JavaFX

The following notes describe important changes and information about this release. In some cases, the descriptions provide links to additional detailed information about an issue or a change.

These release notes cover the standalone JavaFX 25.0.2 release. JavaFX 25.0.2 is the initial release of Oracle JavaFX 25.

- [JavaFX 25.0.2 (GA)](#)
- [OpenJFX 25.0.1](#)
- [OpenJFX 25](#)

Supported Runtimes

JavaFX 25 is designed to work with JDK 25.

Supported Platforms

JavaFX 25 is available for Linux x86_64, Windows x86_64, macOS AArch64, and macOS x86_64.

JavaFX 25.0.2 (GA)

List of Enhancements

#	Link	Area	Summary
1	JDK-8271024	javafx/graphics	Implement macOS Metal Rendering Pipeline

List of Fixes

#	Link	Area	Summary
1	JDK-8378507	javafx/accessibility	JavaFX CSS Reference skips heading levels: <h2> followed by <h4>
2	JDK-8378366	javafx/accessibility	Accessibility issues in CSS Reference Guide and Introduction to FXML
3	JDK-8372453	javafx/window-toolkit	[macOS] Iconifying owner may not iconify owned window
4	JDK-8371052	javafx/media	Update libFFI to 3.5.2
5	JDK-8370632	javafx/web	Additional libxslt 1.1.43 fixes
6	JDK-8368879	javafx/graphics	Intermittent crash on exit when disposing MTLRTTextureData
7	JDK-8368691	javafx/web	Update libxml2 to 2.14.6
8	JDK-8368631	javafx/graphics	Avoid updating disposed MTLTexture
9	JDK-8368166	javafx/graphics	Media query should accept multiple rules
10	JDK-8368021	javafx/window-toolkit	Window buttons of extended RTL stage are on the wrong side
11	JDK-8367602	javafx/controls	Regression: TabPane with wrapped label calculates wrong initial size
12	JDK-8367578	javafx/web	Additional WebKit 622.1 fixes from WebKitGTK 2.48.7
13	JDK-8367370	javafx/window-toolkit	Accent color platform preference not updating in macOS 26 (Tahoe)
14	JDK-8366744	javafx/web	Update SQLite to 3.50.4
15	JDK-8366217	javafx/media	Update GStreamer to 1.26.5
16	JDK-8361644	javafx/web	Update ICU4C to 77.1
17	JDK-8350479	javafx/window-toolkit	SW pipeline should use default pipeline in Glass
18	JDK-8335748	javafx/graphics	Rippling of frame on scrolling

OpenJFX 25.0.1

These release notes refer to the OpenJFX 25.0.1. There is no equivalent JavaFX 25.0.1.

List of Fixes

#	Link	Area	Summary
1	JDK-8361648	javafx/media	Update Glib to 2.84.3
2	JDK-8360270	javafx/web	Websocket communication issues with Vaadin applications through webview
3	JDK-8356982	javafx/web	Update WebKit to 622.1
4	JDK-8328684	javafx/web	HellowWebView demo crashes when a webpage is scrolled

OpenJFX 25

These release notes refer to the OpenJFX 25. There is no equivalent JavaFX 25.

Important Changes

- javafx/build

  - **JavaFX 25 Requires JDK 23 or Later** ([JDK-8359387](#))

    JavaFX 25 is compiled with `--release 23` and thus requires JDK 23 or later in order to run. If you attempt to run with an older JDK, the Java launcher will exit with an error message indicating that the `javafx.base` module cannot be read.

- javafx/graphics

  - **JavaFX Applications No Longer Need --sun-misc-unsafe-memory-access=allow** ([JDK-8334137](#))

    It is no longer necessary to pass `--sun-misc-unsafe-memory-access=allow` to `java` on the command line when running JavaFX applications. The bug that formerly caused this option to be needed has been fixed.

- javafx/window-toolkit

  - **JavaFX Requires GTK 3.20 or Later on Linux** ([JDK-8359396](#))

    On Linux platforms, JavaFX requires GTK3 version 3.20 or later. An exception will be thrown when initializing the JavaFX runtime if the GTK 3 library cannot be loaded or is older than 3.20.

Removed Features and Options

- javafx/graphics

  - **A Deprecated TransitionEvent Constructor Has Been Removed** ([JDK-8353617](#))

    The `TransitionEvent(EventType, StyleableProperty, Duration)` constructor was deprecated for removal in JavaFX 24 and has now been removed. Application developers should use `TransitionEvent(EventType, StyleableProperty, String, Duration)` instead.

List of New Features

#	Link	Area	Summary
1	JDK-8355774	javafx/controls	RichTextArea: provide mechanism for CSS styling of highlights
2	JDK-8357594	javafx/controls	Additional geometry-based Text/TextFlow APIs
3	JDK-8313424	javafx/graphics	JavaFX controls in the title bar (Preview)
4	JDK-8314482	javafx/graphics	TextFlow: TabStopPolicy
5	JDK-8341670	javafx/graphics	[Text,TextFlow] Public API for Text Layout Info
6	JDK-8345348	javafx/graphics	CSS media feature queries

List of Other Enhancements

#	Link	Area	Summary
1	JDK-8313556	javafx/accessibility	Create implementation of NSAccessibilitySlider protocol
2	JDK-8313558	javafx/accessibility	Create implementation of NSAccessibilityStepper protocol
3	JDK-8350316	javafx/accessibility	Create implementation of NSAccessibilityProgressIndicator protocol
4	JDK-8351773	javafx/accessibility	Create implementation of NSAccessibilityGroup protocol
5	JDK-8356983	javafx/accessibility	Create implementation of NSAccessibilityImage protocol
6	JDK-8359257	javafx/accessibility	Create accessibility protocol for TabGroup component
7	JDK-8361379	javafx/accessibility	[macos] Refactor accessibility code to retrieve attribute by name
8	JDK-8335547	javafx/controls	Support multi-line prompt text for TextArea
9	JDK-8358255	javafx/graphics	Factor out boilerplate code of EventHandler properties in Scene and Window
10	JDK-8337960	javafx/media	Improve performance of mfwrapper by reusing GStreamer media buffers for decoded video
11	JDK-8349373	javafx/other	Support JavaFX preview features

List of Fixes

#	Link	Area	Summary
1	JDK-8357157	javafx/animation	Exception thrown from AnimationTimer freezes application
2	JDK-8170720	javafx/base	VetoableListDecorator: Indexes to remove are not aggregated
3	JDK-8233179	javafx/base	VetoableListDecorator#sort throws IllegalArgumentException "duplicate children"
4	JDK-8347753	javafx/base	VetoableListDecorator doesn't accept its own sublists for bulk operations
5	JDK-8351038	javafx/base	ConcurrentModificationException in EventType constructor
6	JDK-8351276	javafx/base	Prevent redundant computeValue calls when a chain of mappings becomes observed
7	JDK-8358770	javafx/build	incubator.richtext pom missing dependency on incubator.input
8	JDK-8361713	javafx/build	JavaFX API docs overview is missing an intro section
9	JDK-8089080	javafx/controls	[TextArea] Caret disappear after pressing backspace to clear the content
10	JDK-8185887	javafx/controls	TableRowSkinBase fails to correctly virtualize cells in horizontal direction

#	Link	Area	Summary
11	JDK-8207333	javafx/controls	[Linux, macOS] Column sorting is triggered always after context menu request on table header
12	JDK-8252566	javafx/controls	TreeTableView: broken row layout for fixedCellSize
13	JDK-8276326	javafx/controls	Empty Cells in TableView supposedly after using setFixedCellSize()
14	JDK-8277000	javafx/controls	Tree-/TableRowSkin: replace listener to fixedCellSize by live lookup
15	JDK-8299753	javafx/controls	Tree/TableView: Column Resizing With Fractional Scale
16	JDK-8299755	javafx/controls	Tree/TableView: Cursor Decouples From Divider When Resizing With Fractional Scale
17	JDK-8333275	javafx/controls	ComboBox: adding an item from editor changes editor text
18	JDK-8335587	javafx/controls	TextInputControl: Binding prompt text that contains linebreak causes exception
19	JDK-8340344	javafx/controls	The first item in TreeView is not aligned in the beginning
20	JDK-8341281	javafx/controls	Root TreeItem with null value breaks TreeTableView
21	JDK-8346824	javafx/controls	Collapsing tree view causes rendering issues
22	JDK-8347392	javafx/controls	Thread-unsafe implementation of c.s.j.scene.control.skin.Utils
23	JDK-8348100	javafx/controls	Tooltips cannot be instantiated on background thread
24	JDK-8349091	javafx/controls	Charts: exception initializing in a background thread
25	JDK-8349098	javafx/controls	TabPane: exception initializing in a background thread
26	JDK-8349105	javafx/controls	Pagination: exception initializing in a background thread
27	JDK-8349255	javafx/controls	TitledPane: exception initializing in a background thread
28	JDK-8349756	javafx/controls	Memory leak in PaginationSkin when setting page count / index
29	JDK-8349758	javafx/controls	Memory leak in TreeTableView
30	JDK-8350976	javafx/controls	MenuBarSkin: exception initializing in a background thread
31	JDK-8351047	javafx/controls	TitledPane should handle titles that are resizable
32	JDK-8351368	javafx/controls	RichTextArea: exception pasting from Word
33	JDK-8351878	javafx/controls	RichTextArea: copy/paste issues
34	JDK-8355012	javafx/controls	JavaFX modena.css -fx-highlight-text-fill bug
35	JDK-8355415	javafx/controls	RichTextArea: NPE in VFlow::scrollCaretToVisible

#	Link	Area	Summary
36	JDK-8355615	javafx/controls	ConcurrentModificationException creating MenuBar on background thread
37	JDK-8357393	javafx/controls	RichTextArea: fails to properly save text attributes
38	JDK-8364049	javafx/controls	ToolBar shows overflow menu with fractional scale
39	JDK-8364088	javafx/controls	ToolBarSkin: NPE in select()
40	JDK-8281384	javafx/graphics	Random chars on paste from Windows clipboard
41	JDK-8318985	javafx/graphics	[macos] Incorrect 3D lighting on macOS 14 and later
42	JDK-8342530	javafx/graphics	Specifying "@Nx" scaling level in ImageStorage should only load that specific level
43	JDK-8349256	javafx/graphics	Update PipeWire to 1.3.81
44	JDK-8350149	javafx/graphics	VBox ignores bias of child controls when fillWidth is set to false
45	JDK-8351067	javafx/graphics	Enforce Platform threading use
46	JDK-8351867	javafx/graphics	No UI changes while iconified
47	JDK-8353632	javafx/graphics	[Linux] Undefined reference to PlatformSupport::OBSERVED_SETTINGS with C++14
48	JDK-8353845	javafx/graphics	com.sun.javafx.css.BitSet.equals(null) throws NPE
49	JDK-8354797	javafx/graphics	Parent.needsLayoutProperty() should return read-only getter
50	JDK-8354813	javafx/graphics	Parent.isNeedsLayout() may return wrong value in property listener
51	JDK-8357004	javafx/graphics	Windows platform color changes are not picked up in some cases
52	JDK-8358454	javafx/graphics	Wrong tags in cssref.html
53	JDK-8329227	javafx/media	Seek might hang with fMP4 H.265/HEVC or H.265/HEVC over HTTP/FILE
54	JDK-8357714	javafx/media	AudioClip.play crash on macOS when loading resource from jar
55	JDK-8088343	javafx/other	Race condition in javafx.concurrent.Task::cancel
56	JDK-8350048	javafx/other	Enforce threading restrictions for show and hide methods in Window, Control, and Skin
57	JDK-8245602	javafx/samples	Ensemble8: HTMLEditor Toolbar gets scrolled out of view
58	JDK-8146479	javafx/ scenegraph	Scene is black after stage is restored (content changed while minimized)
59	JDK-8340322	javafx/web	Update WebKit to 620.1
60	JDK-8352162	javafx/web	Update libxml2 to 2.13.8
61	JDK-8352164	javafx/web	Update libxslt to 1.1.43
62	JDK-8354876	javafx/web	Update SQLite to 3.49.1

#	Link	Area	Summary
63	JDK-8354940	javafx/web	Fail to sign in to Microsoft sites with WebView
64	JDK-8176813	javafx/window-toolkit	Mac: Failure to exit full-screen programmatically in some cases
65	JDK-8348095	javafx/window-toolkit	[Linux] Menu shows up in wrong position when using i3 windows manager in full screen mode
66	JDK-8351733	javafx/window-toolkit	Crash when creating too many nested event loops
67	JDK-8353314	javafx/window-toolkit	macOS: Inconsistent fullscreen behavior
68	JDK-8353548	javafx/window-toolkit	[macOS] DragEvent.getScreenY() returns incorrect value in secondary monitor
69	JDK-8354478	javafx/window-toolkit	Improve StageStyle documentation
70	JDK-8354631	javafx/window-toolkit	[macos] OpenURIHandler events not received by AWT when JavaFX is primary toolkit
71	JDK-8356652	javafx/window-toolkit	Input field ignores custom input source characters
72	JDK-8357584	javafx/window-toolkit	[XWayland] [OL10] Robot.mousePress() is delivered to wrong place
73	JDK-8363813	javafx/window-toolkit	Missing null check in GlassScreen