

WHEN YOU NEED TO BE SURE

SGS

Error Viewer User Guide

Version 2

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Version History

Version	Date	Revision Description
1	6/7/2021	Initial publication
2	7/27/2023	Refreshed all screen captures and as applicable associated narrative to align with latest release.

Document Conventions

This document uses the following typographic and syntax conventions.

- Commands, command options, file names or any user-entered input appear in Courier type. Variables appear in Courier italic type.

Example: Select the `cmdapp-relVersion-buildVersion.zip` file....

- User interface elements, such as field names, button names, menus, menu commands, and items in clickable dropdown lists, appear in Arial bold type.

Example: **Type**: Click **Select Type** to display drop-down menu options.

- Cross-references are designated in Arial italics.

Example: Refer to *Figure 1...*

- Click intra-document cross-references and page references to display the stated destination.

Example: Refer to *Section 1 Overview on page 1*.

The clickable cross-references in the preceding example are *1*, *Overview*, and *on page 1*.

CyFlex Documentation

CyFlex documentation is available at <https://cyflex.com/>. View **Help & Docs** topics or use the **Search** facility to find topics of interest.



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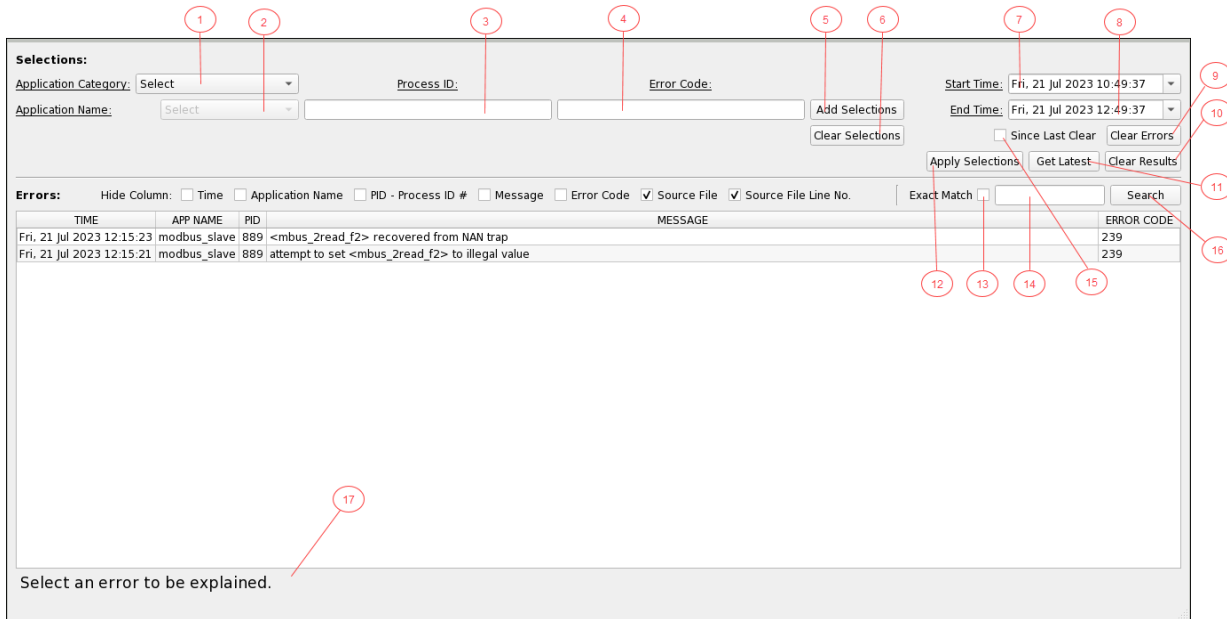
1 Overview

This user guide describes functions and use of the Error Viewer graphical user interface.

1.1 General Layout and Functions

Figure 1 shows the user interface with annotations corresponding to following function descriptions.

Figure 1: General Layout



- 1. Application Category:** Click the dropdown to display a list of similar CyFlex applications and select as needed. Refer to *Figure 2* on page 4.
- 2. Application Name:** Click the dropdown to display a list of application name filters. Select an application name. Refer to *Figure 3* on page 5.
- 3. Process ID:** Enter the process ID filter. This is most useful when filtering for a specific instance of an application when there are multiple instances running.
- 4. Error Code:** Enter the error code filter.

@Note:

Multiple filters can be created and filtered simultaneously by re-entering information in categories 1-4 and then clicking the **Add Selections** button again.

- 5. Add Selections:** Click this button to add the preceding filter selections to the error search. Refer to *Figure 4* on page 6.
- 6. Clear Selections:** Click this button to remove previously entered filters and view unfiltered error results.

7. **Start Time:** This field is active for entry when the **Since Last Clear** checkbox is unchecked, refer to the description for **Since Last Clear** below. When active, the entered **Start Time** indicates the beginning of the time window for errors that will be displayed.
8. **End Time:** This field is active for entry when the **Since Last Clear** checkbox is unchecked, refer to the description below. When active, the entered **End Time** indicates the end of the time window for errors that will be displayed.
9. **Clear Errors:** Clicking this button is the equivalent of entering `clear_errors` in a terminal window. **Clear Errors** operates in conjunction with the **Since Last Clear** checkbox, refer to the description below. When checked and error results are refreshed with the **Get Latest** button, the only errors displayed are those generated the last time the **Clear Errors** button was clicked or since the last time `clear_errors` was entered in a terminal.
10. **Clear Results:** Click this button to remove all displayed errors and error codes. Errors and codes are retained in the database.
11. **Get Latest:** Click this button to update the **End Time** with the current time and display the latest available errors. Refer to *Section 2.2 Displaying Errors Since the Last Clear* on page 3 for related information.
12. **Apply Selections:** Click this button to apply filters that have been set in filter categories 1 through 4.
13. **Exact Match:** Click this checkbox to apply case sensitivity to a search string.
14. Search bar string entry: Enter filters for error results by application name and message.
15. **Since Last Clear:** Click this checkbox so that the error viewer only shows the error messages that have been generated since the last clear. When this box is checked, the **Start Time** and **End Time** windows are deactivated. In this condition, use the **Get Latest** button to refresh the error results. Refer to *Section 2.2 Displaying Errors Since the Last Clear* on page 3 for related information.
16. **Search:** Click this button to filter the results of the application name and message per the entries in the search bar
17. Message explanation: Contains the explanation for a selected error.

2 Using the Error Viewer

2.1 Starting the Error Viewer

Use any of the following methods to start the Error Viewer:

- Enter `ErrorViewer &` into a terminal window.
- Add `ErrorViewer &` toward the end of the `go` script to automatically launch it.
- Add `ErrorViewer &` to the existing operator display with a `cmxcmdbutton`.

2.2 Displaying Errors Since the Last Clear

When making changes to spec files and retranslating them, it is often useful to show only the errors that have been generated since the previous clear to ensure a new error has not been created. To do this:

1. Click the **Since Last Clear** checkbox.
2. Click the **Get Latest** button to refresh the results and then view for newly created errors.

2.3 Filtering Errors using the Search Bar

Use the Search bar to search the **Message** column or **Application** name column for specific text. Enter either a partial or entire application name and then click the **Search** button to filter the existing results for applications or messages containing that name.

Note:

The **Search** button does not refresh the timestamp of results. Obtain the latest results after clicking the **Search** button by then clicking the **Get Latest** button.

2.4 Filtering Errors using the Selection Options

Selection options enable filter of the error results by the CyFlex application name, process ID, or error code. The primary use for this is for creating multiple application or process ID filters at once, or for users who know they have a generic “computation” problem but are not sure exactly which application is creating the problem.

Execute the following sequence to use these filters:

1. Click the **Application Category** dropdown and select a displayed category as in *Figure 2*.

Figure 2: Application Category Dropdown List

The screenshot shows the Error Viewer interface with the 'Application Category' dropdown menu open. The menu lists various categories, and 'Select' is currently chosen. The main interface includes search filters for Process ID, Error Code, Start Time, and End Time, along with buttons for 'Add Selections', 'Clear Selections', 'Apply Selections', 'Get Latest', and 'Clear Results'. A table of error messages is visible, showing columns for MESSAGE and ERROR CODE.

MESSAGE	ERROR CODE
is_2read_f2> recovered from NAN trap	239
pt to set <mbus_2read_f2> to illegal value	239

- After category selection, select an **Application Name** that is a subset of the selected category as displayed in *Figure 3*.

Figure 3: Application Name List

The screenshot shows the Error Viewer interface with the following components:

- Selections:** Application Category: General Devices, Process ID: [], Error Code: [], Start Time: Fri, 21 Jul 2023 10:49:37, End Time: Fri, 21 Jul 2023 13:10:29.
- Application Name List:** A dropdown menu showing a list of application names such as gmodbus, CanDbc, ecat_srvr, bacnet_srvr, MsgUdpIn, MsgProtocolTest, MsgProtocol, MsgUdpOut, MsgTestInt, MsgTcp_serv_comm, MsgTCP_serv, MsgTcp, MsgMon, Msginfile_dump, di_ecat, ao_ecat, ai_ecat, ecat_ins, do_ecat, modbus_slave, ao_modbus_tcp, ao_modbus_serial, ai_modbus_serial, modbus_strm_serial, modbus_srvr_serial, gmodbus_child, do_modbus_serial, di_modbus_serial, di_modbus_tcp, do_modbus_tcp, modbus_strm_tcp, modbus_srvr_tcp, ai_modbus_tcp.
- Search Filters:** On Name, PID - Process ID #, Message, Error Code, Source File, Source File Line No., Exact Match, Search.
- Table:**

TIME	MESSAGE	ERROR CODE
Fri, 21 Jul 2023 12:15:23	as_2read_f2> recovered from NAN trap	239
Fri, 21 Jul 2023 12:15:21	pt to set <mbus_2read_f2> to illegal value	239

- Assume **gp_test** is selected for this example. If multiple instances of gp_test are running and only results from a specific instance is desired, obtain its process ID by using the command below. Enter the process ID by using the `sin -P` command. In the results below, the process ID for the two instances are shown in red.

```
sin -Pgp_test
10157 -19 gp_test avl_smoke_header
10160 20 /bin/bash /cyflex/cmds/sin -Pgp_test
2447 -16 gp_test
```

- After completing entries for all selections in the dropdowns and the text boxes, click the **Add Selections** button as in *Figure 4*.

Figure 4: Add Selections

- The resulting screen contains the added selections as in *Figure 5*.

Figure 5: Added Selections

- If desired, add additional filters by repeating steps 1 through 5.
- When completed with adding filters, execute one of the following based on the timeframe of desired computations to display:
 - Click the **Apply Selections** button to view results within a specific time window.
 - Click the **Get Latest** button to view the latest results.

2.5 Filtering Errors for a Specific Time Window

To search for errors that occurred within a specific time window, ensure the **Since Last Clear** box is unchecked and enter the times to search as in *Figure 6* and then click the **Apply Selections** button.

Note:

Clicking the **Get Latest** button resets the **End Time** to the current time.

Figure 6: Apply Start and End Time Entries

2.6 Displaying Error Codes

Click a value in the **ERROR_CODE** column as in *Figure 7* to view error details. An explanation is displayed for that type of error which may help diagnose the problem.

Figure 7: Error Code Details

Selections:
 Application Category: Select Process ID: Error Code: Start Time: Wed, 5 Jul 2023 09:57:55
 Application Name: Selected Add Selections Clear Selections End Time: Mon, 24 Jul 2023 12:19:41
 Since Last Clear Clear Errors Apply Selections Get Latest Clear Results

Errors: Hide Column: Time Application Name PID - Process ID # Message Error Code Source File Source File Line No. Exact Match Search

TIME	APP NAME	PID	MESSAGE	ERROR CODE
Fri, 21 Jul 2023 12:15:23	modbus_slave	889	<mbus_2read_f2> recovered from NAN trap	239
Fri, 21 Jul 2023 12:15:21	modbus_slave	889	attempt to set <mbus_2read_f2> to illegal value	239
Fri, 21 Jul 2023 07:33:55	modbus_slave	888	<mbus_read_f2> recovered from NAN trap	239
Fri, 21 Jul 2023 07:33:55	modbus_slave	080	attempt to set <mbus_read_f2> to illegal value	239
Fri, 21 Jul 2023 07:33:16	modbus_slave	080	<mbus_read_f1> recovered from NAN trap	239
Fri, 21 Jul 2023 07:33:16	modbus_slave	080	attempt to set <mbus_read_f1> to illegal value	239
Fri, 21 Jul 2023 07:30:09	modbus_slave	089	<mbus_2read_f1> recovered from NAN trap	239
Fri, 21 Jul 2023 07:30:09	modbus_slave	089	attempt to set <mbus_2read_f1> to illegal value	239
Fri, 21 Jul 2023 02:53:13	modbus_slave	089	<mbus_2read_f2> recovered from NAN trap	239
Fri, 21 Jul 2023 02:53:11	modbus_slave	089	attempt to set <mbus_2read_f2> to illegal value	239
Thu, 20 Jul 2023 22:27:46	modbus_slave	080	<mbus_read_f2> recovered from NAN trap	239
Thu, 20 Jul 2023 22:27:46	modbus_slave	080	attempt to set <mbus_read_f2> to illegal value	239
Thu, 20 Jul 2023 22:26:46	modbus_slave	080	<mbus_read_f1> recovered from NAN trap	239
Thu, 20 Jul 2023 22:26:46	modbus_slave	080	attempt to set <mbus_read_f1> to illegal value	239
Thu, 20 Jul 2023 22:23:51	modbus_slave	889	<mbus_2read_f1> recovered from NAN trap	239
Thu, 20 Jul 2023 22:23:51	modbus_slave	889	attempt to set <mbus_2read_f1> to illegal value	239
Thu, 20 Jul 2023 21:33:54	modbus_slave	889	<mbus_2read_f2> recovered from NAN trap	239
Thu, 20 Jul 2023 21:33:51	modbus_slave	889	attempt to set <mbus_2read_f2> to illegal value	239
Thu, 20 Jul 2023 19:07:52	modbus_slave	889	<mbus_2read_f2> recovered from NAN trap	239

Error Code Description: 239
 An attempt was made to set a variable value to a non-finite value, such as NAN or INF

2.7 Refreshing Results

A manual refresh is required to view latest errors. Use either of the following methods depending on the desired result:

- Click the **Get Latest** button to view latest errors.
- Click the **Apply Selections** button to refresh results for errors with a specified **End Time** that is not the current time.

Figure 8: Results Refresh Options

Start Time: Wed, 5 Jul 2023 09:57:55
 End Time: Mon, 24 Jul 2023 12:19:41
 Since Last Clear Clear Errors
 Apply Selections Get Latest Clear Results
 Exact Match Applies the filter selections from above.

2.8 Hiding Columns

Hide columns to only view specific columns of error information and provide more space to view columns of interest. To hide column(s), click the checkbox for a column.

The example in *Figure 9* hides the **PID - Process ID #**, **Source File**, and **Source File Line No** columns to allow for more room to be allocated to the **MESSAGE** column.

Figure 9: Hidden Columns

Selections:

Application Category: Process ID: Error Code:

Application Name:

Start Time: End Time:

Since Last Clear

Errors: Hide Column: Time Application Name PID - Process ID # Message Error Code Source File Source File Line No

Exact Match: Search:

TIME	APP NAME	MESSAGE	ERROR CODE
Fri, 21 Jul 2023 12:15:23	modbus_slave	<mbus_2read_f2> recovered from NAN trap	239
Fri, 21 Jul 2023 12:15:21	modbus_slave	attempt to set <mbus_2read_f2> to illegal value	239
Fri, 21 Jul 2023 07:33:55	modbus_slave	<mbus_read_f2> recovered from NAN trap	239
Fri, 21 Jul 2023 07:33:55	modbus_slave	attempt to set <mbus_read_f2> to illegal value	239
Fri, 21 Jul 2023 07:33:16	modbus_slave	<mbus_read_f1> recovered from NAN trap	239
Fri, 21 Jul 2023 07:33:16	modbus_slave	attempt to set <mbus_read_f1> to illegal value	239
Fri, 21 Jul 2023 07:30:09	modbus_slave	<mbus_2read_f1> recovered from NAN trap	239
Fri, 21 Jul 2023 07:30:09	modbus_slave	attempt to set <mbus_2read_f1> to illegal value	239
Fri, 21 Jul 2023 02:53:13	modbus_slave	<mbus_2read_f2> recovered from NAN trap	239
Fri, 21 Jul 2023 02:53:11	modbus_slave	attempt to set <mbus_2read_f2> to illegal value	239
Thu, 20 Jul 2023 22:27:46	modbus_slave	<mbus_read_f2> recovered from NAN trap	239
Thu, 20 Jul 2023 22:27:46	modbus_slave	attempt to set <mbus_read_f2> to illegal value	239
Thu, 20 Jul 2023 22:26:46	modbus_slave	<mbus_read_f1> recovered from NAN trap	239
Thu, 20 Jul 2023 22:26:46	modbus_slave	attempt to set <mbus_read_f1> to illegal value	239
Thu, 20 Jul 2023 22:23:51	modbus_slave	<mbus_2read_f1> recovered from NAN trap	239
Thu, 20 Jul 2023 22:23:51	modbus_slave	attempt to set <mbus_2read_f1> to illegal value	239
Thu, 20 Jul 2023 21:33:54	modbus_slave	<mbus_2read_f2> recovered from NAN trap	239
Thu, 20 Jul 2023 21:33:54	modbus_slave	attempt to set <mbus_2read_f2> to illegal value	239
Thu, 20 Jul 2023 19:07:52	modbus_slave	<mbus_2read_f2> recovered from NAN trap	239

Error Code Description: 239
An attempt was made to set a variable value to a non-finite value, such as NAN or INF