

# HPCC Systems®

## 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 Playground interface within ECL Watch. The top navigation bar includes the ECL Watch logo, a search bar with the text "Wuid, User, (ecl:\*, file:\*, dfu:\*)", and a "LOGGED IN AS:" indicator. The main area is titled "ECL Playground" and shows a code editor with the following ECL code:

```
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' }
12 }, MyRec);
13 SortedRecs1 := SORT(SomeFile, Value1, Value2);
14 SortedRecs2 := SORT(SomeFile, -Value1, Value2);
15 SortedRecs3 := SORT(SomeFile, Value1, -Value2);
16 SortedRecs4 := SORT(SomeFile, -Value1, -Value2);
17 SortedRecs5 := SORT(SomeFile, Value2, Value1);
18 SortedRecs6 := SORT(SomeFile, -Value2, Value1);
19 SortedRecs7 := SORT(SomeFile, Value2, -Value1);
20 SortedRecs8 := SORT(SomeFile, -Value2, -Value1);
21 OUTPUT(SortedRecs1);
22 OUTPUT(SortedRecs2);
```

Below the code editor is a "Submit" button and a "Target" dropdown menu set to "thor". To the right, a visual execution flow diagram shows two parallel paths. Each path starts with an "Inline Dataset" node, followed by a "Sort" node with parameters "+300, -100", and ends with an "Output Result" node (Output Result #1 and Output Result #2). The flow is indicated by arrows and data counts (e.g., 5 records).

At the bottom, there is a "Refresh" button, download options (Zip, GZip, XLS, CSV), and a "Filter" dropdown. Below this is a table with 5 rows and 3 columns: "#", "value1", and "value2". The table shows the following data:

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

Below the table, it indicates "1 - 5 of 5 results" and a pagination control showing "50". At the very bottom, there are tabs for "Result 1" through "Result 8", with "Result 2" currently selected.

# 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.

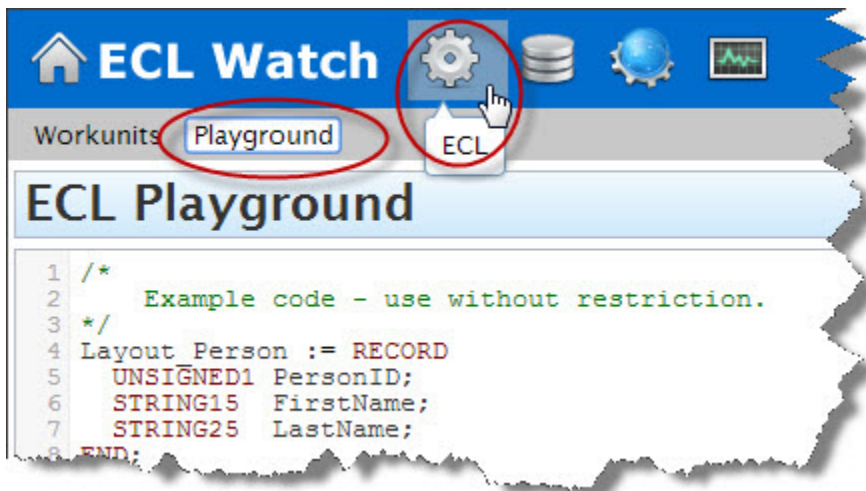
1. In your browser, go to the **ECL Watch** URL. For example, <http://nnn.nnn.nnn.nnn:8010>, where nnn.nnn.nnn.nnn is your ESP server node's IP address.



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 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**

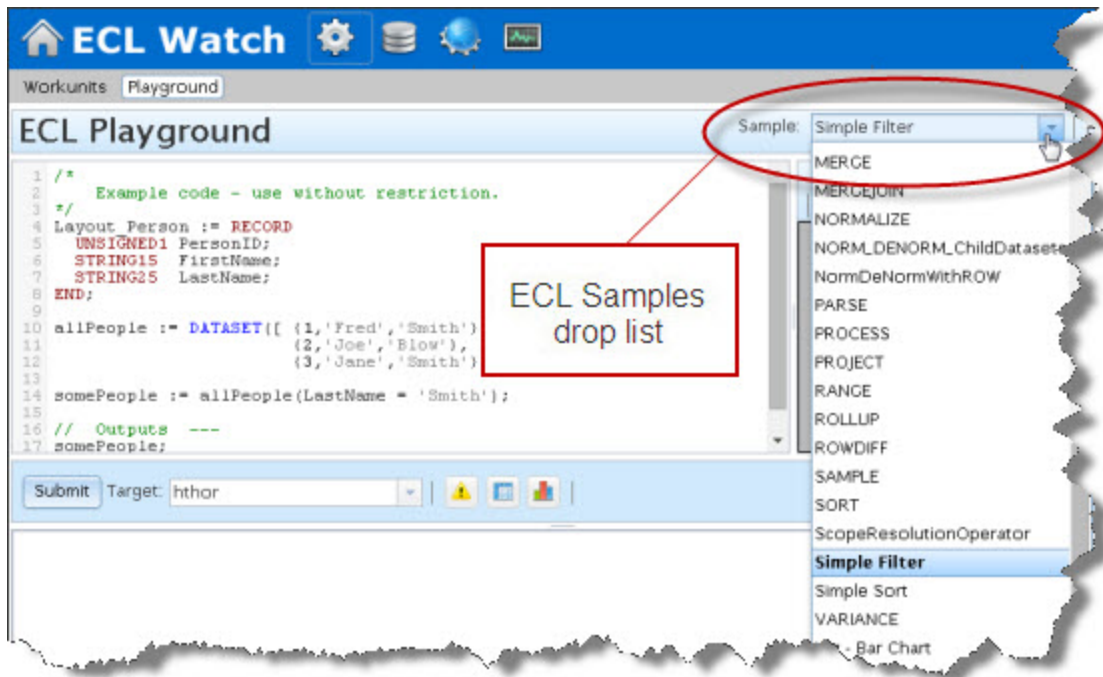
The screenshot shows the ECL Watch playground interface. At the top, there's a navigation bar with 'ECL Watch' and a search bar. Below that, the 'ECL Playground' section is visible. On the left, there's an 'Editor' area containing ECL code. On the right, there's a 'Samples drop list' and a 'Graphs' area. Below the editor, there's a 'Submit button' and a 'Target Cluster' dropdown. The 'Status' area shows 'completed'. Below that, there's a 'Result Options' section with download options like 'Zip', 'CZip', and 'XLS'. The 'Results Area' displays a table with columns 'number' and 'letter'. The 'Results Navigation' section shows '1 - 30 of 30 results' and a pagination control.

##	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 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 that, the 'Workunits' section shows 'Playground' and a 'Sample' dropdown set to 'JOIN\_dupes'. The main area is divided into three sections: a code editor on the left, a graph visualization on the right, and a control bar 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 visualization on the right shows a flow diagram with nodes for 'set1', 'set2', 'dataset', and 'transform'. A red box labeled 'Graph' points to this visualization. The control bar at the bottom features a 'Submit' button (circled in red), a 'Target' dropdown set to 'hthor', and a 'completed' status indicator (circled in red). Below the control bar is a table with columns for '##', 'fred', and 'sue'. The table shows 5 rows of data:

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

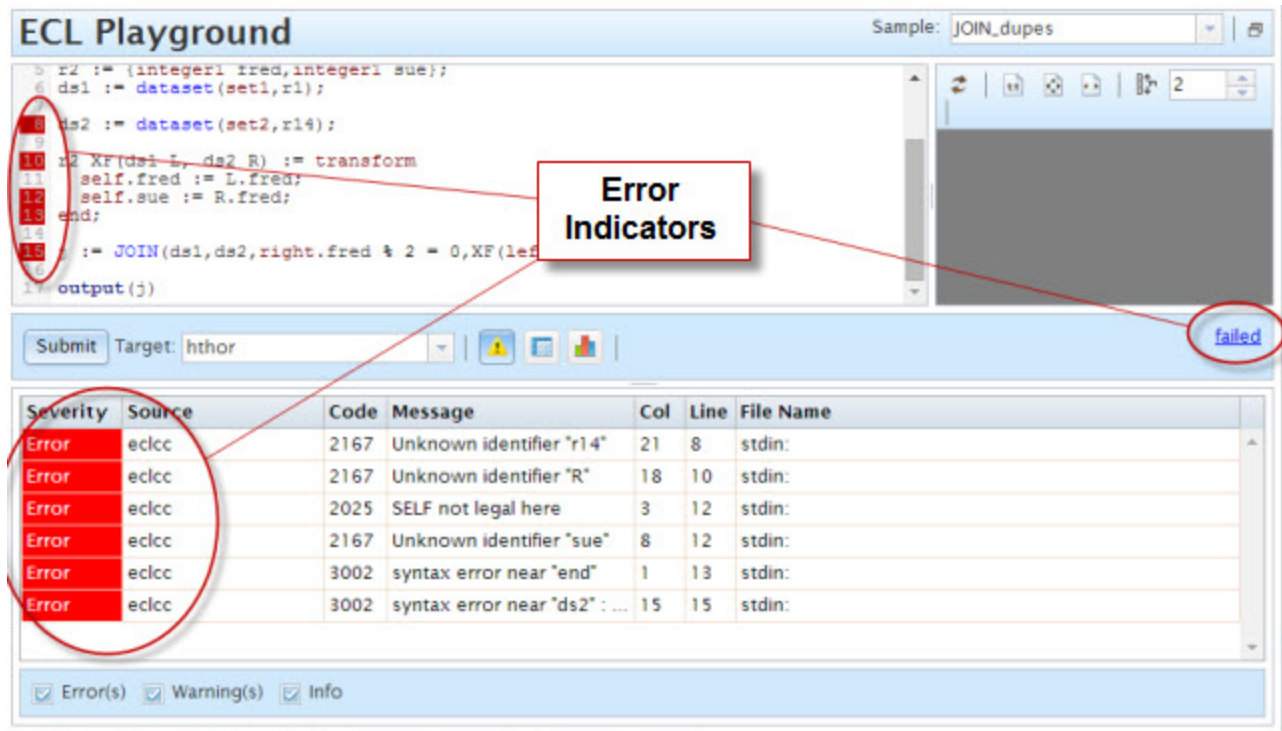
At the bottom of the table, it says '1 - 50 of 100 results' and has navigation controls for page 1 of 50.

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 6. Error



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 displays the ECL Playground interface. At the top, the title "ECL Playground" is visible, along with a "Sample: ENTH" dropdown menu. The main area contains a code editor with the following ECL script:

```
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
```

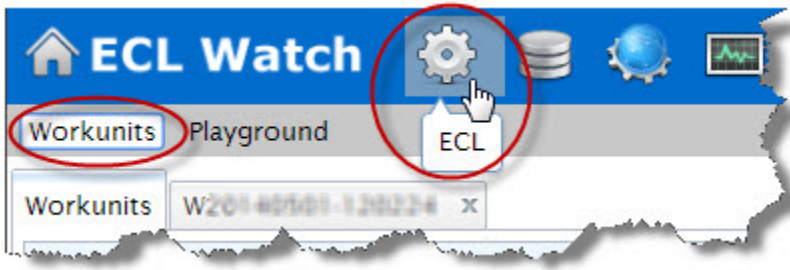
Below the code editor, there is a "Submit" button and a "Target: hthor" dropdown. The status "completed" is shown in the top right. A "Download" section offers options for Zip, GZip, and XLS, along with a "Filter" dropdown. The results table is currently empty, with columns labeled "##" and "letter". A red box labeled "Results Navigation" points to the navigation controls at the bottom of the table. These controls include a "1 - 5 of 5 results" indicator, a set of buttons for "Result 2", "Result 3", "Result 4", and "Result 5", and a pagination control showing "50" with navigation arrows. The "Result 2" button and the pagination control are circled in red.

## 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**

