

ECL Playground

Boca Raton Documentation Team



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ECL Playground

This manual covers the ECL Playground which is a component found in ECL Watch.

Figure 1. The ECL Playground in ECL Watch

The screenshot displays the ECL Watch ECL Playground interface. At the top, the ECL Watch logo and navigation icons are visible. The main area is divided into three sections: a code editor on the left, a workflow diagram on the right, and a results table at the bottom.

Code Editor: The code defines a record structure and a dataset, followed by sorting operations.

```
1 MyRec := RECORD
2   STRING1 Value1;
3   STRING1 Value2;
4 END;
5
6 SomeFile := DATASET([
7   {'C','G'},
8   {'C','C'},
9   {'A','X'},
10  {'B','G'},
11  {'A','B'}], MyRec);
12 SortedRecs1 := SORT(SomeFile, Value1, Value2);
13 SortedRecs2 := SORT(SomeFile, -Value1, Value2);
14 SortedRecs3 := SORT(SomeFile, Value1, -Value2);
15 SortedRecs4 := SORT(SomeFile, -Value1, -Value2);
16 SortedRecs5 := SORT(SomeFile, Value2, Value1);
17 SortedRecs6 := SORT(SomeFile, -Value2, Value1);
18 SortedRecs7 := SORT(SomeFile, Value2, -Value1);
19 SortedRecs8 := SORT(SomeFile, -Value2, -Value1);
20
21 OUTPUT(SortedRecs1);
22 OUTPUT(SortedRecs2);
```

Workflow Diagram: The diagram shows two parallel paths. Each path starts with an 'Inline Dataset' node, followed by a 'Sort' node (labeled '+300, -100'), and ends with an 'Output Result' node (labeled 'Output Result #1' and 'Output Result #2').

Results Table: The table displays the output of the first sort operation. It has columns for row number, value1, and value2.

##	value1	value2
1	C	C
2	C	G
3	B	G
4	A	B
5	A	X

Below the table, there are tabs for 'Result 1' through 'Result 8', and a pagination bar showing '1 - 5 of 5 results'.

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 Systems platform 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 Systems platform. You can access it through the ECL Watch page.

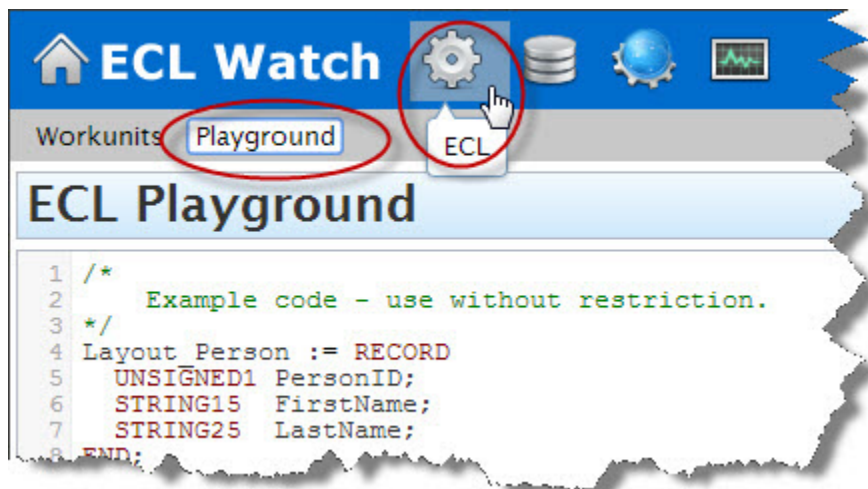
1. In your browser, go to the **ECL Watch** URL. For example, `http://nnn.nnn.nnn.nnn:8010`, where `nnn.nnn.nnn.nnn` is your ESP server node's IP address.



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 2. ECL Playground link

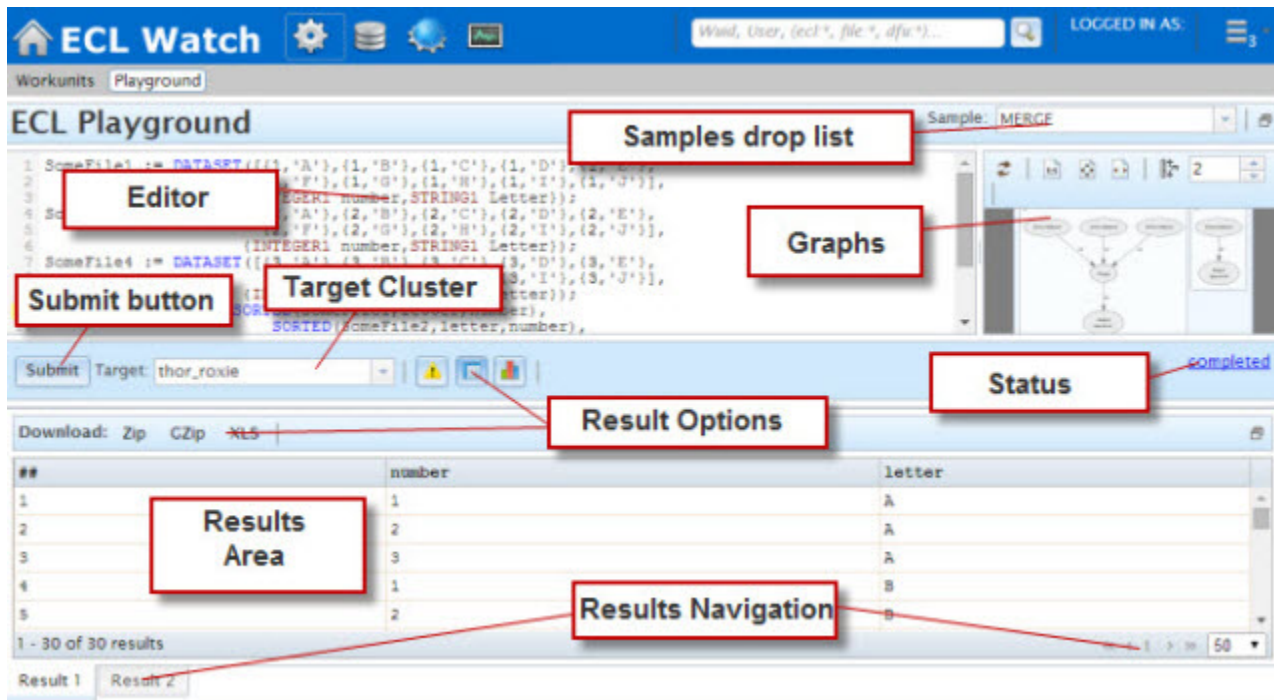


The ECL Playground displays.

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.

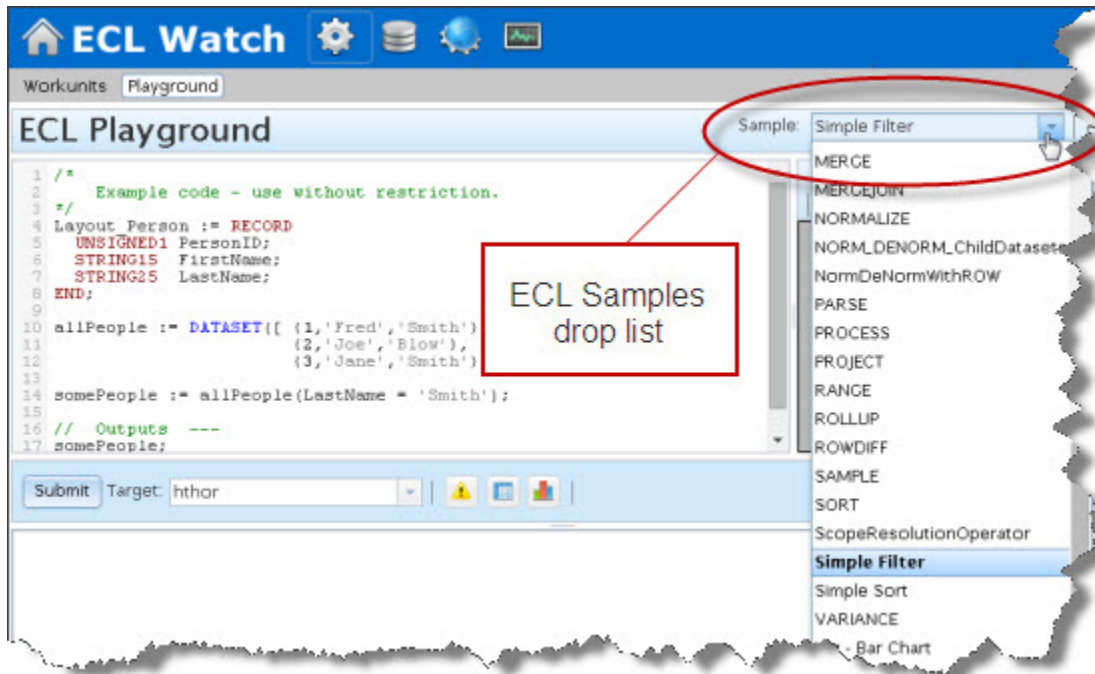
Figure 3. The ECL Playground



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 4. 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 5. 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 the header, the 'Workunits' tab is selected, and the 'Playground' sub-tab is active. The 'Sample' dropdown is set to 'JOIN_dupes'. The main area is divided into three sections: a code editor on the left, a graph view on the right, and a results table at the bottom. The code editor contains the following ECL code:

```
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, r1);
9
10 r2 XF(ds1 L, ds2 R) := transform
11   self.fred := L.fred;
12   self.sue := R.fred;
13 end;
```

The graph view on the right shows a join operation between two datasets. A red box labeled 'Graph' points to this view. The 'Submit' button is circled in red, and the 'completed' status is also circled in red. The results table at the bottom shows the output of the join operation:

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

The table shows 5 results out of 100. The 'Result 1' tab is selected.

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 6. 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 the following ECL code:

```

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   self.fred := L.fred;
8   self.sue := R.fred;
9 end;
10
11 := JOIN(ds1, ds2, right.fred % 2 = 0, XF(left.fred, right.sue));
12
13 output(j)

```

The code is highlighted in red, indicating errors. A red box labeled "Error Indicators" points to the error messages in the code. The status bar at the bottom right shows "failed". Below the code editor, there is a table of error messages:

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".

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 7. 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 "Results Navigation" box, a "Result 2" tab, and a "Result 3" tab.

The results table shows the following data:

##	letter
1	
2	
3	
4	
5	

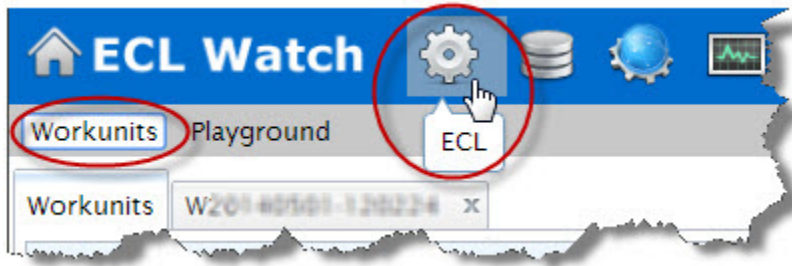
The pagination controls show "1 - 5 of 5 results" and "Results Navigation". The "Result 2" tab is selected, and the "Result 3" tab is also visible. The pagination controls also include a "Results Navigation" box, a "Result 2" tab, and a "Result 3" tab.

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 8. 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 9. ECL link

