournalState""")	8	1	0	4
(65592,1,"*STACK",1,"V","%00000","N","""JournalState""")	8	1	0	4
(65592,2,"*STACK",1,"V","%00000","N","""JournalState""")	8	1	0	4

[Check the related application on InterSystems Open Exchange.](#)

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