Job Scheduling and Recurrences Process Overview

Purpose: This content was created with the intent of covering three main topics around job scheduling and recurrences.

- How to schedule processes
- Standardized recurrence definitions
- System considerations & impacts

ctcLink is an ERP system shared by all 34 community and technical colleges, as well as SBCTC. Because so many individuals are running processes, we need to be considerate and strategic in how we use this shared resource.

Audience: Staff who run recurrences and schedule jobs.

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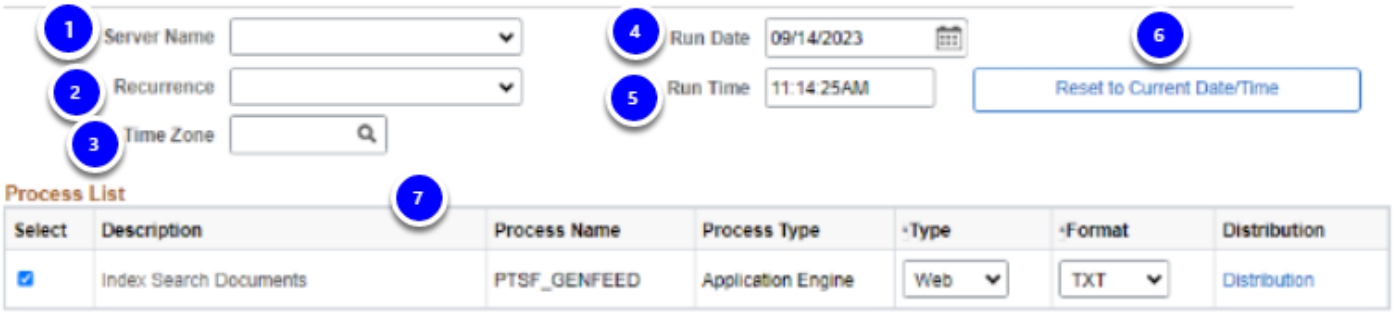
1. Understand Process Scheduler

PeopleSoft (ctcLink) Process Scheduler is a centralized tool that enables users to manage when PeopleSoft processes are run. Users may want to run certain processes in PeopleSoft such as generating reports, posting journal entries, assigning and sending 3C communications, and running batch programs. PeopleSoft Process Scheduler enables users to schedule a process request to run once at a specific date/time or on a repeating basis.

1.1. Using Process Scheduler

To understand details about the process scheduler, view the Process Scheduler Request portion of the Process Scheduler/Process Monitor QRG.

- After selecting the 'Run' button on the page for your process, you will be taken to the Process Scheduler Request page. Enter or update the following fields:
  1. **Server Name** - Leave this field blank so the system will automatically select the next available server.
  2. **Recurrence** - Leave this field blank if you want your process to run only one time. Select the dropdown menu and select the desired recurrence definition if you want your process to run on a repeating basis.
  3. **Time Zone** - Leave this field blank.
  4. **Run Date** - This is the date the process will start to run. You can select a date in the future if you want your process to start at a later date.
     - *Note: If the date selected is in the past, it will run today.
  5. **Run Time** - This is the time the process will start to run. You can select a time in the future if you want your process to start at a later time.
     - *Note: If the date and time selected are in the past, it will run today as soon as possible.
  6. **Reset to Current Date/Time button** - Select this button to update the Run Date and Run Time fields to today's date and time.
  7. **Process List Section** - Generally the default is selected however there may be specific processes where different process list options will need to be selected based on the process being run.
- Select the **OK** button once you are ready to schedule your process



2. Understand the Recurrence Definitions

Recurrence definitions are the available time intervals that users can choose from when they schedule something to run on a repeating basis. The user chooses from the list of available recurrence definitions to meet their business process needs. Recurring processes will continue to cycle until staff manually stop it or the process scheduler is taken offline. Users are responsible for monitoring their recurring processes on a daily basis.

To understand details about recurrence definitions, view the Set Up Recurrences for Jobs QRG.

☐ 2.1. Understand the New Naming Convention and Abbreviations

In December 2023, SBCTC standardized the naming convention of the options listed in the Recurrence field. Options range from running once a week to running multiple times every business day. Please see the recurrences listed below for examples of what the various abbreviations mean:

- M-F 04:30
  - This will run at 4:30am on Mondays, Tuesdays, Wednesdays, Thursdays, and Fridays.
- M-F 07:00-16:00 x3hrs
  - This will run every 3 hours between 7am and 4pm (7am, 10am, 1pm, & 4pm) on Mondays, Tuesdays, Wednesdays, Thursdays, and Fridays.
- Weekly W 13:00
  - This will run at 1pm on Wednesdays.
- XSB M-Su 03:00
  - This is only for SBCTC staff use. It will run at 3am on Mondays, Tuesdays, Wednesdays, Thursdays, Fridays, Saturdays, and Sundays.

NOTE: Recurrence names that start with XSB are for SBCTC staff only.

☐ 3. Understand Process Monitor

Details of processes that have run, are currently running, or are scheduled to run can be viewed in the Process Monitor. The Process Monitor is unique to each PeopleSoft pillar and environment. Processes run in the PCD environment will not be listed in the Production environment Process Monitor. Similarly, a process run in the Campus Solutions pillar will not show up in Process Monitor under the Finance pillar.

Processes use up space on the environment's servers. Users need to monitor their processes to ensure things are running to success in a timely manner. Large processes can impact other users, teams, or other upcoming processes, so it is important that users carefully review their process run control settings and submit a support ticket if they need SBCTC to help review their criteria. This is especially true for processes scheduled on recurrence. Recurring processes/jobs are NOT "set it and forget it" processes.

Users have access to view all processes, but they do not have permissions to take any action on processes that other users have initiated (i.e. pause or cancel). To understand details about Process Monitor, view the Process Scheduler/Process Monitor QRG. Familiarize yourself with the different run statuses as you will need to know what they

mean as you review your processes. The run status of your process usually dictates if you need to take any additional actions.

▢ 3.1. Understand the Process Monitor Page

Users are not only responsible for monitoring the run status, but also viewing the output log of the process itself. A process that ran to success still may not have had the desired outcome. For example, if a process had nothing meeting your Run Control's criteria, the process will say that it completed successfully even when no data was actually processed.

▢ 3.2. Troubleshooting Errors

If your process goes to an 'Error' or 'No Success' status, you should check the Message Log, log file, and/or trace file to see what the error message is.

Scenario 1

- If possible, fix the issue listed in the error message.
- Delete the process that failed.
- Rerun the process.

Scenario 2

- If you are not sure how to resolve the issue, open a ticket with SBCTC ctcLink Customer Support for help with troubleshooting.
- Do not delete this process since SBCTC staff will need to review the log and trace files. Please include the process instance number in your ticket along with your run control parameters. Save PDF or error messages so the information can be attached to a ticket.

▢ 3.3. Take-Down Procedures

To install required updates to ctcLink, SBCTC occasionally needs to take the system down. To prevent processes from failing during the system maintenance, SBCTC may ask users to either cancel their processes or place them on hold. After the maintenance window is complete, users will need to create a new recurrence for any processes they canceled and restart any recurring processes they put on hold.

To understand details about take-down procedures, view the Process Take Down Instructions QRG.

▢ 4. Understand Job Scheduling Resources and Impacts

Before you schedule a process, it is important to consider the impact it may have on the system.

1. The Process Monitor servers are a finite resource, meaning they can only process so many jobs at the same time. If too many jobs are requested to run at the same time, they will wait in a Queued status until the servers have enough processing power to

handle the request. Excessive job scheduling can cause backups in Process Monitor and even slowdowns in the entire system.
2. It is also important to know if your process has any dependencies, or in other words, are there any tasks that need to be completed before or after your process runs? If so, you will want to know the timing of those tasks and how long your process takes to run.
3. When a process fails, it may cause other processes to fail as well. Therefore, it is important to keep an eye on your processes and address any issues in a timely manner.

Before you select a recurrence to use, you should ask yourself the following questions:

1. How long does my process take?
   - For example, if your process takes 2 hours to complete, you would not want to schedule it to run every hour.
2. How often does my process need to run?
   - Does running the process once a day, or even once a week, meet your business needs?
3. Are there any dependencies for my process?
   - If you have a strict deadline, consider allowing for some extra time as a buffer.
4. What time should I run my process?
   - If timing is not important, consider running it outside of normal business hours.
5. Will I be available to address any issues in a timely manner?
   - For example, if you don't work on Fridays, then you probably don't want to schedule all of your processes to run Thursday night.

☐ 5. Jobs Currently Scheduled by SBCTC

Refer to the Process Schedule on the SBCTC website for Jobs that are currently scheduled and running. These timelines can be important to consider when scheduling your own processes to avoid conflicts.

☐ 6. Understand Query and Report Scheduling

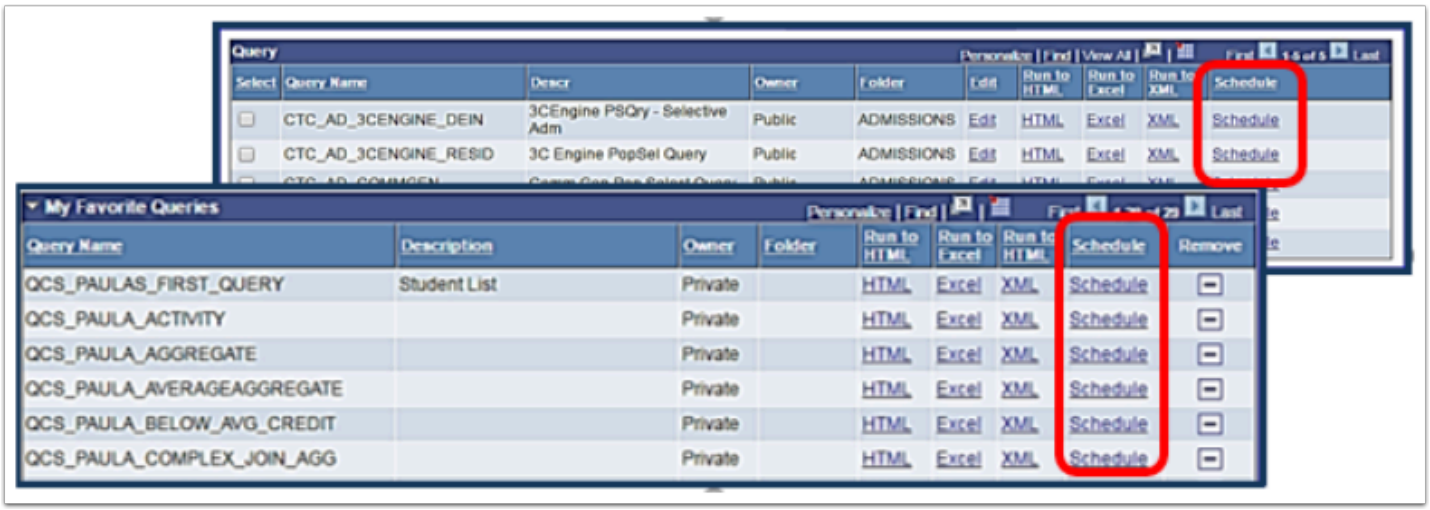
Schedule Query is used for scheduling a query to run at a future time or to run queries with large results. Queries can be scheduled through Query Viewer or Query Manager as well as through the PeopleSoft Menu Path. The process varies slightly depending on whether the user starts using the menu path or Query Viewer/Manager

Using PeopleSoft Schedule Query through Query Viewer/ Manager

The process to schedule a query to run through Query Viewer and Query Manager is the same whether starting from Query Viewer or Query Manager

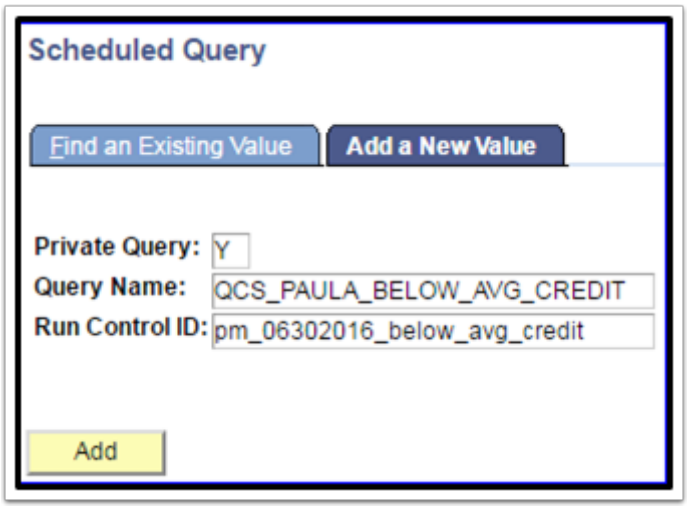
Scheduling a Query to Run Through Query Viewer or Query Manager

The process is the same regardless of whether the user uses Query Viewer or Query Manager. Search for the desired query and click on "Schedule "from the list of results.



The “Scheduled Query” page will come up with the query name previously selected already filled in along with designating whether the query is Private or Public. If there is an existing Run Control ID for the query it will display here.

If there is not an existing Run Control ID the Run Control ID will be blank. If there is an existing Run Control ID then it will appear in the field. In the image below there is an existing Run Control ID associated to this query by the user.

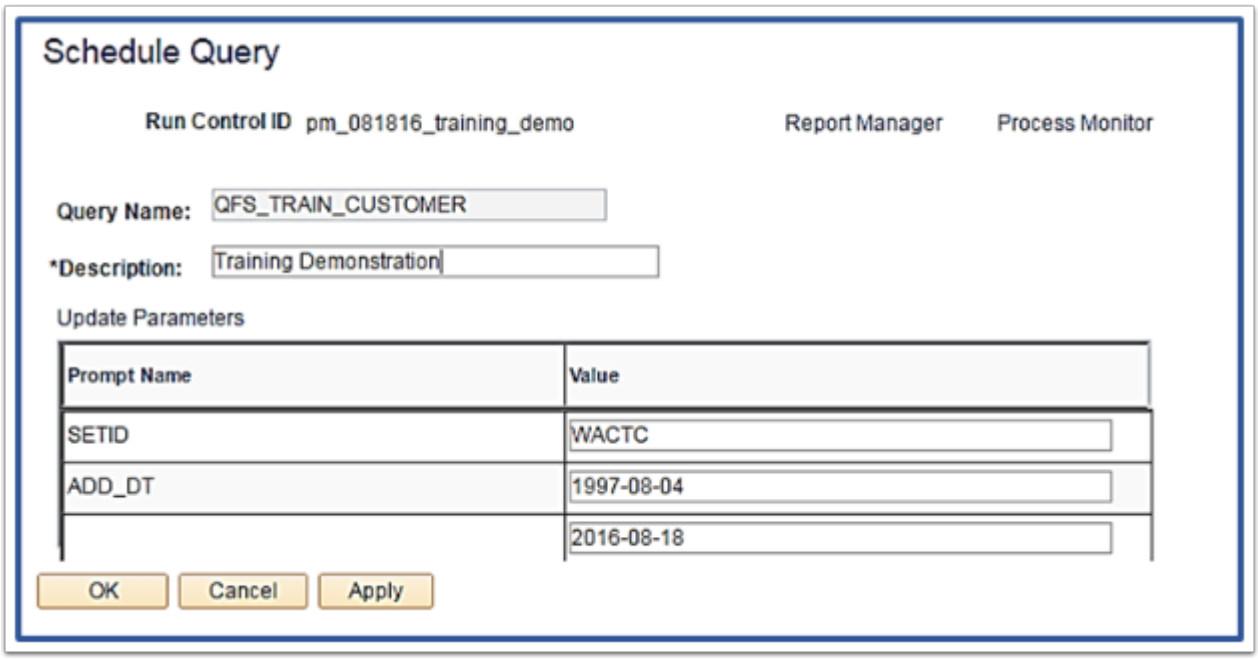


A Run Control ID is used to tell the system when and where and how you want the report to run. For example, you might tell the system to run the report on the database server at 4 am or every Sunday afternoon, or you might tell it to run the report immediately. For most reports, you must also set parameters that determine the content of the report, such as the business unit or time period on which to report. These parameters are based on the prompts used in the query and are saved by the Run Control ID so they don't have to be re-entered each time you use the Run Control ID to run the query. A run control is a database record that provides values for these settings. Instead of entering the same values each time you run a query, you create and save a Run Control with those settings.

There is no specific naming convention for the Run Control ID.Run Control ID's have a 30 character limit and cannot be easily deleted. They are individual to each user and are not visible by others. Run Control ID's can be used for a single query to save the parameters or the user can change the query associated with the Run Control ID.

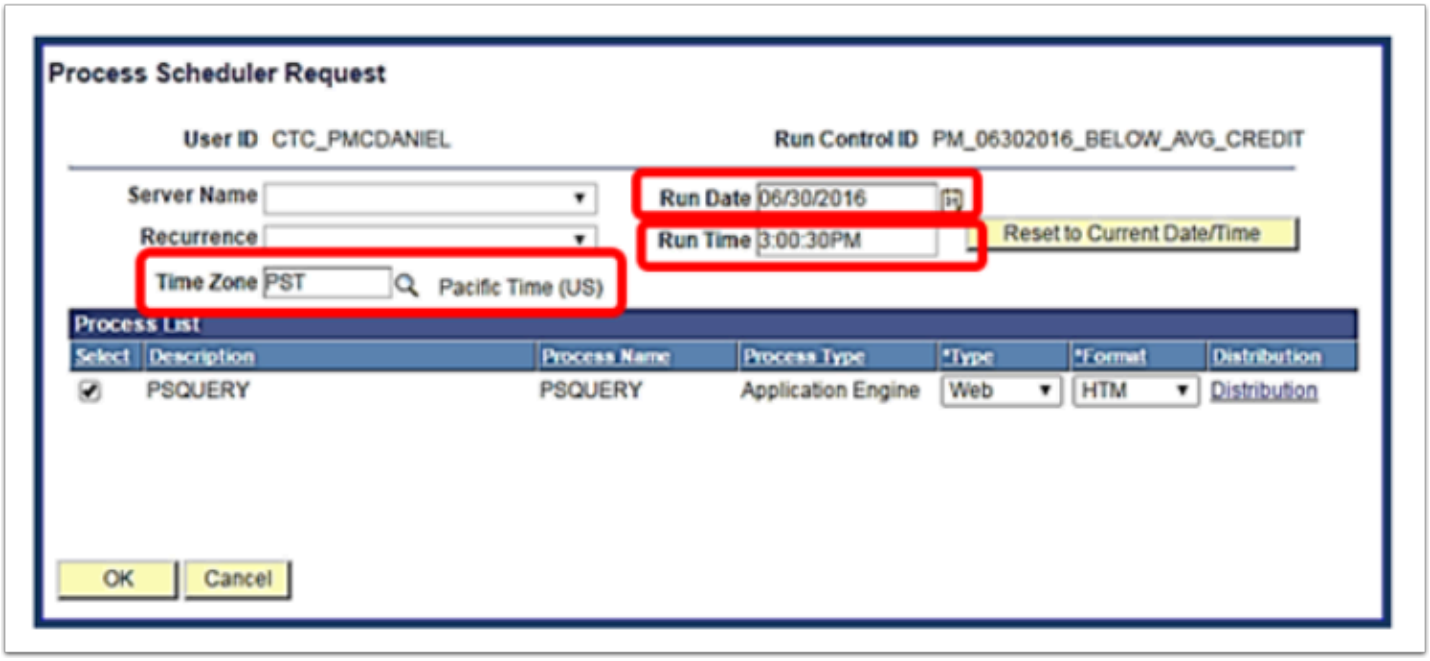
If the Run Control ID field is not populated then create a new one by clicking on "Add a New Value" tab, enter the Run Control ID and then click onthe "Add" button.

The Schedule Query page will display. The query name will automatically populate based on the query selected from Query Viewer or Query Manager. Enter a description for the query Run Control ID in the Description Field. This will be the Report Name.



Note: if there are prompts (parameters) for the Run Control ID they can be updated here by clicking the Update Parameters hyperlink. You can save these changes to the Run Control ID by clicking “Save”. This will not, however, schedule the query. To schedule the query click on “Apply”.

The Process Scheduler Request page will display. Select the Time Zone, Date and Time to run the query.



The Output Type and Format can also be selected here.

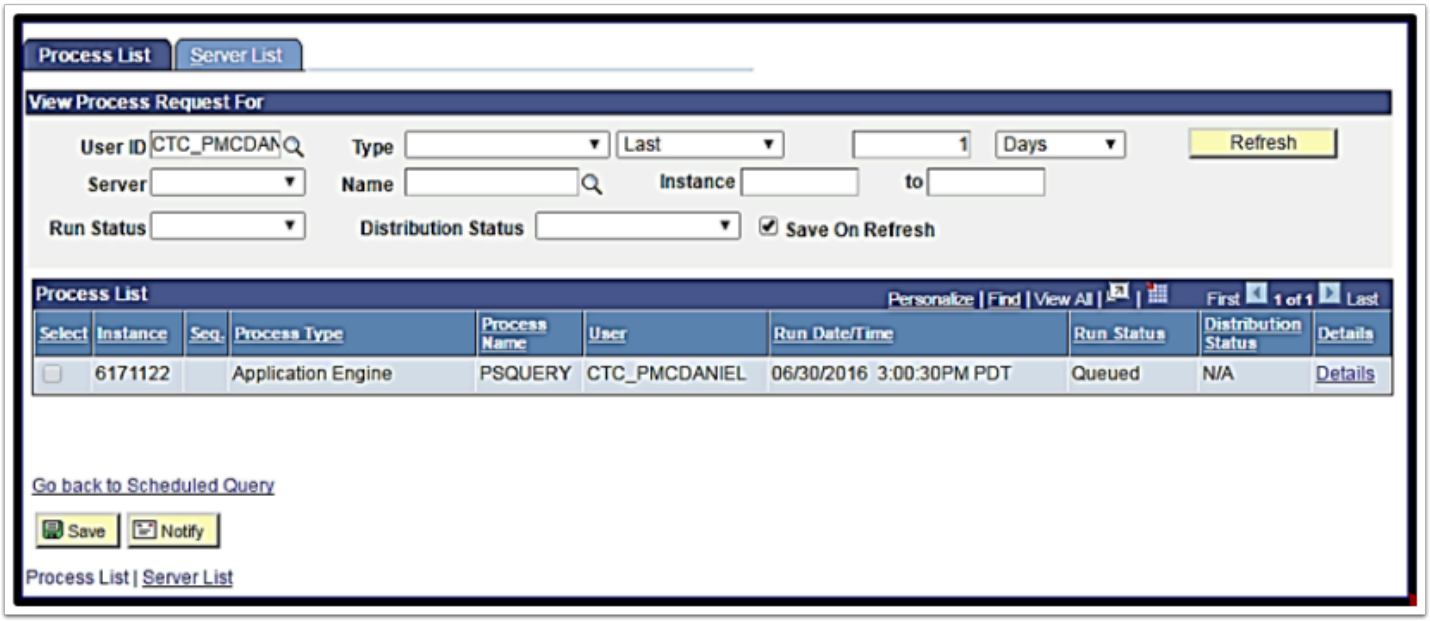
- Output Types available are:
  - Web
  - Email
  - Feed
  - File
  - IB Node
- The Format Types available are:
  - HTM
  - PDF
  - TXT
  - XFORM
  - XLS
  - XML
  - XMLP

Click “OK”.

You will return to the Schedule Query page. Notice there is now a Process Instance number now associated with this Scheduled Query.

Process Monitor

To view the status of your Scheduled Query click the “Process Monitor” hyperlink from the Schedule Query page. The Process Monitor will display the status of the Scheduled Query.



You are able to see the status of Scheduled Query runs by:

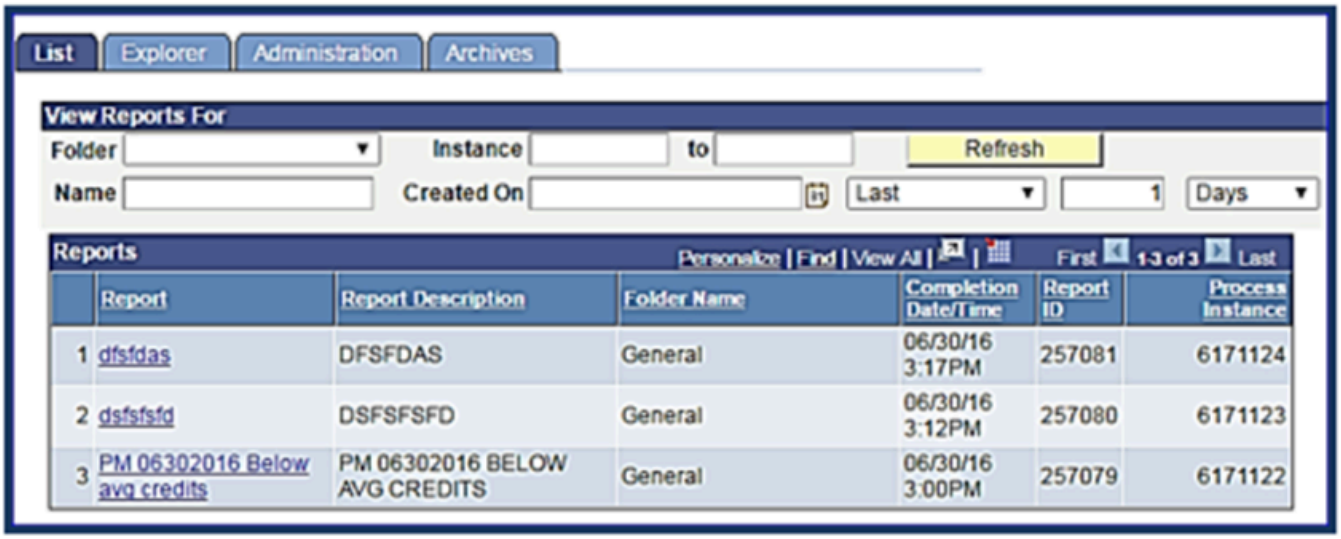
- User ID
- Type
- Number of days past
- Server
- Name
- Instance from and to
- Run Status
- Distribution Status

Another way to access the Process Monitor is through the menu path:Main Menu> PeopleTools> Process Scheduler> Process Monitor

Once the query has run and you see a status of “Success” click on “Go back to Scheduled Query”. This will return you to the very first Scheduled Query search page. Note that your Run Control ID is now filled in so to get to the Scheduled Query page to view the report via Report Manager click on "Enter". Click on the Report Manager hyperlink to view the query results.

Report Manager

To view the results of your Scheduled Query click the “Report Manager” hyperlink from the Schedule Query page in order to access the Report Manager. You may need to click on the "Administration Tab" in order to view the results of the scheduled query.



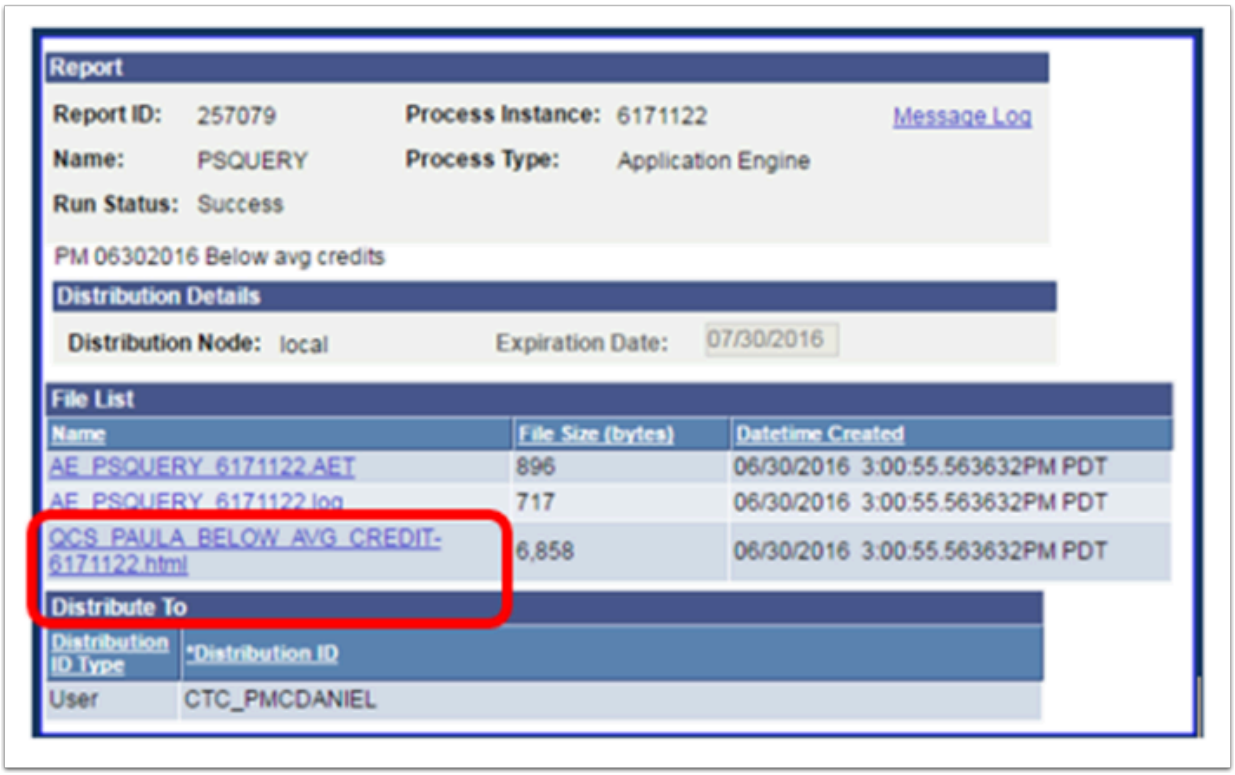
Report Manager allows the user to filter displayed reports by:

- Folder
- Instance from and to
- Name
- Created on Date
- Number of Days past
- Date Range

Another way to access the Report Manager is through the menu path: Main Menu> Reporting Tools> Report Manager

Click on the hyperlink found in the Report column to view the output. Remember this report 'name' is the description entered when first scheduling the query.

The query results can then be viewed in the selected format by clicking on the query name in the Name column.

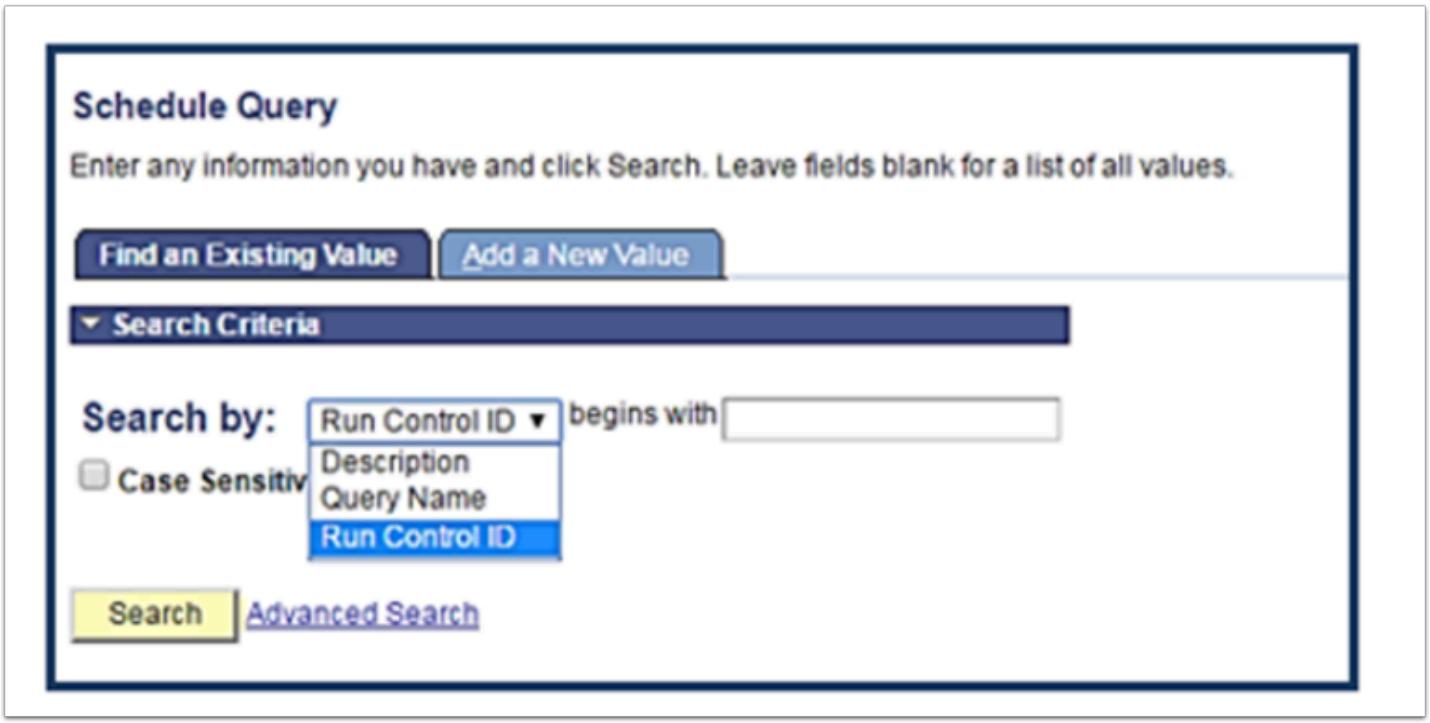


Using PeopleSoft Schedule Query through the Schedule Query Menu Path

Schedule Query is used for scheduling a query to run at a future time or to run queries with large results. Queries can be scheduled through Query Manager or Query Manager as well as through the PeopleSoft Menu Path. The process varies slightly depending on whether the user starts using the menu path or Query Manager/Manager.

Scheduling a Query to Run Through the Schedule Query Menu Path

Navigate to the Schedule Query page by following this menu path: Main Menu > Reporting Tools > query > Schedule Query



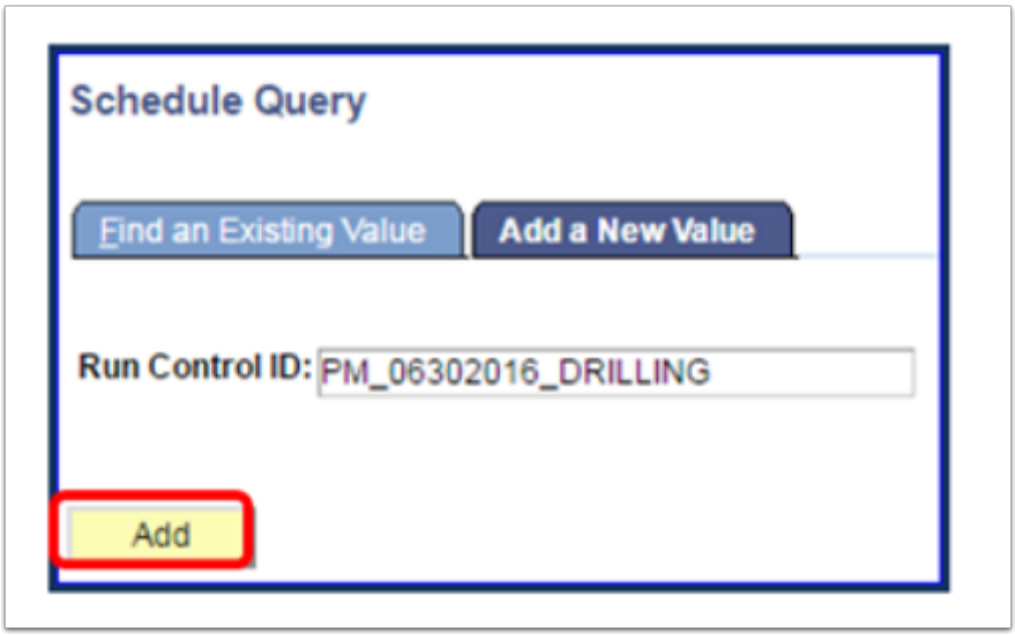
You will be brought to the page to search for an existing scheduled query via:

- Description
- Query Name
- Run Control ID

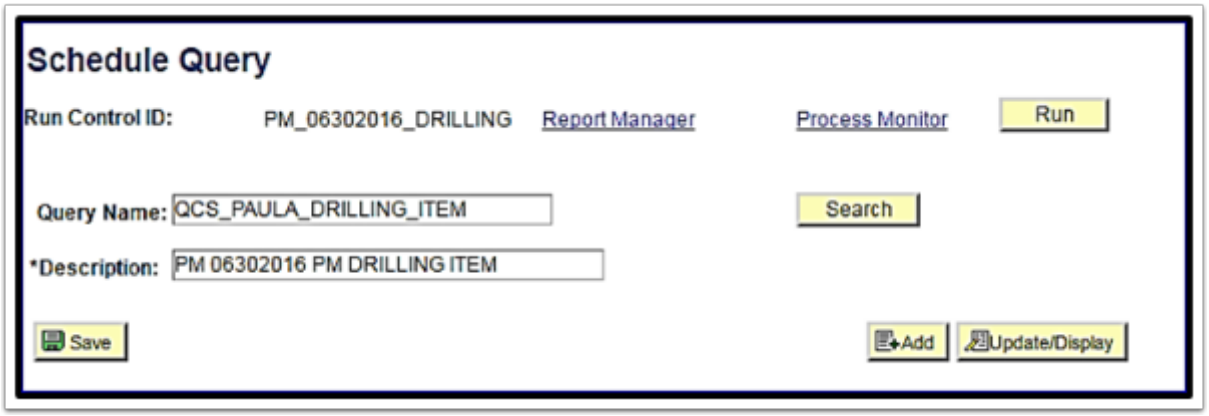
If the query being searched for has an existing Run Control ID associated with it, the user will be taken directly to the Schedule Query page after clicking search if there is only one Run Control ID. If there is more than one Run Control ID a list will display where the user will select the desired one by clicking on the hyperlink.

If there is not an existing Run Control ID then the message "No results found" will display and the user will need to enter in a new Run Control ID. Note: this will entail entering the name of the new Run Control ID before searching for the query to tie it to.

Click Add a New Value tab to create a new Run Control ID. Enter the new Run Control ID in the Field. Once the Run Control ID has been entered click on the “Add” button.

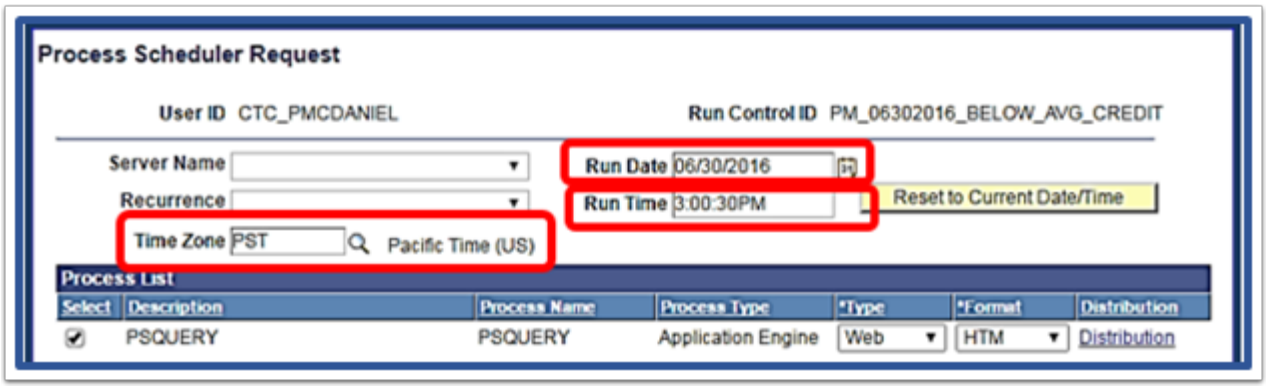


The Schedule Query page will display. Search for the correct query and add a Run Control ID description.



Note: Clicking on “Save” will save the Run Control ID for the Scheduled Query request however it will NOT schedule the query run. To schedule the query run, click on “Run”. Note that this is different than when accessing Schedule Query through Query Manager or Query Manager where the "Apply" button is selected to schedule the query.

The Process Scheduler Request page will display. Select the Time Zone, Date and Time to run the query.



The Output Type and Format can also be selected here.

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Click “OK”.

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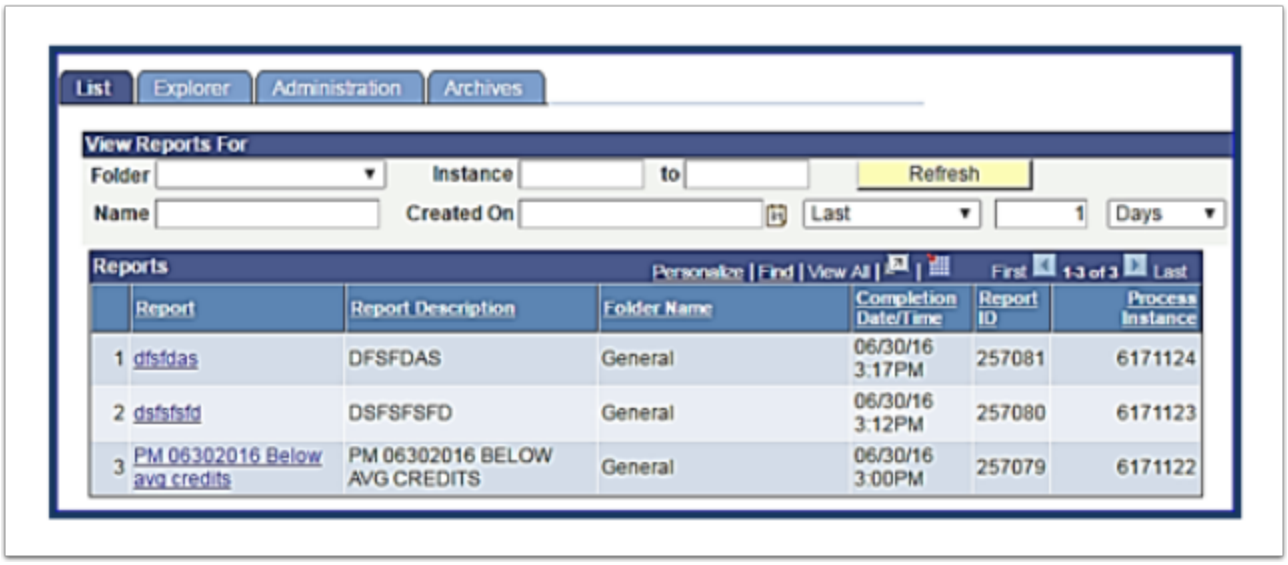

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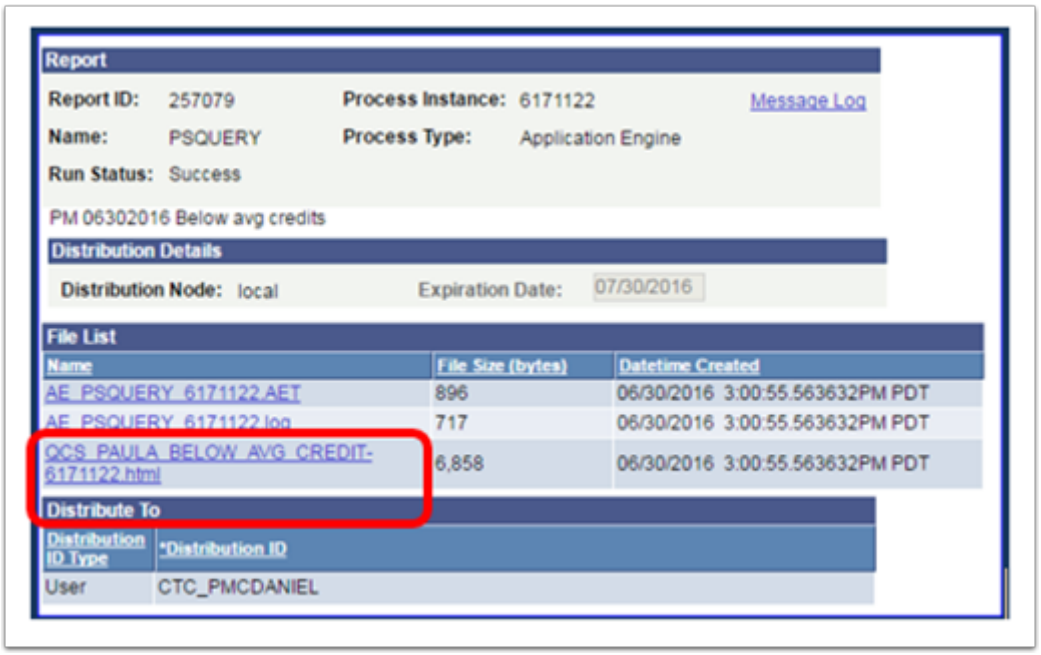
Click on the hyperlink found in the Report column to view the output. Remember this report 'name' is the description entered when first scheduling the query.

The query results can then be viewed in the selected format by clicking on the query Name in the Name column.



Schedule Query Recurrence

Whether using Schedule Query through the Menu Path or through Query Viewer/Manager, users in the CS pillar can set reports up to run on a recurring schedule. If you need this functionality, but do not currently have permissions, please contact your local security administrator for access. This option is not available in HCM or FS pillars, where only SBCTC staff will have access to use recurrences.

From the Process Schedule Request page, select the drop down next to Recurrence, and select the recurrence definition that you want to use for your report.