

# Technical Document

## Niagara Web Start Guide

April 25, 2016



# Niagara Web Start Guide

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# PREFACE

## About this guide

This guide explains to the Systems Integrator how to use the NiagaraAX-3.8U1 Java Web Start feature.

### Document change log

Updates (changes/additions) to this Niagara Web Start Guide are listed below.

- Updated April 25, 2016.
  - Added information about an AX Web Start application being unable to open an applet view on an N4 station to the “Multi-station navigation” and “Web Start limitations” topics. Also in Web Start limitations, revised wording of the paragraph describing that an Hx view containing an instance of the applet may display differently than in a previous release(s).
  - Changed the title of the “Web Start Config properties” topic to “Web Start configuration”, and added information about Web Start options in Default Web Profile.
  - Removed content on custom splash screen from “About Java Web Start” and “Branding Web Start applications” topics.
- Initial publication: April 8, 2016

### Related documentation

- *NiagaraAX User Guide*



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# CHAPTER 1 ABOUT JAVA WEB START

## TOPICS COVERED IN THIS CHAPTER

Web Start configuration

About the JNLP file

About multi-station navigation

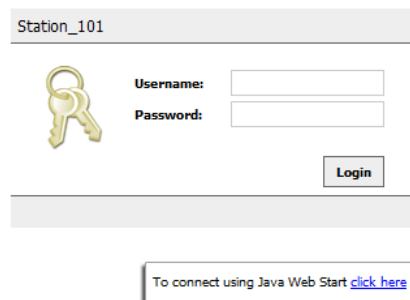
Web Start limitations

Java Web Start is an Oracle technology that comes as part of the Java Runtime Environment. NiagaraAX-3.8U1 offers an alternative to running the Workbench applet in a web browser by providing an application which can be launched by Java Web Start. The key difference 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.

When using this feature, Niagara provides an applet-like Workbench environment that runs completely outside of the browser. The web browser is needed only to download a JNLP file that is used to launch the application. The downloaded JNLP file can be used to launch the application on subsequent occasions (the browser is not needed again). The Niagara Web Start application then checks that a Java 8 JRE is installed, as a minimum. It does not check the update release version of the installed JRE.

In the figure shown here, you would launch the application by clicking the additional link under the login dialog that reads: "To connect using Java Web Start **click here**". Of course, if you configure Web Start desktop or Start menu shortcuts, Workbench is launched from those. In that case, the link and login page in the web browser are not used. Once the application is downloaded and launched, you can close the browser or you can go to a different web page while the application continues running.

**Figure 1. Java Web Start link on a station's login web page**



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 the browser.

Optionally, the Java Web Start application can be branded. You may add brand icons for the window frame and shortcuts. For example, an OEM distributing a Niagara-based application can configure the brand.properties file with their brand defaults, and a Systems Integrator installing that product can optionally modify the default shortcut text to suit the end users via the configuration properties available in the station's Web Services.

Enabled by default, to use Web Start simply decide whether or not you want to install application shortcuts. If you do, use the **Web Start Config** properties (in the station's Web Services) to enable the shortcuts and modify default shortcut text as needed.

## Web Start configuration

In AX-3.8U1, **Web Start Config** is an added slot in the Web Services **Property Sheet** view. Web Start Config properties permit you to enable/disable functionality and to configure shortcuts.

### Web Start Config property descriptions

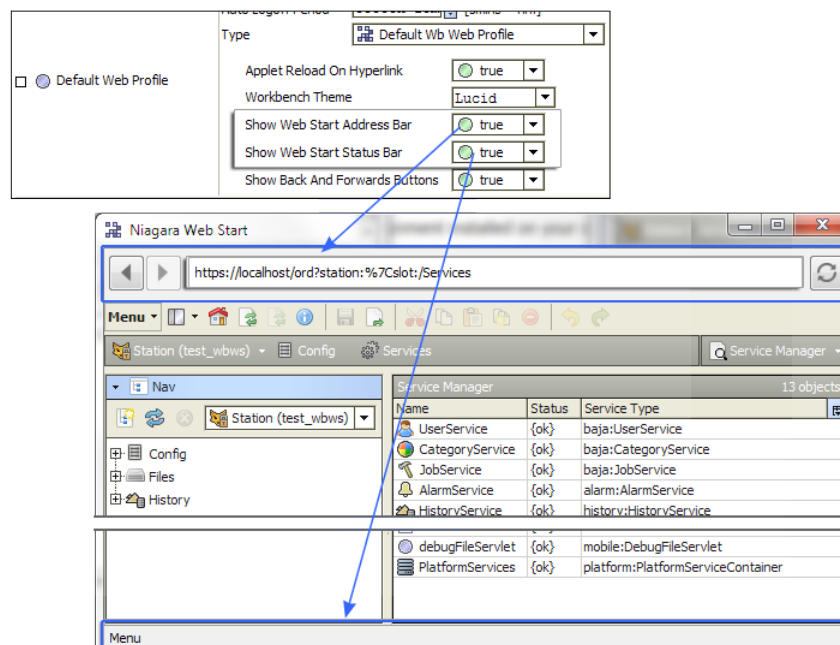
Name	Value	Description
Web Start Enabled	true, false (default)	Enables/disables Web Start functionality on the station.
App Title	Format string: %station% - %server% (default)	<p>Format string supports only the BFormat options. Modifies the text that displays with the Start menu shortcut or desktop shortcut. Typically, the default the App Title is the station name, server name, IP address, or local-host. "</p> <p>For security reasons, this property supports only a few of the BFormat options:</p> <p>%server% - the host name or IP address of the station. This is the URL used to get the JNLP file.</p> <p>%station% - the station name.</p> <p>%app% - the application name. This value is from the <b>webstart.title</b> property in the <code>brand.properties</code> file or if not specified there, it is "Niagara Web Start" by default.</p> <p>%vendor% - the vendor name. This value is from the <code>webstart.vendor</code> property in the <code>brand.properties</code> file or if not specified there, it is the license brand by default.</p>
Create Start Menu Shortcut	true, false (default)	<p>Configures the application to launch from a Start Menu shortcut.</p> <p>Configuring Web Start shortcuts is optional.</p>



Name	Value	Description
Create Desktop Shortcut	true, false (default)	Configures the application to launch from a desktop shortcut.  Configuring Web Start shortcuts is optional.
Shortcut Folder Name	Format string: %app% (default)	Configures the application name text for the shortcut. The default option (%app%) uses the value from the <b>webstart.title</b> property in the brand.properties file or, if not specified there, it defaults to the value configured for the Web Start Config <b>App Title</b> property.  <b>NOTE:</b> Configuring this property is optional.

### Default Web Profile options

The Default Web Profile, in the station's UserService, includes two Web Start configuration options as well: Show Web Start Address Bar and Show Web Start Status Bar. The new profile options allow profile users to hide those parts of the window if they don't want to see them.



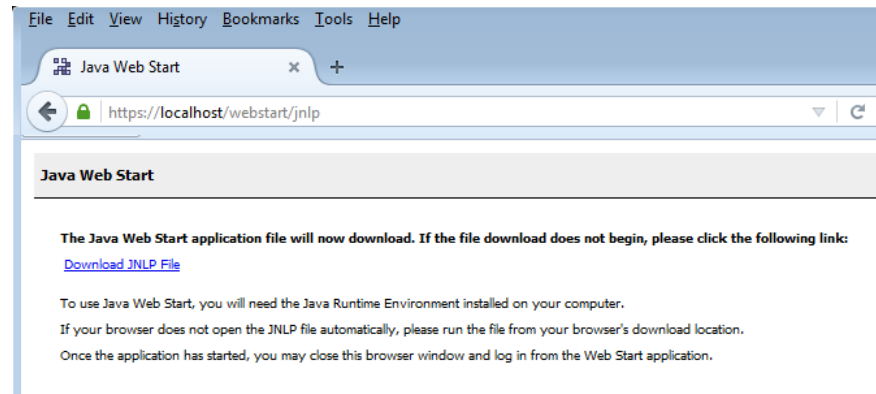
### About the JNLP file

Java Web Start applications are launched using the Java Network Launch Protocol (JNLP). The JNLP file is required in order to deploy an application. A web browser is needed only to download a JNLP file that is used to launch the application. On subsequent occasions, you can

double-click the JNLP file to relaunch the application. The web browser is not needed. The JNLP file, which is generated by the web server, is an XML text file that describes how the application should be launched. It contains the basic information on the application and host, such as the URL of the hosting station. The file does not contain any user- or session-specific information.

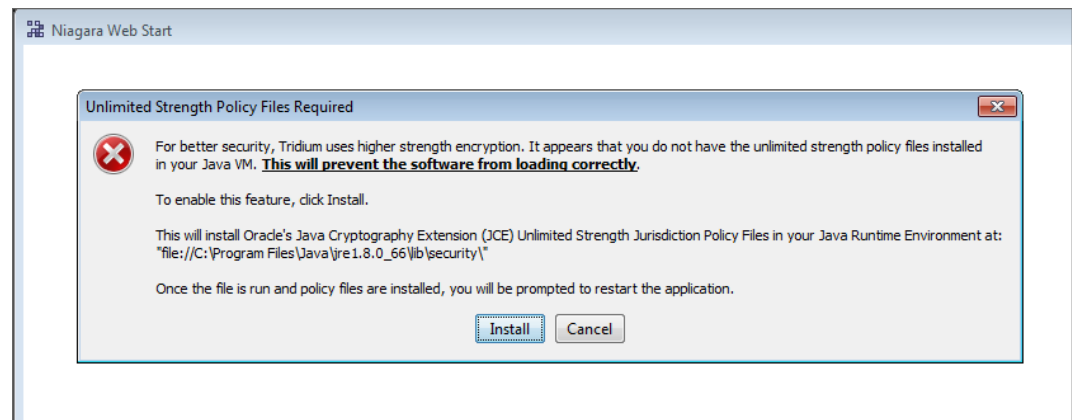
**NOTE:** Once a JNLP file is obtained, the application then checks that a Java 8 JRE (at a minimum) is installed. However, it does not check the update release version of the installed JRE.

**Figure 2. The JNLP file downloads and launches the application**



**NOTE:** If using the Chrome web browser, Chrome is not able to automatically open a JNLP file. The file must first be downloaded and then opened manually.

You may see the following notification that the required JRE unlimited strength policy files must be installed. After the files are installed you must close the application and restart it.



## About multi-station navigation

Multi-station navigation functions somewhat differently in a Java Web Start application than it does in the applet.

When navigating a system, if a login page for another station is encountered, the page may show a link to open a new instance of the Web Start application. If the station you are navigating to has a different Niagara version, you can click the link to open a new Web Start instance, which will be launched from and use the modules from the other station. This requires Web Start to be supported and enabled on that other station.

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**NOTE:** The AX Web Start application cannot open an applet view from an N4 station, and vice versa. In this situation, you must open the Web Start application from the other station.

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## Web Start limitations

Known limitations of the Java Web Start implementation in NiagaraAX are described here.

When the Niagara Web Start application creates a 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 the applet in a browser will not work in Web Start. An applet contained within an HTML frame, for instance, cannot be supported in Niagara Web Start.

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 Niagara Web Start 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.

Additionally, the AX Web Start application cannot open an applet view from an N4 station, and vice versa. In this situation, you must open the Web Start application from the other station.



# CHAPTER 2 COMMON TASKS

## TOPICS COVERED IN THIS CHAPTER

### Enabling Web Start

### Configuring Web Start shortcuts

### Branding Web Start applications

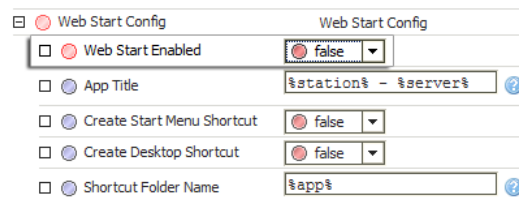
The following sections include descriptions of typical Java Web Start configuration procedures.

## Enabling Web Start

Typically, Web Start functionality is enabled by default. However, if needed, you can enable it via the station's WebServices **Property Sheet** view, as described in this procedure.

### Perform the following steps:

- Step 1 On the station's WebServices **Property Sheet** view, expand the Web Start Config slot (as shown) and click on the **Web Start Enabled** dropdown to set the value to **true**.



The screenshot shows a 'Web Start Config' property sheet. It contains several properties: 'Web Start Enabled' (a dropdown menu currently set to 'false'), 'App Title' (a text field with the value '%station% - %server%'), 'Create Start Menu Shortcut' (a dropdown menu set to 'false'), 'Create Desktop Shortcut' (a dropdown menu set to 'false'), and 'Shortcut Folder Name' (a text field with the value '%app%'). Each property has a small icon to its left and a help icon to its right.

- Step 2 Click **Save**.

Web Start functionality is enabled on the station.

Optionally, you can click in the text field for the **App Title** property to modify the text that displays with the Start menu or desktop shortcuts. Typically, the default app title would be the station name, server name, IP address or localhost.

## Configuring Web Start shortcuts

Java Web Start properties allow you to configure the application to launch from a desktop shortcut or a Start Menu shortcut. Note that configuring shortcuts is optional, it is not required.

### Perform the following steps:

- Step 1 On the station's WebServices **Property Sheet** view, expand the Web Start Config slot and click on the dropdown list to enable the following shortcut properties:

- **Create Start Menu Shortcut**
- **Create Desktop Shortcut**

- Step 2 If desired, click in the text field for the **Shortcut Folder Name** property to modify the default text for the shortcut. This step is optional.

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**NOTE:** For security reasons, this property supports only a few of the BFormat options:

- `%server%` - the host name or IP address of the station. This is the URL used to get the JNLP file.
  - `%station%` - the station name.
  - `%app%` - the application name. This value is from the `webstart.title` property in the `brand.properties` file or if not specified there, it defaults to the value configured for the Web Start Config **App Title** property.
  - `%vendor%` - the vendor name. This value is from the `webstart.vendor` property in the `brand.properties` file or if not specified there, it is the license brand by default.
- 

## Branding Web Start applications

This optional procedure may be most useful for an OEM distributing a Niagara-based application. You can brand defaults for your Workbench application launched by Java Web Start by editing the `brand.properties` file. There are five properties in the brand file relating to Web Start (shown below in step 2).

### Prerequisites:

- The image files used for branding must be located on the local station, either in the module space or in the file system space. If using the file system space, the ords must refer to files in the system home `/workbench/webstart/` directory.
- The image files must be either `.png`, `.gif`, `.jpg`, or `.ico` format.

### Perform the following steps:

- Step 1 Open the Java Control Panel, view the temporary internet files from the general page, and delete any existing cached instances of the Web Start app
- Step 2 In the system home directory, open the `/lib/brand.properties` file and, if the following settings are present in the file, modify as desired. Otherwise, use a text editor to enter the following settings in the file:
  - `webstart.vendor` - you can use this in the format property for the shortcut text. Niagara uses the license brand id when this property is not set.
  - `webstart.title` - provides the text for the window title bar. You can also use this as a format value in the shortcut property.
  - `webstart.icon` - a file ord referencing an icon image file to be used on the title bar of the application window
  - `webstart.shortcut.icon` - a file ord referencing an image file to be used on the start menu and desktop shortcuts)
- Step 3 Start the station.
- Step 4 In the WebServices **Property Sheet** view, expand the Web Start Config slot and ensure that the Web Start property is enabled and that the three shortcut properties are enabled.
- Step 5 Open the login page from a web browser and click on the Web Start link to download the JNLP file.

The Web Start application opens.

- Step 6 Verify that the title and icons specified in the `brand.properties` file are used for the window frame.
- Step 7 Open the Windows Start menu and verify that the shortcut icon specified in the properties file is shown.

**Example**

Following is an example of brand properties referencing custom images via module ords:

```
webstart.vendor=Initech  
webstart.title=Initech BAS Appliance  
webstart.icon=module://demoAppliance/appliance/ui/initech.png  
webstart.shortcut.icon=module://demoAppliance/appliance/  
ui/initech.png
```

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**NOTE:** Since the brand properties are cached, subsequent changes require a station restart for the changes to take effect. Brand properties are also written to the JNLP file, so changes require that the file be downloaded again.

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