DISTECH CONTROLS™

EC-Net Facilities Java-based Web Clients Guide

User Guide

Connecting People with
Intelligent Building Solutions

EC-Net Facilities Java-based Web Clients Guide

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Legal Notice

Contents

About this guide

This topic contains important information about the purpose, content, context, and intended audience for this document.

Product Documentation

This document is part of the EC-Net Facilities™ technical documentation library. Released versions of software include a complete collection of technical information that is provided in both online help and PDF format. The information in this document is written primarily for Systems Integrators. In order to make the most of the information in this book, readers should have some training or previous experience with EC-Net Facilities software.

Document Content

This document describes how to use the Java Web Start and Niagara Web Launcher features both of which provide an applet-like EC-Net^{AX} Pro environment that runs completely outside of a web browser. Sections in this guide describe common tasks, concepts, and reference information. Also included are images and descriptions of the primary software user interface windows involved when working with Web Start and/or Web Launcher.

Document change log

Updates (changes/additions) to this guide are listed below.

January 8, 2020

Updated for EC-Net Facilities v4.9 and later, changes include replacing references to “Web Start” and the “applet” (which are no longer supported) with references to “Web Launcher”.

September 30, 2019

Minor changes in the topic, “About this guide”.

August 6, 2019

Added a note about the Workbench web browser whitelist to these topics: “Using Niagara Web Launcher”, and “Using Java Web Start”.

May 17, 2019

Minor changes in the topic, “Niagara Java-based web clients”. In the topic, “Installing Web Launcher”, added the note on configuring Web Launcher to open with a station connection. Added information on Web Launcher-supported versions to the topic, “Using Web Launcher”.

March 14, 2019

Retitled the existing Web Start guide and restructured the contents to cover both of the EC-Net Facilities Java-based web clients: Web Launcher and Web Start. Added to the document in one or more locations an important notice on the pending end-of-life of Java 8 SE (Standard Edition) and the expected impact on customers. Added a section on using Niagara Web Launcher.

August 8, 2016

Initial publication for EC-Net Facilities. Updated some screen captures and the brand.properties filepath to be accurate for this release.

Related documentation

- *Getting Started with EC-Net Facilities*
- *EC-Net Facilities Station Security User Guide*

Chapter 1 Java-based web clients

Topics covered in this chapter

♦ Niagara Java-based Web Clients
♦ More on the changes in Oracle Java 8
♦ Frequently Asked Questions

While web server software typically is used to deliver content, *web client* software running on a local device is used to access and interact with web servers. Java-based web client software is an Oracle technology that comes as part of the Java Runtime Environment.

EC-Net Facilities Java-based web client software, such as Niagara Web Launcher, offers an alternative to running the Workbench in a web browser by providing an application which can be launched in a separate window by the web client. A significant advantage that Workbench launched by this method has over launching as a browser applet is that it overcomes typical compatibility problems with browsers' Java plugins. For example, many late version browsers have disabled support for NPAPI which prevents the Java WbApplet from running in a browser. So the importance of Java-based web client software is that it removes the need for the use of the Java plug-in. However, it does not remove the need for a suitable Java Runtime Environment on the client's PC.

NOTE: Oracle has announced the end-of-life of Java SE 8 (Standard Edition). As of January 2019, free public updates are no longer available. Customers accessing EC-Net Facilities with the Java Applet/Web Start will be impacted by this change as they will no longer receive free security updates to their Java installation from Oracle. Customers who have upgraded to full HTML5 versions for their browser front-end will not be affected. For customers who use the Java VM and Java Web Start for their legacy systems a suitable alternative is available: Niagara Web Launcher.

Niagara Java-based Web Clients

Niagara Web Launcher is a Java-based web client application which provides an applet-like EC-Net^{AX} Pro environment that runs completely outside of a web browser.

Regarding the announced end-of-life of Java 8, for most customers the concern is that there are no more free auto-updates available for Java 8 JRE; i.e., keeping their systems up-to-date with the latest security fixes from Oracle. Niagara Web Launcher is provided to support customers affected by this change. Niagara Web Launcher will not be affected by the end-of-life of Java 8. The solution provided with Web Launcher is that it actually contains an up-to-date version of the Java 8 JRE . Web Launcher supports the following EC-Net Facilities releases:

- EC-Net^{AX}-3.8U4 and subsequent updates
- EC-Net Facilities 4.4U3 and subsequent updates
- EC-Net Facilities v4.7U1 and subsequent updates
- EC-Net Facilities v4.8 and subsequent releases
- EC-Net Facilities v4.9

Usage information for both features is provided in this guide.

More on the changes in Oracle Java 8

As of January 2019, Oracle ended free public updates for Commercial End Users, and intends to end free updates for Personal End Users after December 2020. Customers accessing EC-Net Facilities with the Java Applet will be impacted by this change.

Figure 1 Oracle Java 8 Updates warning

Most EC-Net Facilities end users fall under the Commercial End User category. They will not be auto-updated to Java 9 (or later) as Oracle intends to remove their web deployment stack with Java 11. This means that commercial end users may have to pay Oracle for support (perhaps a certain dollar figure per license) in order to keep their systems up-to-date with the latest security fixes for the JRE.

Many EC-Net Facilities sites (especially EC-Net^{AX} and EC-Net Access sites) rely on Java Applet functionality in JAVA 8 JRE.

Frequently Asked Questions

This topic provides frequently asked questions and answers to assist you in understanding the potential impact to your system resulting from the pending end-of-life of Java SE 8.

Will my system stop working?

No, your application will continue to work as long as you have your Java Run-Time Engine (JRE) installed. However, you will not receive future security updates after the January 2019 update.

Does this affect Workbench?

No, this does not affect Workbench users.

Does this affect my Supervisor or EC-BOS?

No, security updates for these platforms are still being provided.

Does this affect the web browser I use to access my system?

Yes, this impacts the JRE used in your browser if you are still using Java-based views.

Do I need to upgrade my installed version of Java?

Our replacement product will not use the version of Java currently installed on your system. An up-to-date version for use by our application will be provided. Please consult with your IT department about updating your locally installed version as changes may impact products from other vendors.

Which version of Java does the Niagara Web Launcher support?

Java 8.

Will there be a cost for this new application?

At this time, there will not be a cost for this new application. This is subject to change.

Which EC-Net Facilities versions are supported?

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- EC-Net Facilities v4.9

For users, transitioning to Web Launcher should be easy since the web client application provides an installer which downloads and launches a program that opens the application in a separate window instead of in a browser.

Will I have to make changes to my applications?

Yes, you will need to update certain modules to provide end users with an application download and start-up link.

How will I get the Niagara Web Launcher?

Contact your EC-Net Facilities partner to get the appropriate JAR files.

Will the JRE for the Supervisor and remote controllers still be Oracle J2SE?

The Supervisor and the controller JRE will not be changed as a part of releasing the Niagara Web Launcher.

Will there be some impact (specific bugs, performance, memory) in running two different JREs?

We do not expect any issues.

For additional information from Oracle, check out the Java SE Support Roadmap and the Oracle Java SE 8 Release Notes at https://www.oracle.com/technetwork/java/index.html.

Chapter 2 Using Niagara Web Launcher

Topics covered in this chapter

♦ Downloading the installer
♦ Installing Web Launcher
♦ Web Launcher limitations

The EC-Net Facilities v4.8 (and later) installation includes Niagara Web Launcher. For earlier EC-Net Facilities releases, the minimum version of the web-rt patch module that needs to be installed to run Niagara Web Launcher is as follows:

Regarding the announced end-of-life of Java 8, for most customers the concern is that there are no more free auto-updates available for Java 8 JRE; i.e., keeping their systems up-to-date with the latest security fixes from Oracle. Niagara Web Launcher is provided to support customers affected by this change. Niagara Web Launcher will not be affected by the end-of-life of Java 8. The solution provided with Web Launcher is that it actually contains an up-to-date version of the Java 8 JRE. Web Launcher supports the following EC-Net Facilities releases:

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For users, transitioning to Web Launcher should be easy since the web client application provides an installer which downloads and launches a program that opens the application in a separate window instead of in a browser.

When using this feature the web browser is needed only to download the installer file.

Once the installer file (`NiagaraWebLauncher*.msi`) is downloaded, it installs the Niagara Web Launcher application on your device. The Niagara Web Launcher file (`webLauncher.exe`), which is saved to the `C:\ProgramFiles\Niagara Web Launcher` directory by default, is used to launch the application. After installation has completed, you can configure a Windows shortcut for the file. The browser is not needed again.

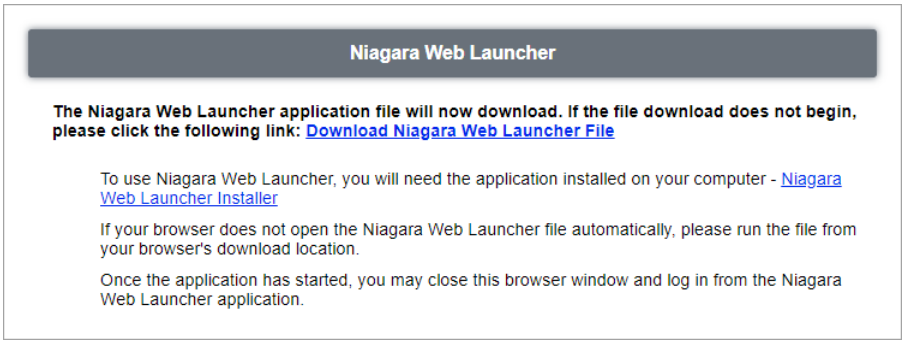
NOTE: In EC-Net Facilities v4.4 and later, by default Web Launcher can no longer be used to navigate to arbitrary Web addresses. The only way to directly load URLs is by first configuring a whitelist in the station's `!defaults/system.properties` file. For example, if your station includes Px pages that include embedded WebBrowsers to external URLs, or hyperlinks to external URLs, then you must configure the whitelist to allow Web Launcher/Web Start to load those URLs. For more details, see “Configuring the web browser whitelist” in *Getting Started with EC-Net Facilities*.

Downloading the installer

When you initiate a browser connection to the station the pre-login window provides a link under the login dialog that reads: “To connect using Niagara Web Launcher **click here**”. Clicking this link downloads and auto-runs the installer file.

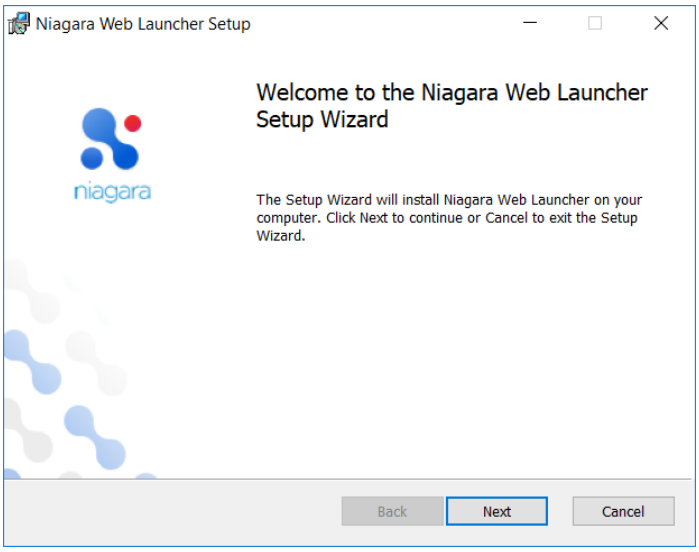
Figure 2 Example Niagara Web Launcher link that downloads and launches the installer

Figure 3 The `NiagaraWebLauncher.msi` installer file downloads



NOTE: If the installer does not automatically run. Access the `NiagaraWebLauncher*.msi` file in your browser's downloads location and double-click the file to run the setup wizard shown below. You may notice another file, `<stationName>.nwl` is downloaded to the same location. This is a text file containing information that tells Web Launcher how to connect to that particular station. So on subsequent connections, there is no need to download and run the `*.msi` installer file again. Instead you could double-click the `*.nwl` file which launches `webLauncher.exe`.

Figure 4 Niagara Web Launcher Setup Wizard window



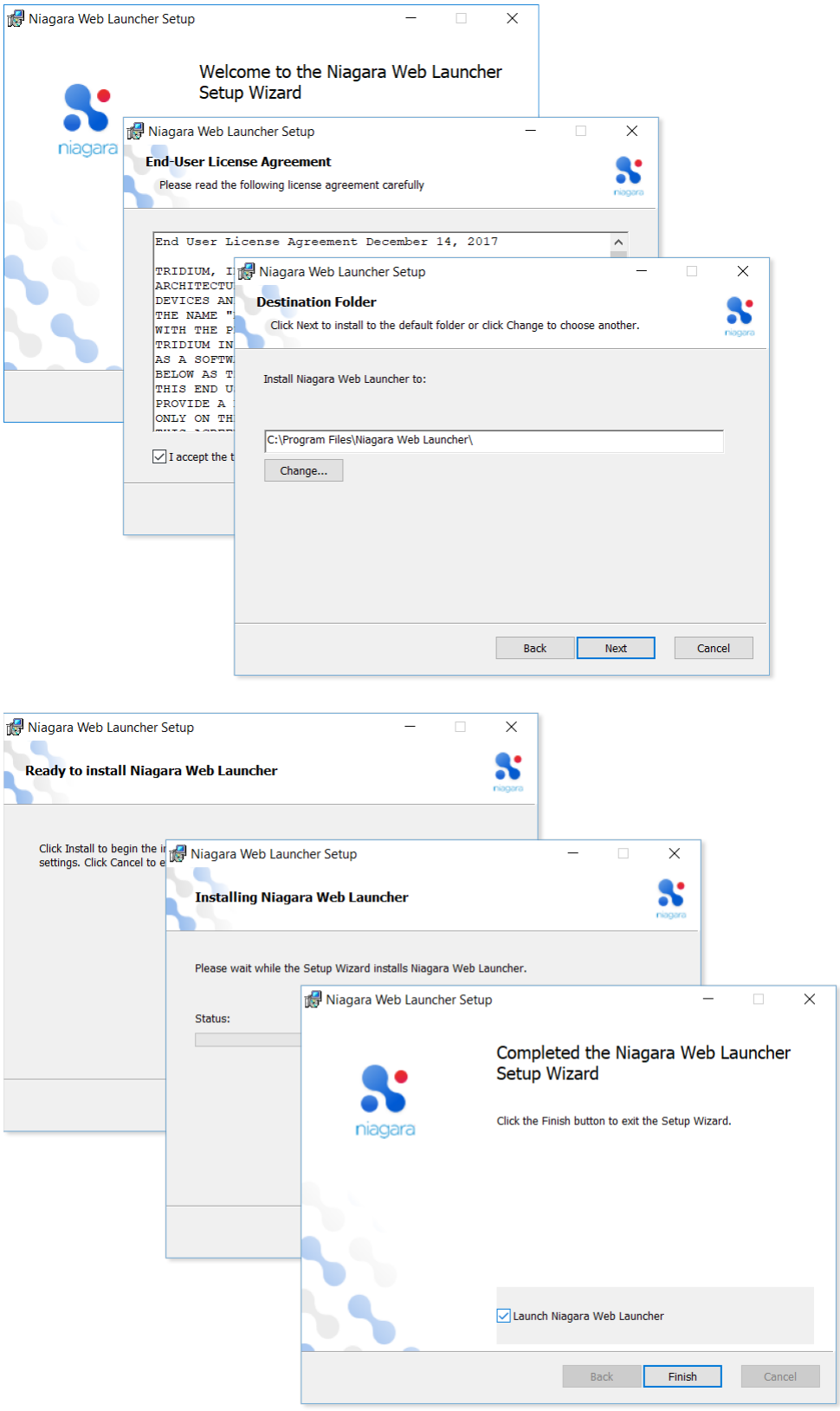
Once the installer launches the **Niagara Web Launcher Setup Wizard**, you can close the browser or you can go to a different web page while the setup wizard runs and installs the executable file.

Installing Web Launcher

The installer file (NiagaraWebLauncher*.msi) which should auto-run upon downloading, opens the **Niagara Web Launcher Setup** window. The setup wizard runs and installs the Web Launcher executable file.

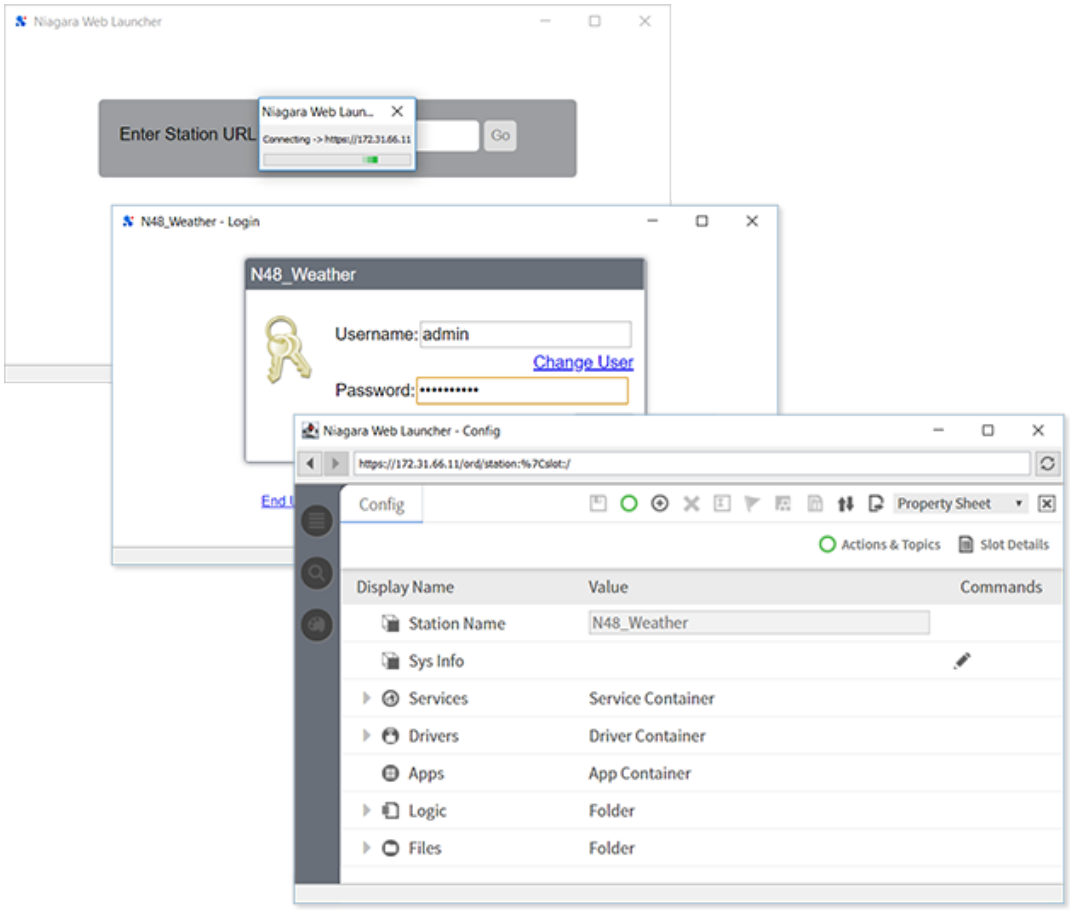
Step 1 As with most installer wizards, on-screen instructions in the windows walk you through the installation process.

Click **Next** to advance to the next window, **Back** to see a previous window, **Install** to begin the installation, and on completion click**Finish** to exit the installer. Click **Cancel** to exit without completing the installation.



When the installer finishes, if the **Launch Niagara Web Launcher** checkbox is selected it automatically launches the Niagara Web Launcher application in a separate window.

Step 2 In the **Niagara Web Launcher** window, first you are prompted to enter a Station URL, then your User-name, and Password credentials to connect to the station.



Once the Web Launcher executable file is installed you only need to run `webLauncher.exe` to connect to the station. There is no longer any need to access the login page via a browser or to run the installer file again. Optionally, you can create a Windows shortcut for the `webLauncher.exe` file to use on subsequent connections.

NOTE: You can configure Web Launcher to open with a connection to a station in one of two ways:

- Edit the host address in the Web Launcher `<stationName>.nwl` file (in your browser's downloads location) by opening the file using a text editor, and replace the host address with your preferred host address.
- Launch Web Launcher from the command line by entering: `weblauncher.exe host=https://localhost`.

NOTE: The installer also installs `webLauncher_debug.exe` (in the same location as the Web Launcher executable) which you can run if you need debugging information. Double-clicking the file to opens a **Debug** window and a **Web Launcher** window.

Web Launcher limitations

Known limitations of the Web Launcher implementation in EC-Net Facilities are described here.

When the Web Launcher application creates the Workbench view, that view is not contained within a web page. The view has no direct relationship to HTML elements in a web page, and the HTML does not know about the view. The view is not displayed as part of the layout of a page. This means that certain things that might have been possible with an applet in a browser will not work in Web Launcher. An applet contained within an HTML frame, for instance, cannot be supported in Web Launcher.

An Hx view containing an instance of the applet may not display in a browser exactly as it did in a previous release(s). The Web Launcher application is unable to display the applet in-line with the HTML content. Instead, the application positions the HTML and applet next to each other. The application shows the Hx path bar at the top of the view, with the applet below it. HTML content below the applet is not visible.

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