Installing and Testing JavaFX™ Mobile 1.2 for Windows Mobile OS

November 2009

Overview

This document describes how to configure a Windows Mobile target device to use JavaFX Mobile for Windows Mobile OS. It also describes how to configure NetBeans to deploy projects on the target device. Before using this document, consult the *Release Notes* to verify that your host and device meet the system requirements.

- Installing JavaFX Emulation on a Windows Mobile Device
- Deploying and Running Applications
  - Prepare to Deploy an Application to the Device
  - Use the Command Line to Install and Run an Application on the Device
  - Use NetBeans to Run an Application on the Device
  - Manually Deploy an Application to the Device

Installing JavaFX Emulation on a Windows Mobile Device

This procedure describes how to install JavaFX Mobile on a real device and make it available to the JavaFX SDK 1.2 software on the host computer. These directions assume ActiveSync is running.

Note – Advanced Network Settings must be enabled in Windows Mobile on the device. If it is not set, the JavaFX Device Manager will not be able to detect JavaFX. On the device, open the Start menu and select Settings. Choose Connections, and select USB to PC. Check "Enable Advanced Network Functionality." Tap OK on the upper right.

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1. **Connect the device to your host computer with a USB cable and register it with ActiveSync.**
2. **Copy the SUN_JAVAFX.cab file onto the clipboard.**

   Right-click the .cab file and select Copy.
3. **Move the CAB file into the device root directory.**

   a. **In Windows Explorer, go to My Computer and open the Mobile Device folder.**

   b. **Open My Windows Mobile-Based Device.**

   c. **Select Edit > Paste.**

4. **Install the CAB file on your device.**

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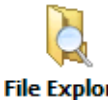
a. **Open the Start menu and select Programs.**

b. **Select File Explorer.**



In the File Explorer be sure you show My Device in the drop menu.

c. **Scroll down and tap the `SUN_JAVAFX.cab` file to start the installation.**

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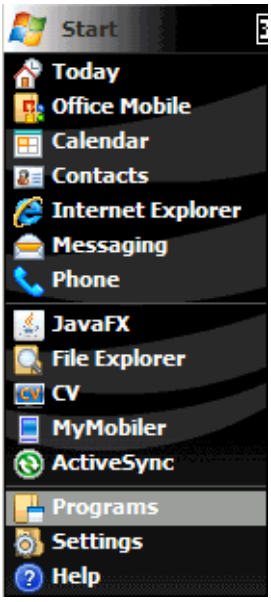
a. **Open the Start menu and select Programs.**



b. **Select Tools.**

c. **Select File Explorer.**

d. **Scroll down and tap the `SUN_JAVAFX.cab` file to start the installation.**

- When asked if you want to continue, choose Yes.
- When asked for the installation location, install the application on the device.

When the installation completes, you should see the message "SUN_JAVAFX.cab was successfully installed on your device."

[optional] Tap OK on the upper right to return to the File Explorer.

5. **Run JavaFX on the device.**

From the Start menu, select Programs. Tap the JavaFX icon.

6. **Wait for JavaFX to start. The splash screen appears briefly, then you see three folders and the sample applications.**

7. **[Optional] You can delete the CAB file after the installation is complete.**

   a. **Press on SUN_JAVAFX.cab label until the context menu opens.**

   b. **Select Delete.**

Font Notes

Upon installation of the JavaFX Mobile stack you might find the font size too small or too large. Follow these steps to change the size.

1. **Use the System Settings to set the font size: Settings > System > Screen > Text Size.**

   In the Text Size tab, use the horizontal slider to set the size.

2. **Restart JavaFX Mobile.**

If the font size does not change, font size settings defined in your device's Windows Mobile registry are overriding the system font size setting. Follow these steps:

1. **Using a registry editor, remove the following keys:**

   ```
   [HKEY_LOCAL_MACHINE\Software\SUN\JVM\FONT\SMALL]
   [HKEY_LOCAL_MACHINE\Software\SUN\JVM\FONT\MEDIUM]
   [HKEY_LOCAL_MACHINE\Software\SUN\JVM\FONT\LARGE]
   ```

2. **Restart JavaFX Mobile.**

Deploying and Running Applications

An application can be run on the device, or it can be launched from the host machine. This section describes three ways to run applications on the device.

- Prepare to Deploy an Application to the Device
- Manually Deploy an Application to the Device
- Use the Command Line to Install and Run an Application on the Device
- Use NetBeans to Run an Application on the Device

Prepare to Deploy an Application to the Device

Before a device can be used as a target it must be detected by the JavaFX Device Manager.

Note – If JavaFX has *already* been installed on a device and you are re-connecting the device to the host, start the runtime on the device *before* connecting the device to your PC. The Device Manager will detect the device more quickly than if the runtime is started after you connect the device to the host.

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1. **Advanced Network Settings must be enabled in Windows Mobile on the device, as mentioned in** Installing JavaFX Emulation on a Windows Mobile Device**.**

   Select Settings > Connections, and select USB to PC. Check "Enable Advanced Network Functionality."

2. **On the device, run JavaFX as described in** Step 5 **and** Step 6 **of** "Installing JavaFX Emulation on a Windows Mobile Device"**.**

   You must be viewing the JavaFX directory with Game, Application and Business folders, and the sample apps.

3. **On the host, verify the device is detected.**

   The JavaFX Device Manager runs as a service when the JavaFX SDK is installed. When a device is connected, wait up to 30 seconds (the default value) for the JavaFX Device Manager to recognize it.

   Go to the command line and type `emulator -Xquery`, where `emulator` is the full path to the emulator executable. For example:

   ```
   "C:\Program Files\NetBeans 6.7.1\javafx2\javafx-sdk\emulator\bin\emulator" -Xquery
   ```

   The detected device name is JavaFXWinceDevice*number* (for example, JavaFXWinceDevice*1*). When you run Xquery, you should see JavaFXWinceDevice*number* listed, along with any emulators that have been detected.

   After you run `emulator -Xquery`, the Device Manager icon is visible in the Windows system tray. In the graphic below, it's the first icon. You can right-click on the Device Manager to open a context menu that allows you to Exit or Restart the Device Manager.

   If the device is detected, you are ready to install or run an application on the device.

4. **[Optional] If the above conditions are met and the device is undetected, follow these steps:**
   - In the system tray, click on the Java FX Device Manager and select Exit from the context menu.
   - In your user home, delete the directory `javafx-sdk`. The typical location for this directory is: `C:\Documents and Settings\`*User*`\javafx-sdk`.
   - If you are running NetBeans, restart it.

Use the Command Line to Install and Run an Application on the Device

These instructions assume you have detected the device as described in "Prepare to Deploy an Application to the Device".

From the command line use `-Xdevice` to specify the real device you installed. For example:

```
emulator -Xdevice:JavaFXWinceDevice1 -Xdescriptor:JAD-file-location
```

The JAD file location can be a URL or a local file path. `emulator` is the path to the emulator. For example:
`"C:\Program Files\NetBeans 6.7.1\javafx2\javafx-sdk\emulator\bin\emulator"`

Use the `-Xjam` argument to install an application:

```
emulator -Xdevice:JavaFXWinceDevice1 -Xjam:install=JAD-file-location
```

For example:

```
emulator -Xdevice:JavaFXWinceDevice1 -Xjam:install=d:\src\test.jad
```

```
emulator -Xdevice:JavaFXWinceDevice2 -Xjam:install=http://192.11.5.1:1234/x.jad
```

You can also use `-Xdescriptor` to install an application, but it will be removed from the device as soon as you exit the application. If you want the application to remain, specify the `-Xjam` argument.

When the application installs successfully, you see a confirmation message that includes an ID number. For example:
`The suite was successfully installed, ID: 2.`

The installed application can be invoked with its storage name or storage number (the ID). If you don't know the storage number, you can find it as follows:

```
emulator -Xdevice:JavaFXWinceDevice1 -Xjam:list
```

Once you know the number, call the installed application as follows:

```
emulator -Xdevice:JavaFXWinceDevice1 -Xjam:run=storage-name|storage-number
```

To stop an application, press CTRL-C or CTRL-Break in the command window.

Use NetBeans to Run an Application on the Device

This procedure describes how to use NetBeans to run projects on a real device. These instructions assume you have detected the device as described in "Prepare to Deploy an Application to the Device".

Note – Only one MIDlet can run at a time.

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1. **Open a JavaFX Mobile project in NetBeans.**

   You can download a sample project from `http://www.javafx.com/samples/`. Be sure that the project you choose has a mobile phone icon next to it.

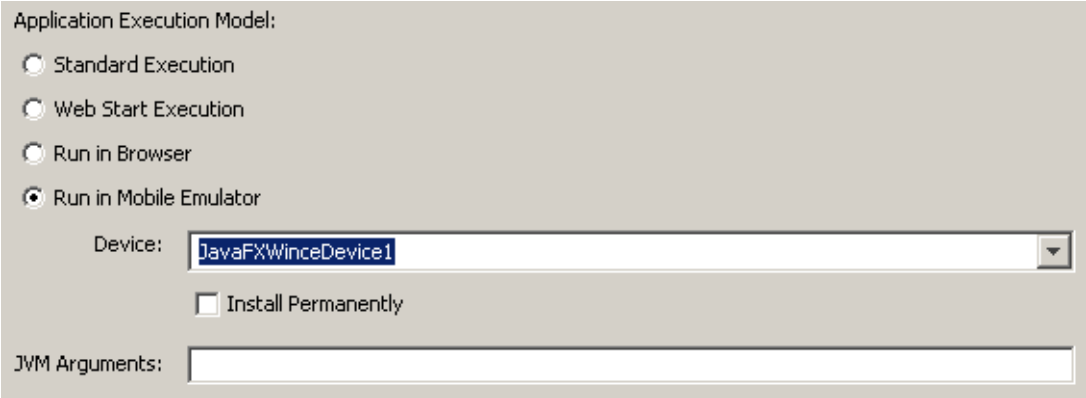
2. **Set the project to Main, and select Run > Clean and Build.**

3. **Right-click the project and select Properties. Select the Run category.**

4. **Find the Application Execution Model section.**

   a. **Select Run in Mobile Emulator.**

   b. **From the Device menu, select JavaFXWinceDevice1.**



   c. **Click OK.**

Note – Each device is given a unique name that will be re-used if the device is re-connected (this is necessary because you can connect multiple devices simultaneously). In this menu NetBeans does not differentiate between connected devices and disconnected devices you detected in the past. Select the appropriate device name that is nearest to the top of the Device menu list. For example, if JavaFXWinceDevice2 appears in the list several times, choose the first instance.

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5. **Click the Run button (the green triangle) to run the project.**

   The JavaFX project runs on your target device. Some projects might take several seconds to appear on the device. NetBeans displays an indicator on the bottom right of the IDE. When the message changes to "running" the application should be running on the device.

6. **Stop the application when you are finished.**

   Most applications have an exit menu that allows you stop the application. If there isn't one, stop the device from NetBeans. Select Run > Stop Build/Run, or, if you are viewing the Output Window, click the red button. To stop the application from the status bar, click the X button next to the project status.

Manually Deploy an Application to the Device

Follow these steps to install and run an application on the device.

1. **Deploy the application.**

   This entails copying an application's JAD and JAR files to the device. Go to your project's `/dist` directory and copy the JAD and JAR files to the device the same way you copied the CAB file in Step 3 and Step 4 **of** "Installing JavaFX Emulation on a Windows Mobile Device".

2. **Install the application.**

   On the device, locate the files you copied and tap the JAD file.

3. **Choose the location.**

   You are asked to choose the folder that will contain the application files.
   You see an "application already installed message" if the application was installed before. You can overwrite the old installation.

   When the installation is complete you have the option to launch the installation. If you say no you will return to the AMS.

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