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## Sending Commands to Another Job -- The RUNJOBCMD Command

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How would you like to be able to view or change a batch job's local data area on the fly from your workstation session? Or maybe you want to copy a batch job's QTEMP library to a persistent library that you can then inspect. Using the command presented in this issue, you can run any Control Language command within another job, whether batch or interactive.

In this issue, Carsten Flensburg presents the command **RUNJOBCMD** (Run Job Command). A typical use for the RUNJOBCMD command is to diagnose problems and fix issues in active batch or interactive jobs. For example, you can add a missing library to another job's library list prior to performing a "retry" operation on a failing command or program.

### The Internal Details

The RUNJOBCMD command is based on two OS/400 CL commands: Start Service Job (STRSRVJOB) and Trace Job (TRCJOB).

When you issue the STRSRVJOB command against another job, all subsequent service commands (dump, debug, and trace) are implicitly run against the serviced job. This is quite useful because it lets you interactively debug a batch job. And you can also run the TRCJOB command against another job.

The key to the RUNJOBCMD command is that the TRCJOB command provides an exit program parameter. If a program is specified as the TRCJOB command exit program, it will be called prior to each trace record being collected by TRCJOB. This exit program facility was designed to let you programmatically remove trace records. You can also use the exit program to format and print your own TRCJOB report. For information on the TRCJOB exit program, go to the following Web page:

<http://publib.boulder.ibm.com/infocenter/iserics/v5r3/index.jsp?topic=/apis/xtrcjob.htm>

Since the TRCJOB exit program actually runs within the job being serviced, the RUNJOBCMD command exploits this by supplying a TRCJOB exit program. Instead of the exit program's normal function to control the trace data, the exit program provided here will execute the specified command within the serviced job.

The utility uses a keyed data queue to 'pipe' commands from the RUNJOBCMD command (running from your job) to the TRCJOB exit program, which runs in the serviced job. This will cause the command to be executed within the serviced job. The data queue key value is the fully qualified job name of the serviced job. This is used in order to avoid any conflicts between RUNJOBCMD commands being run at the same time on the same system for different jobs.

Once the specified command has been run in the serviced job, the outcome is passed back to the RUNJOBCMD command through the data queue as a simple flag -- indicating success or error. A time-out parameter is available that lets you specify a number of seconds that the RUNJOBCMD programs will wait for a reply from the serviced job command being executed. This allows long running commands time enough to complete without the initiating program timing out while waiting for the data queue reply.

Since the TRCJOB exit program is run as part of the system's trace/debug cycle, the exit program will interrupt the serviced job until the command specified on RUNJOBCMD has completed.

It is possible that the STRSRVJOB command run by the RUNJOBCMD programs will not be honored by the job you are attempting to service. This can occur in cases where the serviced job is currently performing low-level functions, such as building an index. In that case an error message will be returned, informing you that the STRSRVJOB command timed-out. If this occurs, retry the RUNJOBCMD command again.

The STRSRVJOB and TRCJOB commands can only be run by specific system user profiles, or user profiles having \*ALLOBJ authority. Since the RUNJOBCMD is running commands in other jobs, the command has the added requirement that the user profile running this RUNJOBCMD command also has \*JOBCTL special authority.

For more information on the STRSRVJOB command see:

<http://publib.boulder.ibm.com/infocenter/iserics/v5r3/index.jsp?topic=/cl/strsrvjob.htm>

A typical use for the RUNJOBCMD command is to diagnose problems and fix issues in active batch or interactive jobs. For example, you can copy objects from the job's QTEMP library to a permanent library or add a missing library to the job's library list prior to performing a 'retry' operation on a failing command or program.

The parameters for the RUNJOBCMD command are:

- **JOB** – The fully qualified name of the job for which you want to run the command.
- **CMD** – The Control Language command that will be executed within the job specified in the JOB parameter.
- **TIMEOUT** – The number of seconds the RUNJOBCMD waits for a reply from the job specified in the job parameter. The default for this parameter is 25 seconds, but you can specify any value from 5 seconds through 3600 seconds.

Here's an example of running the command to add a library to another job's library list.

```
RUNJOBCMD  JOB (APJOB/APUSER/001234) +  
           CMD (ADDLIBL APPROD)      +  
           TIMEOUT (120)
```

Here's an example of running the command to copy the serviced job's QTEMP library to a permanent library that can then be examined and used to collect diagnostic information.

```
RUNJOBCMD  JOB (APJOB/APUSER/001234) +  
           CMD (CPYLIB FROMLIB (QTEMP) TOLIB (MYDEBUG) ) +  
           TIMEOUT (300)
```

The following source code is included:

- CBX935X – Command Definition source code
- CBX9351 - CL Command Processing Program
- CBX9352 - CL Program to get the Serviced Job ID
- CBX9353 - RPGLE Program - TRCJOB Exit Program
- CBX935H – Command Help Panel Group

See each source member for compile instructions.

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

[/Content/Content/18248/RunJobCMD\\_2005.zip](#)

### **Special Note:**

The command processing program CBX9351 requires that the command RTVSPCAUT(Retrieve User Special Authorities) exists on your system. This command was presented in the February 2, 2005 issue of the newsletter. The source code for RTVSPCAUT can be found at:

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

### **Special Update from the Author -- June 2008**

This RUNJOBCMD is based on a kind of backdoor technique (exit program parameter on the TRCJOB command) that IBM discontinued with release V5R4. IBM was, however, kind enough at the same time (V5R4) to provide a new, documented and supported facility that enabled running commands in other jobs, the job interrupt APIs and exit program. I therefore rewrote my RUNJOBCMD utility for V5R4, and the new version was published in May 2008, here:

<http://systeminetwork.com/article/sending-commands-another-job-revisited-i5os-v5r4>

So if you're on V5R4 or higher, the updated article and command will be of interest to you. If you're still on V5R3, stick with this original, 2005 article and command.

**Source URL:** <http://iprodeveloper.com/systems-management/sending-commands-another-job-runjobcmd-command>