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Retrieve Internal System Information with Carsten's RTVSYSDDTA Command

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Most of us are familiar with the RTVSYSVAL(Retrieve System Values) and RTVJOBA (Retrieve Job Attributes) commands. We use them all the time in our CL programs to pull external information that our programs need.

The RTVSYSDDTA (Retrieve System Data) command lets you pull in all types of information about your system into your program. The really cool thing about this command is that most of the information retrieved is VERY hard to get at without using a ton of IBM Supplied APIs. Carsten has taken all the tough work out of finding and getting the information; all you have to do is run his cool command.

Retrieving all return values in one call involves many calls to APIs and MI built-ins and could take 3-4 seconds to complete on an average system.

Editors Note: For those of you who want to know how to call IBM APIs and MI Built-ins from your RPG IV programs, I encourage you to examine Carsten's source code. Carsten is a brilliant technician from whom we could all learn a lot!

... *Dan Riehl*

So what kind of information can be retrieved using this command?

There is a Reset Statistics parameter that is used to refresh the statistics for the return values: System ASP percentage used, CPU percentage used, and DB capability percentage used. This works similar to the Reset (F10) function key on WRKACTJOB and WRKSYSSTS commands.

There is processor type, processor group, main storage size, total auxiliary storage size, system ASP size, percentage of system ASP used, ASP threshold percent, CPU used percent, database capability used percent, OS/400 release level, whether the system is currently in restricted state, whether the TCP/IPv4 stack currently in an operational state, the last IPL date and time, the current IPL type, and what is the current control panel keylock position?

Additional information is also provided to let you determine the limits on interactive workload and Database workload that can be sustained without causing a disproportionate increase in system overhead.

See the Help Panel group provided to view all the return values for the parameters.

Here's the command prompt display:

Retrieve System Data (RTVSYSDDTA)			
Type choices, press Enter.			
Reset statistics	*NO	_____	*NO, *YES
CL var for PRCTYPE (4) . .	_____		Character value
CL var for PRCGROUP (4) . .	_____		Character value
CL var for MAINSTGSIZ (10 0) . .	_____		Number
CL var for TOTAUXTG (10 0) . .	_____		Number
CL var for SYSASPSIZ (10 0) . .	_____		Number
CL var for SYSASPUSED (7 4) . .	_____		Number
CL var for SYSASPTH (4 1) . .	_____		Number
CL var for CPUPCTUSED (4 1) . .	_____		Number
CL var for DBCAPUSED (4 1) . .	_____		Number
CL var for PRCINTTHR (4 1) . .	_____		Number
CL var for PRCINTLMT (4 1) . .	_____		Number
CL var for DBCAPTHR (4 1) . .	_____		Number
CL var for DBCAPLMT (4 1) . .	_____		Number
CL var for OSREL (6) . .	_____		Character value
CL var for SYSSTT (1) . .	_____		Character value
CL var for TCPSTS (1) . .	_____		Character value
CL var for IPLDTS (17) . .	_____		Character value
CL var for CURIPLTYP (1) . .	_____		Character value
CL var for PNLKEYPOS (6) . .	_____		Character value

Carsten has included a sample program that uses the command. The source code for the sample program is included in the downloadable code in CL Source member CBX939T.

The following source code is included:

- CBX939 -- Command RPG/IV CPP
- CBX939H -- Command help text panel group
- CBX939X -- Command definition source
- CBX939T -- Test RTVSYSDDTA CL sample program

See each source member for compile instructions.

You can download a zip file containing all the source code from the following URL:

<http://www2.systeminetwork.com/noderesources/code/clubtechcode/RtvSysDta.zip>

Source URL: <http://iprodeveloper.com/rpg-programming/retrieve-internal-system-information-carsten-s-rtvsysddta-command>