Installing & setting up the sfnLauncher

Contents

About the sfnLauncher

The sfnLauncher runs the sfn Analysis Client. This manual describes how to install the sfnLauncher on Windows, Linux and OS-X computers.

Notes:

- The sfnLauncher is for use by licensed clients of sfn only
- The sfnLauncher gives access to the sfn Analysis Client and is not needed when accessing the Viewer, which runs in a browser. Users who only require access to the Viewer do not need the sfnLauncher installed on their computers
- The sfn Analysis Client uses Java, which is embedded within the sfnLauncher. It is not necessary to have Java installed on the computer, and any Java that is installed will be ignored
- The sfnLauncher runs under Windows, OS-X and Linux

For more technical information, see *Technical details* below.

Planning the installation

It is important to plan the installation of the sfnLauncher on users' computers, since users can run the sfn Analysis Client in two ways:

- By running the sfnLauncher directly (for example, from a desktop icon or from the Windows *Start* menu)
- By running a .sfnl file (which contains an sfn URL and automatically calls the sfnLauncher)

Usually, users run the sfnLauncher directly from the desktop or the *Start* menu. Should a user need access to multiple sfn systems (with separate URLs) then this provides the simplest method to access them. For users who access only a single sfn system, you may want to set up a .sfnl file (accessible to them from the desktop, for example), which takes them straight to the sfn Analysis Client.

Downloading the sfnLauncher

You can download the Windows version of the sfnLauncher from the Lightfoot Solutions website by clicking here.

If you require the Linux/OSX version of the sfnLauncher, please contact Lightfoot Solutions.

Installing the sfnLauncher

You need to install the sfnLauncher on the computers of all users of the sfn Analysis Client. The installation varies depending on whether you are installing on Windows or on Linux or OSX.

Installing and uninstalling on Windows

Uninstalling old versions

To uninstall a pre-2.8 version of the sfnLauncher (version 2.7 or earlier) from a computer, use Windows *Add/Remove Programs* or use a script such as the following:

```
$Regpath='HKLM:\SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall\{com.lightfoot.sfn
.launcher}}_is1'
if (Test-Path -Path $Regpath) {
            $App = Get-ItemProperty -Path  $Regpath;
            Start-Process -FilePath $App.UninstallString -ArgumentList "/silent" -wait
            }
```

Note: You should always uninstall pre-2.8 versions before installing a new version.

Later versions of the sfnLauncher are automatically uninstalled as part of the installation procedure, so do not need to be uninstalled manually.

If you want to remove a post-2.8 version of the sfnLauncher completely (without installing a new version), you can do so. Run the Windows command prompt as administrator, and from the command line run a command similar to the following:

```
        msiexec.exe /uninstall "$MSIpath\sfnLauncher-X.Y.msi" /quiet
```

where *$MSIpath* represents the path to the currently-installed sfnLauncher and the *X.Y* in *sfnLauncher-X.Y.msi* should be replaced by the version number.

Installing a new version of the sfnLauncher

Note: If a computer has a pre-2.8 version of the sfnLauncher installed (2.7 or earlier) then you should uninstall it before installing the new version, as described above.

1. Extract the sfnLauncher's MSI file from the zip file you downloaded from the Lightfoot Solutions website.
    Note: The filename contains the version number of the sfnLauncher. So, for example, version X.Y would have the filename *sfnLauncher-X.Y.msi*
2. Install the sfnLauncher using its MSI file. You can do this in one of two ways:
    *   Run the MSI file as administrator on each user's computer
    *   Install via central deployment methods such as Group Policy or Microsoft Intune. This can be achieved by assigning the MSI file as an installation package on Windows-based endpoints. For example, to install the sfnLauncher via the Windows command prompt run the command prompt as administrator and then run a command similar to the following:

        ```
        msiexec.exe /package "$MSIpath\sfnLauncher-X.Y.msi" /quiet
        ```

        where *$MSIpath* represents the path to the currently-installed sfnLauncher and the *X.Y* in *sfnLauncher-X.Y.msi* should be replaced by the version number

Installing on Linux and OS-X

1. Extract the *sfnLauncher.tar.gz* from the zip file you obtained from Lightfoot Solutions.
    Note: The filename contains the version number of the sfnLauncher. So, for example, version X.Y would have the filename *sfnLauncher-X.Y.tar.gz*

2. Unpack the *sfnLauncher.tar.gz* file into the desired location. It will create an sfnLauncher directory
3. Open the sfnLauncher directory that has been created, and run the file *sfnLauncher.sh*.

Setting up the sfnLauncher

After installing the sfnLauncher, you can add sfn URLs to it, so that they are available to the user.

1. Run the sfnLauncher (for example, by double-clicking on the Windows desktop shortcut).
2. A dialog appears, similar to the one below.
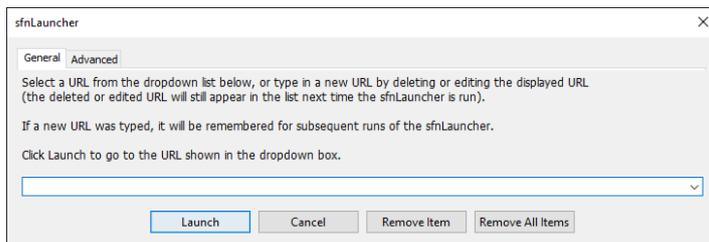
3. Enter the URL of the sfn Analysis Client.
4. Click *Launch* to display that instance, and save its URL in the sfnLauncher.
5. If desired, you can add the URL of another sfn instance. To do this, close sfn and run the sfnLauncher again (the previous URL is remembered and displayed in the dialog). Enter the URL of another instance and click *Launch*. All of the entered URLs are remembered by the sfnLauncher, and are displayed as a dropdown list in the dialog (with the most recently used at the top):
   - If you need to remove a URL (for example, if you mistyped it), select it in the list and click *Remove Item*
   - If you want to remove all previously-entered URLs, click *Remove All Items*

6. If you want to open the sfnLauncher console, or to control access to a proxy server, open the **Advanced** tab.
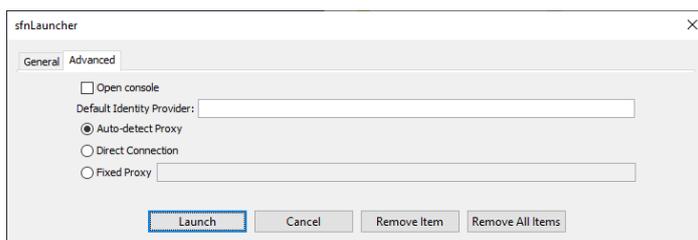
   - To see the sfnLauncher console (for example, for debugging) click the *Open console* check box
   - By default, the sfnLauncher auto-detects the proxy server to use: it either looks at the proxy being used by browsers, or reads a PAC file if one exists. You can override this by entering the address of a proxy server into the *Fixed Proxy* box, or you can cause the sfnLauncher to connect without using a proxy server by clicking the *Direct Connection* check box

The user runs the sfn Analysis Client by double-clicking on the desktop shortcut, selecting the relevant instance from the list, and then clicking *Launch*.

Note: The user can of course also run the sfnLauncher in this mode by calling it from the Windows *Start* menu.

Setting up a .sfnl desktop shortcut for Windows

A .sfnl file is simply a text file that contains the URL of the sfn Analysis Client. The file extension is associated with the sfnLauncher at installation time, so users can run the sfnLauncher automatically by opening the .sfnl file.

1. Create a text file (using Notepad or similar). In it, enter the URL of the sfn Analysis Client.
2. Save the text file with a *.sfnl* extension. If you save the file to the desktop then it will be readily accessible to the user.

The user runs the sfn Analysis Client by double clicking on the text file on the desktop. This takes the user directly to the sfn Analysis Client, without showing the sfnLauncher dialog.

Technical details

The sfn Analysis Client originally ran as an applet inside a browser. This became impossible in around 2016, when browser vendors removed support for the Java Plugin due to security concerns. Therefore Lightfoot created the sfnLauncher, which is a Java application that runs on the client computer and contains enough browser-like functionality to load and run the sfn Analysis Client, and also carries out handshaking for single sign-on.

Notes:

- Most browser-like functionality is carried out by the JavaFX WebView class – an embedded browser. Persistent cookie handling is implemented using a custom cookie store
- The build produces a native executable structure, which uses an embedded, stripped-down version of the Java Runtime Environment and JavaFX
- The sfnLauncher is tied to the sfn Java applet and will not execute a general payload
- At install time, the *.sfnl* file extension is mapped to the sfnLauncher to allow charts from the sfn Viewer (which runs in a browser) to be opened in the sfnLauncher for further analysis. This also allows the sfnLauncher to be run from a .sfnl file on the desktop
- The sfnLauncher can run in the user context, requiring no special privileges. It does not create a service or a sandbox breakout
- The sfnLauncher connects over HTTPS (so TCP/IP) to the same URL as the Viewer (but without the final */viewer*), and uses the same port (usually 443)
- The sfnLauncher has been penetration tested as an application by BulletProof against OWASP top 10