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<https://docs.oracle.com/api/javafx/embed/swing/SwingFXUtils.html>

This class provides utility methods for converting data types between **Swing/AWT** and **JavaFX** formats. Method Summary. Methods. Modifier and Type, Method and ...



AI Overview

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`javafx.embed.swing.SwingFXUtils` is a utility class within the JavaFX framework, specifically designed to facilitate interoperability between JavaFX and Swing/AWT components. It provides methods for converting data types between these two UI toolkits.

Key Functionality:

- **Image Conversion:** The primary use of `SwingFXUtils` is for converting `java.awt.image.BufferedImage` objects (used in Swing/AWT) to `javafx.scene.image.Image` objects (used in JavaFX), and vice versa. This is crucial for displaying images consistently across applications that mix both Swing and JavaFX elements.

Example of Image Conversion:

To convert a `BufferedImage` to a `WritableImage` (a type of `Image` in JavaFX that can be written to), you would use the `toFXImage` method:

Java



```
import javafx.scene.image.WritableImage;
import javafx.embed.swing.SwingFXUtils;
import java.awt.image.BufferedImage;

// ... (assuming you have a BufferedImage called 'bufferedImage')

WritableImage fxImage = SwingFXUtils.toFXImage(bufferedImage, null);
```

To convert a `Image` to a `BufferedImage`, you would use the `fromFXImage` method:

Java



```
import javafx.scene.image.Image;
import javafx.embed.swing.SwingFXUtils;
import java.awt.image.BufferedImage;

// ... (assuming you have a JavaFX Image called 'fxImage')
```

```
BufferedImage bufferedImage = SwingFXUtils.fromFXImage(fxImage, null);
```

Context in JavaFX-Swing Interoperability:

SwingFXUtils is part of the `javafx.embed.swing` package, which also includes classes like `SwingNode` and `JFXPanel`.

- `SwingNode` : Allows embedding Swing content within a JavaFX application. `SwingFXUtils` is often used in conjunction with `SwingNode` when you need to handle images or other data types that need to be translated between the two frameworks.
- `JFXPanel` : Allows embedding JavaFX content within a Swing application.

In essence, `SwingFXUtils` acts as a bridge, enabling seamless data exchange, particularly for images, when building hybrid applications that leverage both Swing and JavaFX technologies.