

# **HPCC Systems®**

## **ECL Playground**

**Boca Raton Documentation Team**

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<i>ECL Playground</i> .....	4
Using the ECL Playground .....	4

# ECL Playground

## Using the ECL Playground

ECL Playground is a tool hosted on an ESP server. A page runs in your browser, allowing you to access and execute self-contained ECL code on your HPCC system without the use of any other tools. The ECL Playground then shows you the results and the graph in your browser. The view is very similar to what the ECL IDE displays.

## Accessing ECL Playground

ECL Playground is installed with the HPCC platform. You can access it through the ECL Watch page.

1. In your browser, go to the **ECL Watch** URL. For example, <http://nnn.nnn.nnn.nnn:8010>, where nnn.nnn.nnn.nnn is your ESP server node's IP address.



Your IP address could be different from the ones provided in the example images. Please use the IP address of **your** node.

2. From ECL Watch, click on the **ECL** icon, then click the **Playground** link from the navigation sub-menu.

**Figure 1. ECL Playground link**



The ECL Playground displays.

## Introducing the ECL Playground

The ECL Playground page is a work area where you can see and run self-contained ECL code. You can see the code, submit it, and see the results. You can even change the code and resubmit it to instantly see the new results right in your browser. This is an ideal tool for the user who is not an ECL programming expert who wants to change some of the ECL code and see the results.

**Figure 2. The ECL Playground**

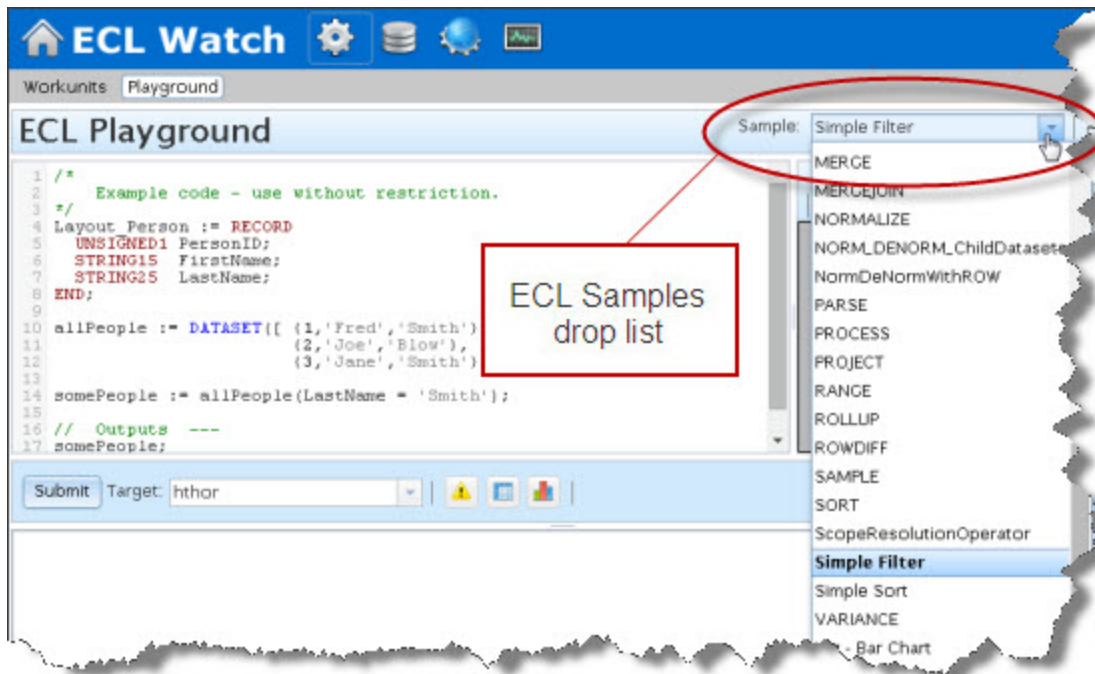
The screenshot shows the ECL Watch Playground interface. At the top, there's a blue header with the ECL Watch logo, navigation icons, a user profile dropdown, and a 'LOGGED IN AS:' indicator. Below the header, the 'Workunits' tab is selected, showing the 'Playground' sub-tab. The main area is divided into two sections. The top section contains the 'Editor' with ECL code, a 'Samples drop list' at the top right, and a 'Graphs' view on the right. The bottom section contains the 'Submit button', a 'Target Cluster' dropdown, and a 'Status' indicator showing 'completed'. Below these are 'Result Options' (Download: Zip, CZip, XLS) and the 'Results Area' displaying a table of results. The 'Results Navigation' bar at the bottom shows '1 - 30 of 30 results' and 'Result 1'.

##	number	letter
1	1	A
2	2	A
3	3	A
4	1	B
5	2	B

The ECL Playground page is divided into areas. The top portion contains the *Editor* area and the *Graph Viewer*. The Sample code drop list is at the top right. The bottom portion of the page displays the results.

The ECL Playground comes with a set of ready to run sample ECL code. The drop list contains code samples. Select any one of these samples and it loads in the editor.

Figure 3. Sample drop list



The selected code displays in the *Editor* area. You can then submit it as-is, or modify and submit. The results display at the bottom portion of the page.

## Running ECL Code

To run the selected sample code, choose a target cluster from the drop list, then press the **Submit** button.

A successful run displays the word **completed** as the status and the results display in the results viewer. You can also view the graph in the upper right.

Figure 4. Success

The screenshot shows the ECL Watch Playground interface. At the top, there's a blue header with the ECL Watch logo and navigation icons. Below it, a grey bar shows 'Workunits' and 'Playground' tabs. The main area is titled 'ECL Playground' and includes a 'Sample: JOIN\_dupes' dropdown. On the left, a code editor displays ECL code for creating datasets and performing a join. On the right, a graph view shows the execution flow, with a red box labeled 'Graph' pointing to it. Below the code editor, a 'Submit' button is circled in red. To its right, a 'Target: hthor' dropdown is visible. Further right, a 'completed' status is circled in red. At the bottom, a table displays the results of the join operation, with columns for '##', 'fred', and 'sue'. The table shows 5 rows of data. Below the table, a 'Result 1' tab is visible.

```
1 set1 := [1,2,3,4,5,6,7,8,9,10];
2 set2 := [10,20,30,40,50,60,70,80,90,100];
3
4 r1 := {integer1 fred};
5 r2 := {integer1 fred, integer1 sue};
6 ds1 := dataset(set1, r1);
7
8 ds2 := dataset(set2, r2);
9
10 r2 XF(ds1 L, ds2 R) := transform
11   self.fred := L.fred;
12   self.sue := R.fred;
13 end;
```

##	fred	sue
1	1	10
2	1	20
3	1	30
4	1	40
5	1	50

A completed job generates a graph. You can examine the graph in greater detail by double-clicking the graph to zoom in. You can also zoom in with the mouse wheel. A double-click on a blank area of the graph will zoom out. You can use the scroll bars on the border of the graph to navigate or you can drag the graph with your mouse.

Selecting a node in the graph highlights the relevant section of the code in the Editor. This is helpful in troubleshooting or modifying code since it shows you the code that corresponds to a node in the graph.

Figure 5. Error

The screenshot shows the ECL Playground interface. At the top, the title is "ECL Playground" and the sample is "JOIN\_dupes". The code editor shows ECL code with several lines highlighted in red, indicating errors. A red box labeled "Error Indicators" points to these lines. The code is as follows:

```
1 r2 := {integer1 fred, integer1 sue};  
2 ds1 := dataset(set1, r1);  
3  
4 ds2 := dataset(set2, r14);  
5  
6 r2 XF(ds1 L, ds2 R) := transform  
7  
8 self.fred := L.fred;  
9 self.sue := R.fred;  
10 end;  
11  
12 := JOIN(ds1, ds2, right.fred % 2 = 0, XF(left  
13  
14  
15  
16  
17 output(j)
```

Below the code editor, there is a "Submit" button and a "Target" dropdown set to "hthor". To the right, a status area shows a "failed" button. Below this, a table of error messages is displayed:

Severity	Source	Code	Message	Col	Line	File Name
Error	ecfcc	2167	Unknown identifier "r14"	21	8	stdin:
Error	ecfcc	2167	Unknown identifier "R"	18	10	stdin:
Error	ecfcc	2025	SELF not legal here	3	12	stdin:
Error	ecfcc	2167	Unknown identifier "sue"	8	12	stdin:
Error	ecfcc	3002	syntax error near "end"	1	13	stdin:
Error	ecfcc	3002	syntax error near "ds2": ...	15	15	stdin:

At the bottom, there are checkboxes for "Error(s)", "Warning(s)", and "Info", all of which are checked.

The status area displays the job status. If a job fails, errors display in the result viewer and the code is highlighted in red in the *Editor*. If there are warnings they are displayed in yellow.

## Analyze the results

When running ECL Code that has multiple results, each result is on a separate tab. Select a tab to see that set of results. You can also change number of results displayed or page through the results with the links at the bottom.



Figure 6. Multiple results

The screenshot shows the ECL Playground interface. The top section displays the ECL code for a query. The code defines a dataset of letters and then uses the `ENTH` function to retrieve the 2nd, 10th, 1st, 3rd, and 4th elements of the dataset, storing them in `Set1` through `Set5`.

```
1 SomeFile := DATASET({'A'}, {'B'}, {'C'}, {'D'}, {'E'},  
2 {'F'}, {'G'}, {'H'}, {'I'}, {'J'},  
3 {'K'}, {'L'}, {'M'}, {'N'}, {'O'},  
4 {'P'}, {'Q'}, {'R'}, {'S'}, {'T'},  
5 {'U'}, {'V'}, {'W'}, {'X'}, {'Y'},  
6 {STRING1 Letter});  
7  
8 Set1 := ENTH(SomeFile, 2, 10, 1);  
9 Set2 := ENTH(SomeFile, 2, 10, 2);  
10 Set3 := ENTH(SomeFile, 2, 10, 3);  
11 Set4 := ENTH(SomeFile, 2, 10, 4);  
12 Set5 := ENTH(SomeFile, 2, 10, 5);  
13
```

The bottom section shows the results of the query. The results are displayed in a table with columns `##` and `letter`. The results are paginated, showing 1 to 5 of 5 results. The pagination controls include a "Results Navigation" box, a "Result 2" tab, and a "Result 3" tab. The pagination controls also include a "Page 1 of 1" indicator and a "Page 50" dropdown menu.

**Results Navigation**


1 - 5 of 5 results

Result 2 Result 3 Result 4 Result 5

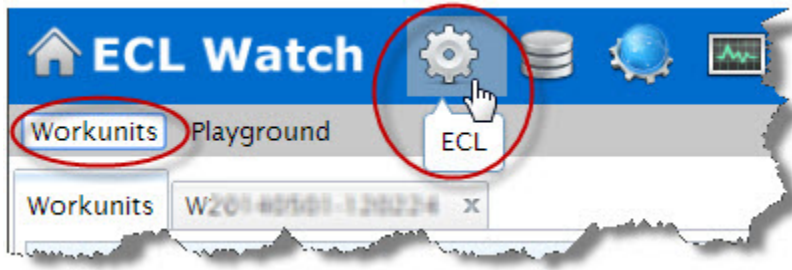
Page 1 of 1 Page 50

## ECL from a Workunit

You can access ECL code from inside a Workunit Details page in ECL Watch.

1. Select **Workunits** from the ECL Watch  menu.

**Figure 7. Browse Workunits**



2. Click on a workunit hyperlink to open the Workunit Details page.
3. Click on the **ECL** tab to view the workunit's ECL code.

**Figure 8. ECL link**

