

APL64 2024.0.10 Update is Coming

Table of Contents

Overview	3
Interpreter Modifications	3
Colossal File System: Significant performance improvements reading components.....	3
Colossal File System: New File Open Modes	3
XML Serialization Exception Message Format	3
☐ XL: New Actions to Read and Write CSV-format Files	3
☐ FnEdHist System Function.....	3
☐ NewLine and ☐ SetNewLines System Functions.....	3
☐ LCASE and ☐ UCASE system functions updated to support Unicode characters	3
☐ SYSINIT[2] (2nd element) returns the .Net Version targeted by APL64 instance.....	3
APL64 Developer Version GUI Modifications	5
New Function Editor Compare Format	5
New Function Editing Changes Records	5
Documentation of the Options Keyboard Definition Dialog Updated	6
The Find/Replace tool now reopens in the same location it was closed.....	6
Set Initial Caret Position when Editing a New Function	6
WRE and CPC Utility	7
Line Termination for Exception Messages	7
Miscellaneous	7
APL64 system and installer updated to support .Net 8	7
:IFTEST control structure can be closed with either :ENDIF or :ENDIFTEST or :END:	7
)EDSS and ☐ EDSS: SpreadsheetGear Nuget package updated from v9.2.44 to 9.3.12	7
☐ SQLite: Microsoft.Data.Sqlite client software Nuget package updated from v8.0.6 to v8.0.8	7
Bug Fixes	7
Mouse Wheel Scrolling Direction Corrected	7
APL64 Interpreter Closed Unexpectedly.....	7
Find/Replace Dialog Focus	7
Changing Editors Pane Format Layout.....	7
Duplicate)ed ... In History.....	7

Ucase and Lcase on a variable with Unicode dash and foreign accented characters changed the variable..... 7

Overview

This document describes the enhancements and bug fixes that are planned for the APL64 2024.0.10 Update.

Interpreter Modifications

[Colossal File System: Significant performance improvements reading components](#)

This is accomplished when a colossal file is tied exclusively (open mode = 0+16 or 2+16) in this update. Refer to the descriptions for the new open modes for `□cftie` for additional information.

[Colossal File System: New File Open Modes](#)

`□cfstie` now support file tying modes like the modes of `□xntie`. This allows files to be explicitly opened in read-only mode with shared read-only by multiple users or processes. Refer to the descriptions for the new open modes for `□cftie` for additional information.

[XML Serialization Exception Message Format](#)

If an XML serialization exception occurs, the formatting of a multi-line exception message is improved.

[□XL: New Actions to Read and Write CSV-format Files](#)

The `SaveWorkSheetAsCsv` and `ToAplFromCsv` actions have been implemented to read and write 'comma-separated' format files. An option is provided to specify the field separator.

[□FnEdHist System Function](#)

Function editing history can be captured as an APL nested array or an XML document using the new `□FnEdHist` system function. Refer to the function editing change records features described below for additional information.

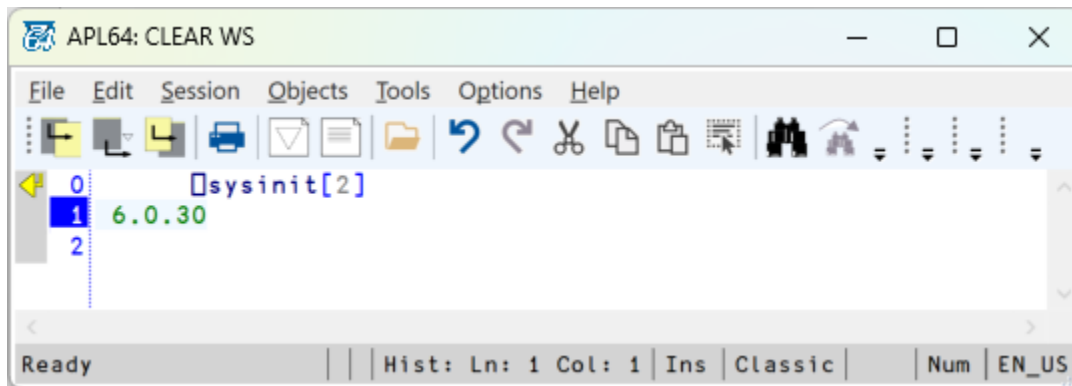
[□NewLine and □SetNewLines System Functions](#)

These new system functions are useful when an APL64 cross-platform component generates multi-line text, so that the line termination character(s) are appropriate for the operating system.

[□LCASE and □UCASE system functions updated to support Unicode characters](#)

[□SYSINIT\[2\] \(2nd element\) returns the .Net Version targeted by APL64 instance](#)

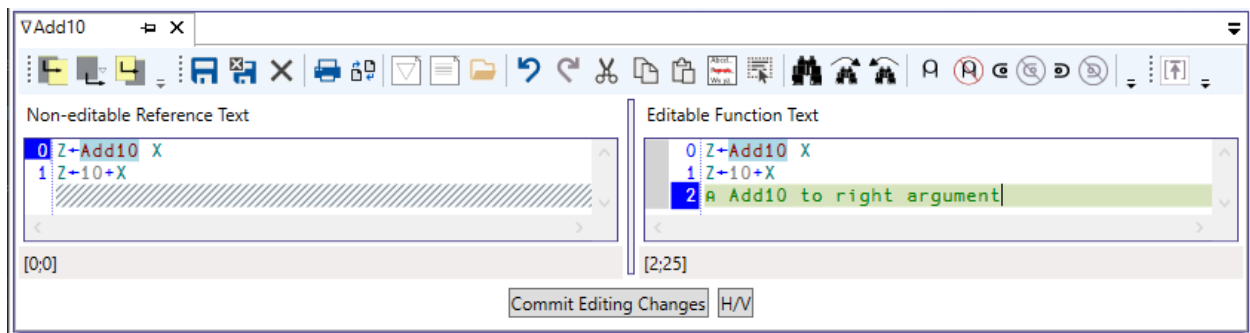
Refer to [Environment.Version Property \(System\) | Microsoft Learn](#) for additional information.



APL64 Developer Version GUI Modifications

New Function Editor Compare Format

The Compare Format Function Editor illustrates a reference text (left) and the current edited text (right) when the compare format of the function editor is selected. The traditional format of the function editor has not been modified.

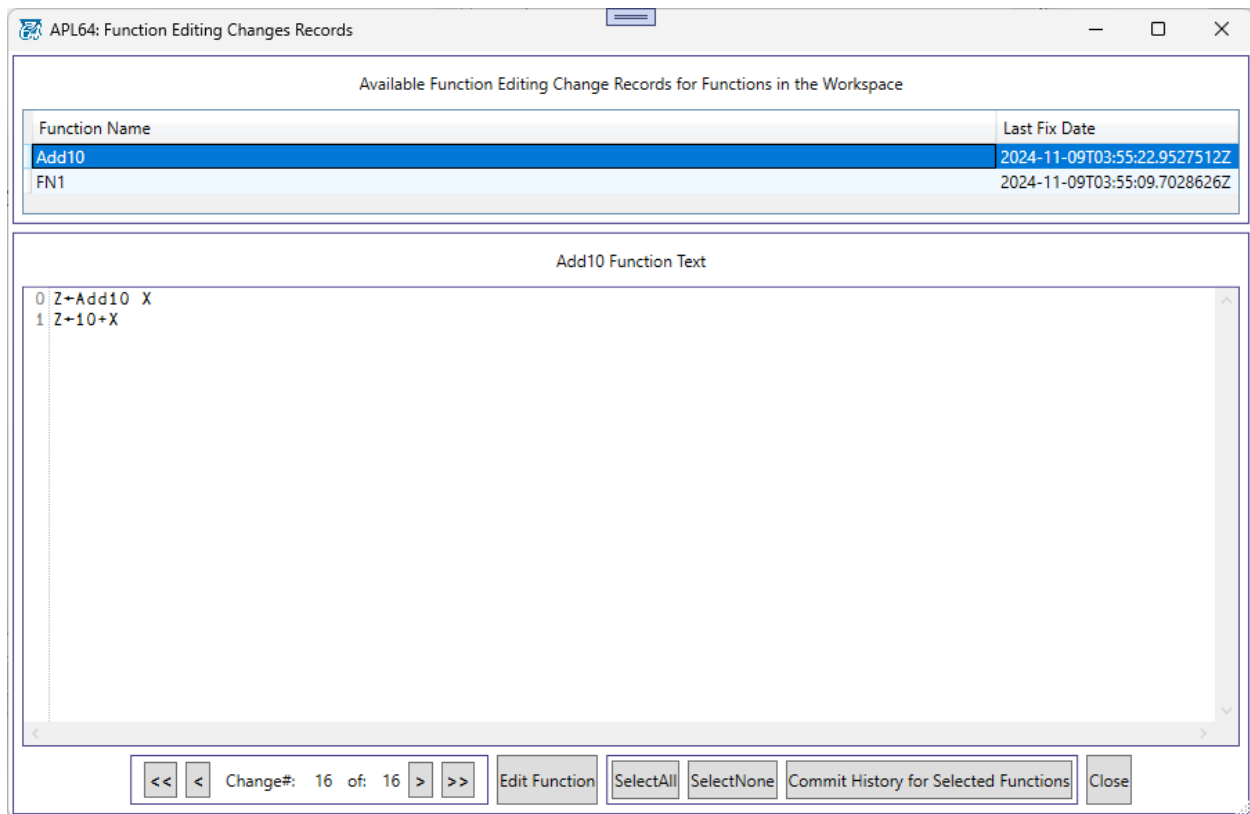


New Function Editing Changes Records

An option has been implemented to record function editing changes within the function definition so that they may be undone/redone in subsequent function editing instances. Select this option using the **Objects | Function Editor | Function Editing Change Records | Consider Function Editing Change Records** check box.

The function editing change records for a user-defined function in the workspace may be reviewed using the **Objects | Function Editor | Function Editing Change Records | Review Function Editing Change Record** dialog.

Refer to the **Help | Editing APL64 Objects | Function Editor Compare Format & Editing History** document for details.



[Documentation of the Options | Keyboard Definition Dialog Updated](#)

Refer to the **Help | Developer Version GUI | Keyboard Definition** document for details.

The Find/Replace tool now reopens in the same location it was closed

This is applicable:

- (a) between panes in the same APL64 developer version instance, and
- (b) between APL64 developer version instances

[Set Initial Caret Position when Editing a New Function](#)

This is configurable in the **Objects | Function Editor | Caret At End of Header For New Function** menu item.

WRE and CPC Utility

Line Termination for Exception Messages

The line termination character(s) in a multi-line APL64 interpreter exception message will be determined by the host operating system environment.

Miscellaneous

APL64 system and installer updated to support .Net 8

:IFTEST control structure can be closed with either :ENDIF or :ENDIFTEST or :END:

The latter two closing options are now documented in the Control Structure and User Manual documents.

)EDSS and ☐EDSS: SpreadsheetGear Nuget package updated from v9.2.44 to 9.3.12

☐SQLite: Microsoft.Data.Sqlite client software Nuget package updated from v8.0.6 to v8.0.8

Bug Fixes

Mouse Wheel Scrolling Direction Corrected

The mouse wheel did not operate as expected when the Microsoft Windows option: **Mouse Properties | Wheel | Vertical Scrolling | One screen at a time** option is checked.

APL64 Interpreter Closed Unexpectedly

APL64 exited unexpectedly for the command: X←'abc',☐tcnl,'pqrst' ♦ ☐edss 'X'

Find/Replace Dialog Focus

The focus sometimes incorrectly appeared first in the replacement text field of the Replace dialog.

Changing Editors Pane Format Layout

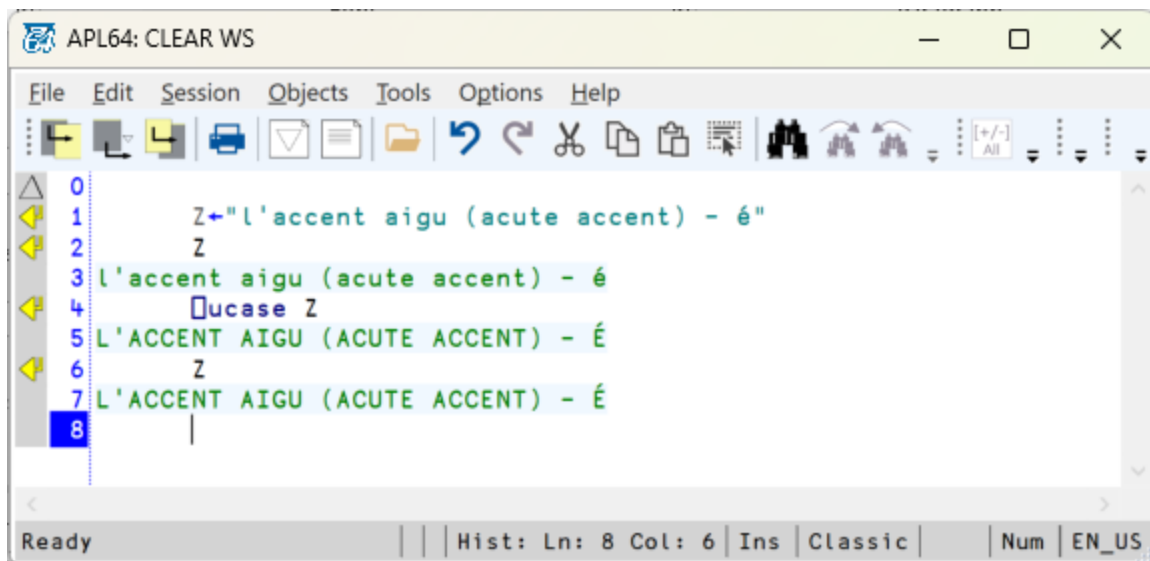
A blank area appeared to the left of the object editors after selecting the Editors Tiled Horizontally or Vertically option.

Duplicate)ed ... In History

When selecting a function to edit in the Editor Autosave Options dialog, and closing the dialog, a duplicate 'ed ...' line occurred in the history pane.

☐ucase and ☐lcase on a variable with Unicode dash and foreign accented characters changed the variable

Example,



The screenshot shows the APL64: CLEAR WS window with the following content:

```
0  
1      Z←"l'accent aigu (acute accent) - é"  
2      Z  
3      l'accent aigu (acute accent) - é  
4      ⍎ucase Z  
5      L'ACCENT AIGU (ACUTE ACCENT) - É  
6      Z  
7      L'ACCENT AIGU (ACUTE ACCENT) - É  
8      |
```

The status bar at the bottom indicates: Ready | Hist: Ln: 8 Col: 6 | Ins | Classic | Num | EN_US