

# HPCC Systems®

## ECL Playground

Boca Raton Documentation Team

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*ECL Playground* ..... 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.

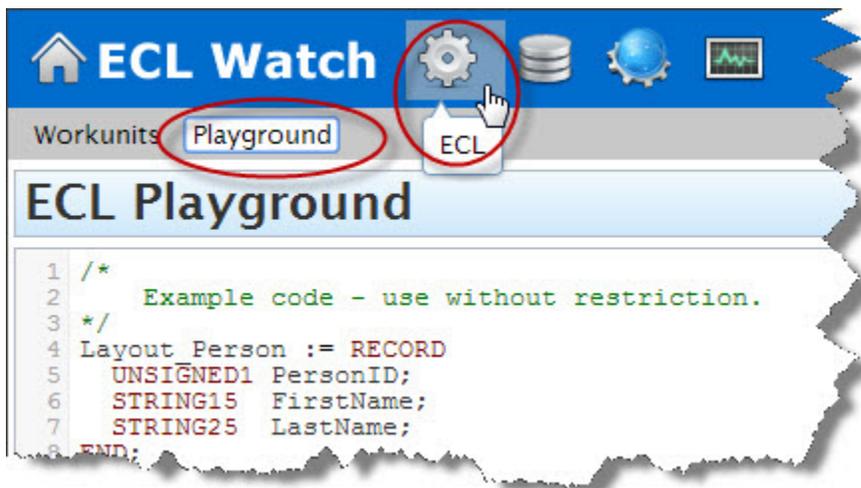
1. In your browser, go to the **ECL Watch** URL. For example, `http://nnn.nnn.nnn.nnn:8010`, where `nnn.nnn.nnn.nnn` is your ESP server node's IP address.



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

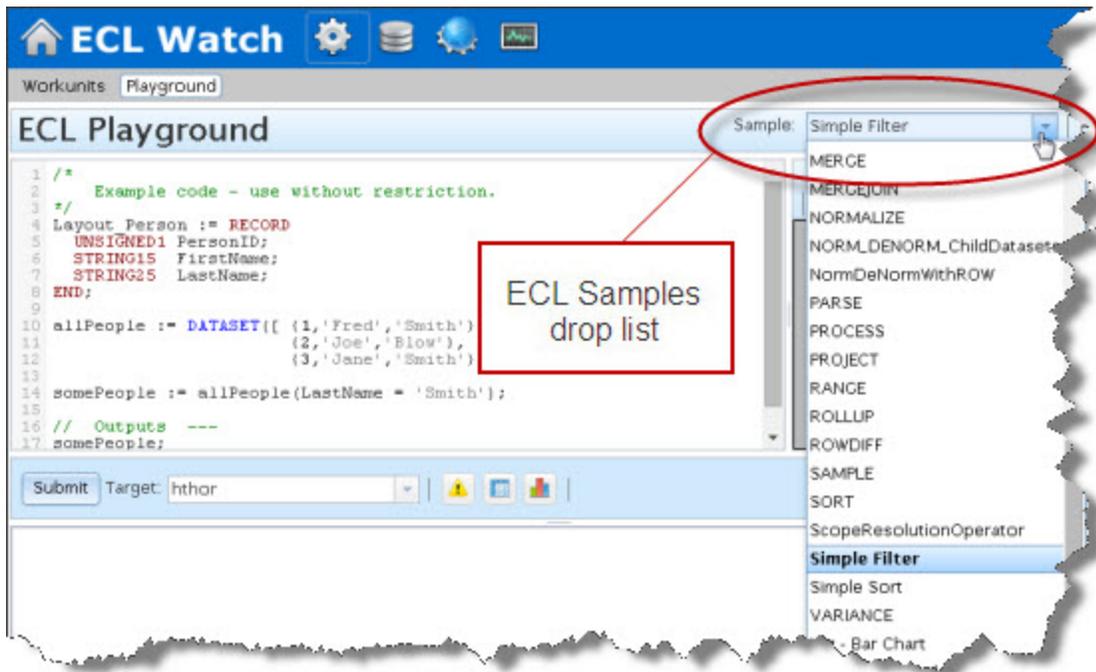
The screenshot shows the ECL Watch playground interface. At the top, there is a blue header with the ECL Watch logo, a search bar, and a 'LOGGED IN AS:' indicator. Below the header, the 'Workunits' section shows 'Playground' selected. The main area is titled 'ECL Playground' and contains a 'Samples drop list' at the top right showing 'Sample: MERGE'. The central 'Editor' area contains ECL code. To the right of the editor is a 'Graphs' area showing a flowchart. Below the editor is a 'Submit button' and a 'Target Cluster' dropdown menu. The 'Status' area shows 'completed'. Below the status is a 'Result Options' section with 'Download: Zip CZip XLS'. The 'Results Area' displays a table with 5 rows of results. At the bottom, there is a 'Results Navigation' section showing '1 - 30 of 30 results' and 'Result 1 Result 2'.

##	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 that, the 'Workunits' section shows 'Playground' and a 'Sample' dropdown set to 'JOIN\_dupes'. The main area is divided into a code editor on the left and a graph visualization on the right. 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 from 'set1' and 'set2' through a 'dataset' node to a 'transform' node, which then outputs 'Result #1'. A red box labeled 'Graph' points to this visualization. Below the code editor, there's a 'Submit' button (circled in red) and a 'Target' dropdown set to 'hthor'. To the right of the 'Submit' button, the status 'completed' is displayed in a blue box (also circled in red). Below the code editor, there's a 'Download' section with options for 'Zip', 'GZip', and 'XLS', and a 'Filter' dropdown. The main results area shows a table with 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 results area, 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 5. Error

The screenshot shows the ECL Playground interface. At the top, the sample name is 'JOIN\_dupes'. The code editor contains the following ECL code:

```
r2 := {integer1 fred, integer1 sue};  
ds1 := dataset(set1, r1);  
ds2 := dataset(set2, r14);  
XF(ds1 L, ds2 R) := transform  
  self.fred := L.fred;  
  self.sue := R.fred;  
end;  
:= JOIN(ds1, ds2, right.fred % 2 = 0, XF(lef  
output(j)
```

The code editor has red error indicators on lines 8, 10, 12, 13, and 15. A box labeled 'Error Indicators' points to these lines. The status bar at the bottom right shows 'failed'. Below the code editor 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 of the error table, 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 displays the ECL Playground interface. At the top, the title is "ECL Playground" and the sample is "ENTH". The code editor contains 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" dropdown set to "hthor". The status is "completed".

The results section shows a table with columns "##" and "letter". The table is currently empty. Below the table, there is a "Download" section with options for Zip, GZip, and XLS. A "Filter" dropdown is also present.

At the bottom of the results section, there is a navigation bar. It shows "1 - 5 of 5 results". Below this, there are buttons for "Result 2", "Result 3", "Result 4", and "Result 5". The "Result 2" button is highlighted. To the right of these buttons, there is a pagination control with arrows and a page number "50".

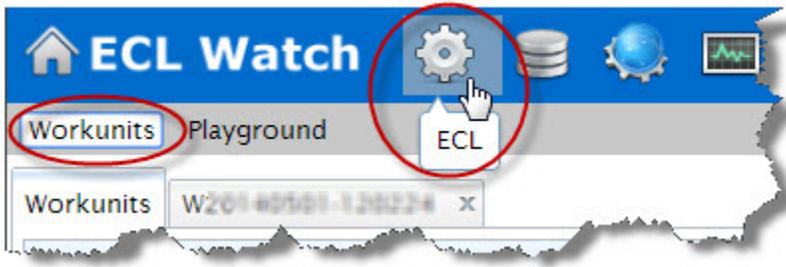
A red box labeled "Results Navigation" is positioned over the navigation bar, with lines pointing to the "Result 2" button and the pagination control.

## 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**

