

WHEN YOU NEED TO BE SURE



CyFlex® Release Notes

Release Version 6.3.27

Developed by SGS North America, Inc.

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Overview

This release notes document identifies and describes the updates for CyFlex version 6.3.27. The following link contains Jira issues within this release: [cyflex.6.3.27 - Jira Issues](#)

Refer to *Installation Notes* below for install-related considerations.

Installation Notes

- [CFBUG-2811](#) – the dii_scales program is no longer available in the cyflex releases
- [CFBUG-2800](#) - [CFBUG-2793](#)
 - adding the -u argument to gval will allow the value of the variable to be returned with the units. The -u option must be the first argument. New gval usage: gval -u variable_name or gval variable_name
 - add the capability to return the value of a variable in specified units by specifying the return units in brackets
Ex. if my_real is 70.70[VOLTS]
\$ gval my_real[mV]
70700.00

\$ gval -u my_real[mV]
70700.00[mV]

- [CFBUG-2775](#) – Removed obsolete function codes for di_specs and do_specs
 - The following di_specs function codes were **removed**:

THR_LOC_SELECT	THR_REM_SELECT	PTD_FUEL_SYS	CELECT_FUEL_SYS	DYN_LOC_SELECT
DYN_REM_SELECT	CELL_SYS_OFF	CELL_SYS_ON	STARTER	SHOP_AIR_OVERRIDE
EMERGENCY_STOP	VIBRATION_DETECT	CELL_DOOR	LOW_COOLANT	FUEL_TANK_OVERFLOW
AVL_TIP	AVL_NO_PAPER	DYNO_COOLANT_FLOW	FLAME_DETECTOR	UPS
DYNO_LUBE	COUPLING_TEST			

If any of the above function codes are used, a -462 error message will be given.

Example:

Error -462 in: di_specs TID:13492 On Wed Dec 15 15:30:47 2021

File: /cyflex.6.3.exp/transfer/di_logi/di_specs.c Line: 827

chan-0 variable-<cell_on>, <CELL_SYS_ON> is not a valid functional spec line 437

The function code should be replaced with a valid code or -. SGS should be contacted with questions.

- o The following di_specs function codes are valid to use:

INPUT_INTEGER	STARTER_DISABLE	FUEL_SCALE_TRIP
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- o The following do_specs function codes were **removed**:

FUEL_STEERING	THR_DYN_ENABLE	DYNO_STEERING	DYNO_FLOW_OVERRIDE
INT_REST_DIR	RTI860_EXT_TRIG_ENABLE	EXH_REST_DIR	BEEP
OIL_CART	INT_REST	EXH_REST	DII_FR_REQUEST
THROTTLE_STEERING	AVL_REQUEST	ENGINE_STARTER	FUEL_SYSTEM_POWER

If any of the above function codes are used, a -462 error message will be given.

Example:

Error -462 in: do_specs TID:13500 On Wed Dec 15 15:30:47 2021

File: /cyflex.6.3.exp/transfer/do_logi/do_specs.c Line: 799

<FUEL_SYSTEM_POWER> is not a valid functional spec line 90

The function code should be replaced with a valid code or -. SGS should be contacted with questions

- o The following do_specs function codes are valid to use:

OUTPUT_INTEGER	IGNITION	WATCH_DOG	TEST_CELL_SYSTEMS	SHOP_AIR
DYNO_H2O_DISABLE	TC_FANS	DYNO_OIL_PUMP	PWM	

- [CFBUG-2760](#) - a file will be generated containing a list of all the procedures/sub-procedures being used when a new procedure is started. The file will be in /specs/gp/trace/ directory and named "file_list.<name>" where 'name' is the instance name. The file will be overwritten when a new "nt" command is issued.
- [CFBUG-2751](#) – Modified code to not read and require the following @KEYWORDS by the esvd_star5.b09 program. The processing of these channels was moved into em_data_analysis long ago, but the keywords reads were never removed. The following keywords can be removed from esvd_specs.dat.

@TR_EM_MEASRD_CVS_FLOW	@TR_EM_NOX_BKG_CONCEN_LBL	@TR_EM_HC_BKG_CONCEN_LBL
@TR_EM_CO_BKG_CONCEN_LBL	@TR_EM_CO2_BKG_CONCEN_LBL	@TR_EM_NOX_ANA_DRYER_PR_LBL
@TR_EM_NO_ANA_DRYER_PR_LBL	@TR_EM_HC_ANA_DRYER_PR_LBL	@TR_EM_CO_ANA_DRYER_PR_LBL
@TR_EM_CO2_ANA_DRYER_PR_LBL	@TR_EM_CH4_ANA_DRYER_PR_LBL	@TR_EM_NOX_ANA_DRYER_TEMP_LBL
@TR_EM_NO_ANA_DRYER_TEMP_LBL	@TR_EM_HC_ANA_DRYER_TEMP_LBL	@TR_EM_CO_ANA_DRYER_TEMP_LBL
@TR_EM_CO2_ANA_DRYER_TEMP_LBL	@TR_EM_CH4_ANA_DRYER_TEMP_LBL	@TR_EM_TOT_MPS_FILT_FLOW_LBL
@TR_EM_TOT_MPS_SEC_DIL_FLOW_LBL	@TR_EM_TOT_MPS_PROB_DIL_FLOW_LBL	@TR_EM_TOT_APS_FILT_FLOW_LBL
@TR_EM_TOT_APS_SEC_DIL_FLOW_LBL	@TR_EM_TOT_APS_PROB_DIL_FLOW_LBL	

- [CFBUG-2745](#) – new keywords @ELOG, @PASS_ELOG and @FAIL_ELOG added to er_specs
- [CFBUG-2735](#) – multiple instances of gas_prop can be ran at the same time. If multiple instances of gas_prop are ran, the @REG_NAME keyword must be specified within the spec file of each instance. The reg name specified for each file must be unique. When executing the re-read application for either of the multiple instances, the reg name of the spec file must be specified as an argument to the re-read applications. For instance, if the first instance of gas_prop running has a reg_name of gas_prop1 and the second instance of gas_prop running as a reg_name of gas_prop2, executing 're-read gas_prop1' would prompt the rereading of the specfile for the first instance. Executing 're-read gas_prop2' would prompt the rereading of the specfile for the second instance of gas_prop. If only one instance of gas_prop is running, the @REG_NAME keyword does not have to exist within the spec file. To prompt the rereading of a single instance of gas_prop, executing 're-read gas_prop' would be entered.
- [CFBUG-2717](#) - A capability has been added to distinguish between PAM header and engine specification files using the @FILE_TYPE keyword. If these keywords are used, it will prevent processing the wrong file type which can lead to

catastrophic results.
The details on how to use these keywords can be found in updated:

/cyflex/specs.def/engine_specs.def
/cyflex/specs.def/pam_specs.def

Issue Type and Jira Issue Legends

Refer to the following legend for **Issue Type**:

Issue Type Key	Definition
NF	New feature
B	Bug
I	Improvement

X = denotes additional information about change within the **Related Jira Issue**.

General Applications

Application, Script, or Library	Install Note Above	Issue Type	Bug Fix Name	Description
		I	CFBUG-2811	Obsolete the dii_scales program
channel.dat parameter.dat units.dat		I	CFBUG-2807	New *.dat files from 12/03/21
torq_sched		B	CFBUG-2804	Fixed problem to recognize that the old eng control task is getting used by retrieving the torque_target_rv value
libasset.so.6.3.0 all applications using string array variable		B	CFBUG-2802	Fixed problem with evaluation of string array variables using integer array variables for index failed

Application, Script, or Library	Install Note Above	Issue Type	Bug Fix Name	Description
gval	Y	I	CFBUG-2800	gval can convert units
mk_data_data_dirs_tc cmds/verify_testcell_config.sh		I	CFBUG-2797	Modification to create new data directories and verify directories have been created for darts
channel.dat		I	CFBUG-2796	New *.dat files for 11/10/21
libasset.so.6.3.0		B	CFBUG-2794	Fixed problem in library function where variable name after ? in array expression was not getting resolved properly
gval	Y	I	CFBUG-2793	gval will return units on INTEGER and REAL variable types.
channel.dat units.dat		I	CFBUG-2792	New *.dat files for 11/8/21
trv		B	CFBUG-2789	Modification to look at value of DARTS_mode variable to determine source of datapoint file – either datapoint or darts_datapoint
libapi_cyberapps.so.6.3.0		B	CFBUG-2788	Fixed problem to have cyberapps execute caStop correctly
add_water		B	CFBUG-2785	Fixed problem to update composition timestamp when barometer or vapor_pressure have changed
snapio_strm		B	CFBUG-2783	snapio_strm now only triggers once, instead for each brain
er_specs		I	CFBUG-2777	Updated er_specs to have a valid error message when translating an empty file
newtest		B	CFBUG-2776	Fixed problem with newtest to use gets instead of fgets when prompted for entry of information on the screen
di_specs do_specs	Y	I	CFBUG-2775	Obsolete some unused function codes

Application, Script, or Library	Install Note Above	Issue Type	Bug Fix Name	Description
msu_set		B	CFBUG-2774	Fixed msu_set to not core dump if /data/state_codes file was not present
cyflex_wd		B	CFBUG-2773	cyflex_wd will now work in 6.3 versions of CyFlex
/cyflex/cmds/qt/eng_ctrl_disp.ui /cyflex/cmds/update_eng_cmd update_eng_specs		B	CFBUG-2771	The ctrl_disp program for engine control loops didn't handle restoring gains via the panic button(s) properly so changes were made via Designer to the UI and in code to properly handle restoring file gains.
ra_specs run_aver	Y	I	CFBUG-2770	Added a new keyword to ra_specs specfile to provide different calculation when values are reading 0.
vrbl_to_file		B	CFBUG-2769	Missing units entry was not detected - didn't match the number of labels
browse.dat parameter.dat units.dat		I	CFBUG-2768	New *.dat files from 09/27/2021
gen_labels		B	CFBUG-2767	Integer transition events get turned off when gen_labels is run more than once for the same file
limit_info		NF	CFBUG-2766	Add support for multiple limits of the same type
limit_status		B	CFBUG-2764	Removed potential of core dump within program
ai_snapio ai_eblox ai_modbus_tcp ai_modbus_serial ai_AmsAds ai_cantran ai_cyrius ai_scanny		B	CFBUG-2763	Fixed a bug for ai_eblox and ai_snapio where the rate of data was not being received at the expected rate

Application, Script, or Library	Install Note Above	Issue Type	Bug Fix Name	Description
libasset.so.6.3.0		B	CFBUG-2762	Fixed error message when invalid dimension number specified to report correct variable name
cfv_1065		B	CFBUG-2761	Units conversion is performed correctly on mass and molar flow
libtestgp.so.6.3.0	Y	NF	CFBUG-2760	Add a file list showing which procedured gp_test has read
specs.def/gp_template gp_test libtestgp.so.6.3.0 ck		B	CFBUG-2759	Due to prior changes in how gp_test handles reading procedure files, it is no longer feasible to support the AT_NT kill_option for launching BACKGROUND tasks
gp_test		B	CFBUG-2758	Prevent core dump when 'nt' command piped into grep
fdump libasset.so.6.3.0 dumpit		I	CFBUG-2757	Increase resolution of MM to 7 digits in Composition variables
channel.dat units.dat parameter.dat		I	CFBUG-2756	New *.dat files from 8/31/21
chain_events libtestgp.so.6.3.0		B	CFBUG-2755	Fixed @CHAIN_EVENTS to handle output events correctly
setPAMtestid		B	CFBUG-2753	Fixed to update the Test_ID variable after it is executed successfully
eng_ctrl_task eng_ctrl_specs libtrvar.so.6.3.0 libuser_ctrl.so.6.3.0 user_ctrl_specs		I	CFBUG-2752	The user_ctrl_specs program gives errors when var_transfer is not running
gp_test ck libtestgp.so.6.3.0		B	CFBUG-2748	Access a valid furball file resulted in an error log when the filename was specified as a cyflex variable

Application, Script, or Library	Install Note Above	Issue Type	Bug Fix Name	Description
CanDbc		B	CFBUG-2747	CanDbc will now correctly send 24 bit messages big endian
do_pwm_transfer		NF	CFBUG-2746	Increased channel limit for do_pwm_transfer from 64 to 128
/cyflex/specs.def/er_specs.def	Y	I	CFBUG-2745	Added description and examples on how to configure the new ELOG, PASS_ELOG and FAIL_ELOG keywords
libcyflexPAMmua.so.6.3.0		B	CFBUG-2744	Don't throw an error when there is one missing section in the darts specfile
arr_specs		NF	CFBUG-2743	Allow arr_specs to modify units of some elements of the array
evnt_rsp		B	CFBUG-2737	Fixed problem to prevent core dump when an invalid expression is entered with the @ELOG keyword in er_specs
gas_prop	Y	NF	CFBUG-2735	Allow multiple instances of gas_prop
evnt_rsp		B	CFBUG-2732	@ELOG keyword in er_specs didn't handle literal string comment properly
cfv_1065		I	CFBUG-2731	Modify error handling for processing the specification file for CFV_1065 The cfv-1065 program did not have sufficient error processing to prevent core dumps which were caused by improper entries in the specification file.
cmds/pam_specs darts_datapoint datapoint eng_specs PAMheader libcyflexPAM.so.6.3.0 specs.def/engine_specs.def specs.def/pam_specs.2.def specs.def/pam_specs.def	Y	I	CFBUG-2717	Add capability to distinguish between PAM header and engine specs files

Application, Script, or Library	Install Note Above	Issue Type	Bug Fix Name	Description
ck specs.def/gp_template gp_test libtestgp.so.6.3.0		NF	CFBUG-2695	modify gp_test to allow a vrbl_to_file to be launched in one mode and referenced in other modes

QT Applications

Application, Script, or Library	Install Note Above	Issue Type	Bug Fix Name	Description
quick_display libquick_displayl.so.6.3.0		B	CFBUG-2805	Fixed how filters are applied for applications to return the correct results
libQt5cyflexplugin.so.6.3.0		B	CFBUG-2749	Fixed problem to save modified event name property in ui file

Transient Emission Applications

Application, Script, or Library	Install Note Above	Issue Type	Bug Fix Name	Description
esvd_star5.b09		B	CFBUG-2813	Fixed problem where the emission bench file keywords that are not in the em_bench file are not written to the composite file
All esvd12 applications		I	CFBUG-2808	Add capability to process GHG keywords for array variables.
star_pream.12		B	CFBUG-2795	Fixed the *preamble processor from core dumping
All esvd12 programs		I	CFBUG-2784	Replace processing of ESTTI_ECM_OVERRIDES and GHGEFMTS_ECM_OVERRIDES with ACT_ECM_OVERRIDES in the tri_specs.dat file
All esvd12 applications		I	CFBUG-2782	Increase number of @DATA_CHANNELS to be read from 500 to 5000 for tri_specs
tca_logr.12 tca_header.10c		I	CFBUG-2772	Add ability to read and set restriction and CAC tolerances and speeds from cvs_ci_specs.dat for esvd10c and from tri_specs.dat for esvd12
esvd_star5.b09 esvd_star5.raw esvd_star5.12 esvd_star5_12.raw	Y	I	CFBUG-2751	Removed reading and processing of unused @TR_EM keywords that are no longer used
tca.10c tca.12		I	CFBUG-2725	Program tca.10c could only analyze down/up throttle sweeps - could not do up/down The tca.10c (torque curve analysis program) could only process throttle sweeps that went from 100->0->100% throttle and would give erroneous results for 0->100->0.

Weighroom Applications

Application, Script, or Library	Install Note Above	Issue Type	Bug Fix Name	Description
filt_data_save		B	CFBUG-2786	Fixed problem to update the mps_bspart, mps_prelim_bspart, aps_bspart and aps_prelim_bspart columns when the prelim or certified weight values are not found