Work With Profound UI Instances Tool

The Work With Profound UI Instances (PUIWRKINST) command is a green-screen utility that will help you identify, configure, and manage the instances of Profound UI that are installed on your IBM i server or LPAR. It is "Work With" style command, similar to those that IBM provides with the operating system. To run it simply type **PUIWRKINST** in your 5250 emulation software at the command-line.

> *Note:* In order to use the PUIWRKINST command, you must have the library where you installed Profound UI (or one of the libraries if you have it installed multiple times) in your library list. By default, this library is called PROFOUNDUI, but you have the option to select a different library name during installation. Add whichever library name you used when you installed Profound UI to your library list before running the PUIWRKINST command.

PUIWRKINST has one optional parameter, an instance name to work with. If this parameter is not provided, or the special value of *SELECT is provided, the PUIWRKINST tool will show the "Work With Profound UI Instances" screen where it will show all of the instances on your system. If an instance name is provided, it will go directly to the "Work With Profound UI Instance Jobs" screen.

The Work With Profound UI Instances Screen

This screen provides a list of the Profound UI instances on your system, and gives you options that you may use to work with each instance. Here is an example from an IBM i server that has one instance named PROFOUNDUI:

The fields shown on this screen are:

- **Opt** - lets you type an option to perform on each instance
- **Instance** - the name of the HTTP server instance
- **Library** - the name of the library where the Profound UI server-side code has been installed
- **Auto** - Whether this instance is automatically started when TCP/IP is started. The possible values are *YES, *NO and *GLOBAL. *GLOBAL means that it uses the global setting that you can set with the IBM-provided CHGHTTPA command.
- **Running** - Whether this instance is currently running or not.
- **Port** - TCP port number that the instance is configured to use. (If you've created a custom configuration that uses more than one port number, only the first one will be shown.)
- **Version** - the version of Profound UI that is installed. Note: Older versions of Profound UI do not provide a way to detect the port number. This will show "unknown" in that case.
- **Server Root** - The IFS directory that contains the root of your HTTP server files. If the directory name is too long for the display, it may be abbreviated here, if that is the case, use option 8=View IFS Directories to see the full name.

The options available on this screen are:

- **2=Change** - Uses the IBM-supplied Edit File (EDTF) command to edit the instance's httpd.conf configuration file.
- **3=Copy** - Runs the Copy Profound UI Instance (PUICPYINST) command to duplicate the instance.
- **4=Delete** - Runs the Delete Profound UI Instance (PUIDLTINST) command to delete the instance
- **5=Work With** - Work with the jobs running in this instance. See the *Work With Profound UI Instance Jobs* documentation, below.

- **6=Change Autostart** - Lets you control whether this instance is automatically started when TCP/IP is started. The options are Y=Yes, N=No and G=Global. If you select Global, it will base this setting on the autostart parameter that has been set using the IBM-supplied CHGHTTPA command. The value you set here will be displayed in the *Auto* field described above.
- **7=Error Log** - Shows the most recent error log file found for this HTTP server instance using the IBM-supplied Display File (DSPF) command.
- **8=View IFS Directories** - Shows the full IFS directory names for the HTTP server root, document root, and configuration file.
- **9=Start Instance** - If the instance is not running, you can use this option to start it.
- **10=Stop Instance** - If the instance is running, this option can be used to stop it. This tool will wait up to 30 seconds for the instance to stop. If the instance takes longer than that to end, you can use the IBM Work with Active Jobs (WRKACTJOB) command to monitor whether it has finished stopping or not.

If any of the above options produces an error, the error message will be reported in your job log. You can use the F20 function key to view the job log when this happens.

The following function keys are available on this screen:

- **F3=Exit** - Return to the 5250 command line
- **F5=Refresh** - Reload all of the server instance information
- **F8=Sort** - Move your cursor to one of the columns in the list of instances and press this key, the information will be re-sorted by that column.
- **F20=View Job Log** - View the job log of the interactive job that is running the PUIWRKINST tool
- **F21=System Command** - brings up a command-line where you can type a system command.

The Work With Profound UI Instance Jobs Screen

When a Profound UI instance is running there are many jobs that make it work properly. Some of these jobs are provided by the IBM HTTP Server (powered by Apache) that Profound UI runs on top of, and others are part of the Profound UI tool itself. This screen lets you see the jobs that are working and helps you understand the role of each job and get diagnostic information for each job when necessary. If you have purchased the Profound UI Performance Tools module, this screen will also show you some performance statistics related to each job in your Profound UI instance.

By default, the Work With Profound UI Instance Jobs screen will only show you the jobs where your applications are run. There will be one job shown for each session that is running a Profound UI application. In this example, the instance is running one application in Genie and one application in a Rich Display session:

If you press the F22 key, it will show all jobs running in the instance, including the IBM-supplied jobs that make the HTTP server work and the Profound UI controller jobs. Here is the same instance as above with the additional jobs shown:

```
                   Work With Profound UI Instance Jobs
                                              Instance: PROFOUNDUI
  Type options, press Enter.
    1=Pos To Ctl Job   4=End Job   5=Work With   8=Dump Call Stack   9=Dump Job Log

  Opt  Role          JobNo/Term   User        Type   Status   Pty   CPU%   Temp Storage
       HTTPMGR       064430       QTMHHTTP    BCH    SIGW     25    0          11mb
    _  HTTPLOG       064431       QTMHHTTP    BCI    SIGW     25    0           8mb
    _  HTTPMAIN      064432       QTMHHTTP    BCI    SIGW     25    0          41mb
    _  CGI           064433       SKLEMENT    BCI    TIMW     25    0          12mb
    _  CGI           064434       SKLEMENT    BCI    TIMW     25    0          12mb
    _  HTTPMAIN      064435       QTMHHTTP    BCI    DEQW     25    0          17mb
    _  GENIECTL      068696       QTMHHTP1    BCI    TIMW     25    0          16mb
    _  GENIEAPP      QPADEV0004   SKLEMENT    INT    DSPW     20    0           7mb
    _  RDFCTL        068699       QTMHHTP1    BCI    TIMW     25    0          15mb
    _  RDFAPP        068700       QTMHHTP1    BCI    SELW     25    0          11mb




                                                                     Bottom


  F3=Exit    F5=Refresh    F8=Sort (Cursor)  F10=Restart Statistics    F11=View 2
  F12=Cancel    F21=System command    F22=Show Only Application Jobs
  MA     C                                                            07/003
```

The fields shown on this screen are:

- **Opt** - lets you type an option to perform on each job
- **Role** - the role this job plays in your Profound UI instance. Possible roles are:
    - **HTTPMGR** - IBM HTTP manager job, manages the HTTP server
    - **HTTPLOG** - IBM HTTP logging job
    - **HTTPMAIN** - IBM HTTP server main job, serves out static HTTP content
    - **CGI** - Stateless CGI job, these jobs are reused for all stateless requests, including running SQL statements to load database-driven widgets, loading/saving/compiling members in the Visual Designer, loading Atrium menu items, and more. CGI jobs can be re-used for other purposes, such as controller jobs, later. The IBM HTTP server automatically starts new CGI jobs when they are needed.
    - **GENIECTL** - Genie Controller job. This job runs the Profound UI programs that convert the 5250 data stream into Genie web data and communicate that data to your web browser. These are persistent CGI jobs that are automatically started (by reusing an existing "CGI" job) by the IBM HTTP Server (powered by Apache). Once they have become Genie Controller jobs, they will only be used for the given Genie session, and will end when that session is complete.
    - **GENIEAPP** - Genie Application job. This is an interactive 5250 job running in an interactive subsystem. This job is created by the Genie Controller (GENIECTL) job to run your interactive session. The job will end when your Genie session has ended.
    - **RDFCTL** - Rich Display File controller job. This job runs the Profound UI programs that handle the HTTP communications for a Rich Display or Profound UI Mobile session. (However, if you use a Rich Display file through Genie, it will use a GENIECTL job instead, see above.) This job is automatically created (by re-using a "CGI" job) by the IBM HTTP server, but once it has become a controller job, it will not be reused again, it will end when your Rich Display session has ended.
    - **RDFAPP** - Rich Display Application job. This job is where your HLL programs that use Profound UI Rich Displays, including RPG programs that use Open Access, are run (unless you run them from Genie, in which case a GENIEAPP job is used, see above.) This job is started by the RDFCTL job, and will remain active until your user profile's "initial program" has ended.
- **JobNo/Term** -
- **User** -
- **Type** -
- **Status** -

If you have purchased the Profound UI Performance Tools module, the following additional fields will be available. These are all job-level statistics (not thread-level.) You can use the F11 function key to scroll through the additional fields since not all of them can fit on the screen at one time:

- **Pty** - Run Priority
- **(Elapsed) CPU%** - Processing unit used - percent during the elapsed time
- **Temp Storage** - Temporary Storage (memory) used
- **(Elapsed) CPU Used** - Processing unit used - time during the elapsed time
- **(Elapsed) Page Faults** - Page fault count during the elapsed time
- **(Elapsed) Lock Wait** - Lock wait time - time during the elapsed time
- **(Elapsed) Disk I/O Async** - Disk I/O count during the elapsed time - asynchronous I/O
- **(Elapsed) Disk I/O Sync** - Disk I/O count during the elapsed time - synchronous I/O
- **(Elasped) Disk I/O Tot** - Disk I/O count during the elapsed time
- **(Elasped) Inter Resp** - Interactive response time - total during the elapsed time
- **(Elasped) Inter Trans** - Interactive transactions - count during the elapsed time
- **Total CPU** - Processing unit time used - total for the job.

The details are retrieved by calling the IBM-supplied QUSRJOBI API, you can find more documentation by looking at format JOBI1000 on the QUSRJOBI manual page. Elapsed statistics may be reset by pressing the F10 function key.

You can use the following function keys on this screen:

- **F3=Exit** - Return to the command line
- **F5=Refresh** - Reload all of the information presented on this screen. (This does not reset elapsed statistics.)
- **F8=Sort** - Place your cursor on one of the fields and press this key to sort the display by that column.
- **F10=Restart Statistics** - This reloads the display and resets the elapsed performance statistics (only available with the Profound UI Performance Tools module)
- **F11=Change View** - This lets you see additional performance statistics (only available with the Profound UI Performance Tools module)
- **F12=Cancel** - Return to the "Work With Profound UI Instances" display
- **F21=System command** - Displays a command prompt where you can run system commands
- **F22=Show/Hide Jobs** - This lets you toggle between showing all jobs for the HTTP Server instance vs. showing only the jobs where your applications are run.