

Getting Started with Series 40 Web Apps

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Change history

7 April 2011	1.0	Initial document release
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1. Introduction

This document provides a getting started guide to using the Nokia Web Tools to create, preview, test, and deploy Series 40 web apps for the Ovi Browser.

1.1 Nokia Web Tools

Nokia Web Tools comprises four components:

- *Web Developer Environment (WDE)* — built on the Eclipse and Aptana Studio platforms; WDE leverages the powerful web editing features of these platforms to provide for the editing, packaging, and deploying of web apps. The features of the WDE for creating Series 40 web apps are described fully in Web Developer Environment Guide for Series 40 Web Apps available from Web Developer Channel.
- *Web App Simulator (WAS)* — this tool enables web apps to be previewed and log information useful for debugging viewed on a computer. The features of WAS applicable to Series 40 web apps are described fully in Web Apps Simulator Guide for Series 40 Web Apps, available from Web Developer Channel.
- *Web Developer Channel (WDC)* — this resource is embedded in WDE and provides online access to a range of resources from Nokia that will assist in the development of web apps. The features of WDC are described fully in the Web Developer Channel Guide, available from WDC.
- *Web App Designer (WAD)* — this tool enables developers and designers to create application prototypes using screen mock-ups. Using hotspots and by defining screens linked to hotspot actions, interactive prototypes can be created. These prototypes can be exported and exercised on a wide variety of Nokia devices to gather feedback. The features of WAD are described in Web App Designer User Guide, available from WDC.

Nokia Web Tools are available for computers running Microsoft Windows, Apple OSX, or Ubuntu Linux.

1.2 Content

This document provides a guide to getting started with the creation of Series 40 web apps and describes the processes of creating, previewing, testing, and deploying a Series 40 web app. Reading this guide will provide you with sufficient information to start creating Series 40 web apps with Nokia Web Tools.

This guide has been written based on use of a Microsoft Windows installation; however the guidance provided is the same for Apple Mac and Ubuntu installations, unless specifically noted.

2. Getting started guide

This guide assumes you have installed Nokia Web Tools onto your computer. Nokia Web Tools are delivered in standard installer packages for Microsoft Windows, Ubuntu Linux, and Apple Mac. If you need additional information on the installation process it's provided in [Nokia Web Tools Installation Guide](#), which is available from the [Nokia Web Tools download page](#) on the Forum Nokia website.

Once Nokia Web Tools are installed, getting started is easy: You create a web app from a template, edit it, preview it, and deploy it to your compatible Nokia device — through the Ovi Browser proxy server — to see it in action.

2.1 Starting Web Developer Environment

Web apps are created, edited, packaged, and deployed in Web Developer Environment (WDE). WDE is run from your systems applications menu. The first time WDE is run you will be prompted to select a workspace, as shown in Figure 1. Unless you wish to regularly change the active workspace, **Use this as the default and do not ask again** can be selected.

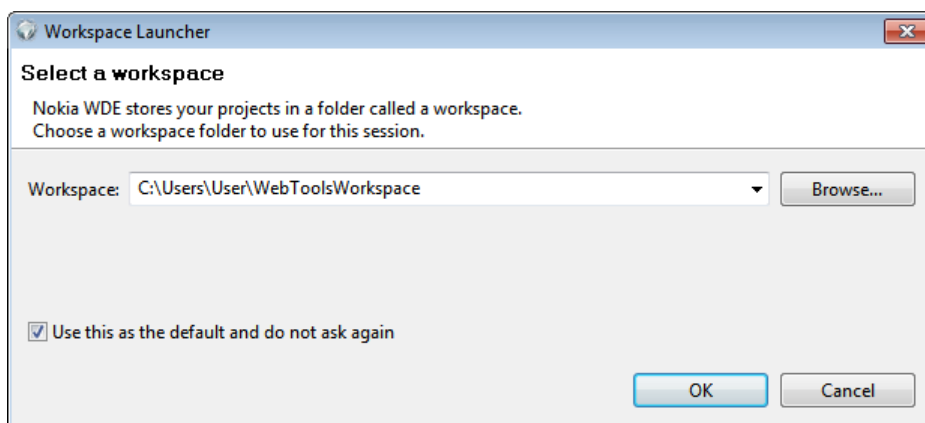


Figure 1: The Workspace Launcher, enabling an alternative work space to be selected, is shown.

After clicking **OK**, WDE opens.

Once the workspace has been selected you may receive a **Windows Security Alert** prompt, as shown in Figure 2. If this message is displayed, click **Unblock**.

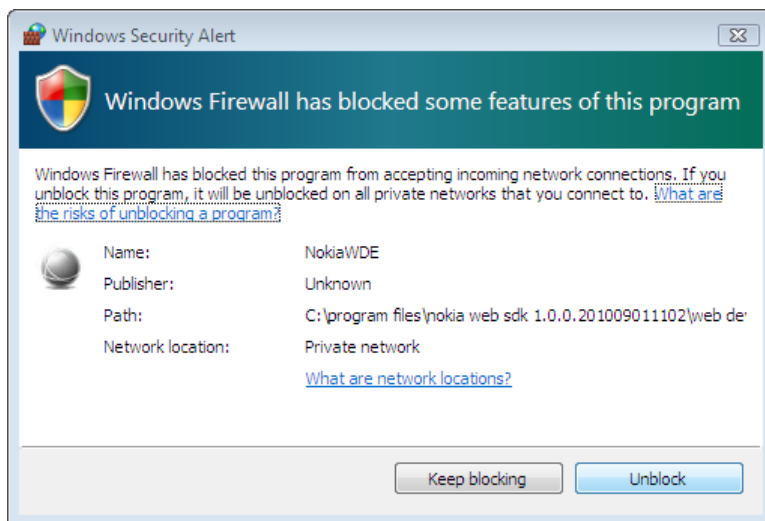


Figure 2: The Windows Security Alert that may be displayed when WDE is first run is shown.

2.2 Creating your first web app project

To enable the creation of Series 40 web apps WDE offers a number of templates, such as the Basic template that contains the core web app files with no functionality and the News web app project template that offers a functional RSS reader. You can work with web app examples or a web app project you have already created as well. More details on importing web apps and using the templates can be found in Web Developer Environment Guide for Series 40 Web Apps.

For this guide the fully working News web app template will be used to create a Series 40 web app.

To create the Series 40 web app project, on the **File** menu point to **New** and click **Series 40 web app (wgt)**, shown in Figure 2.

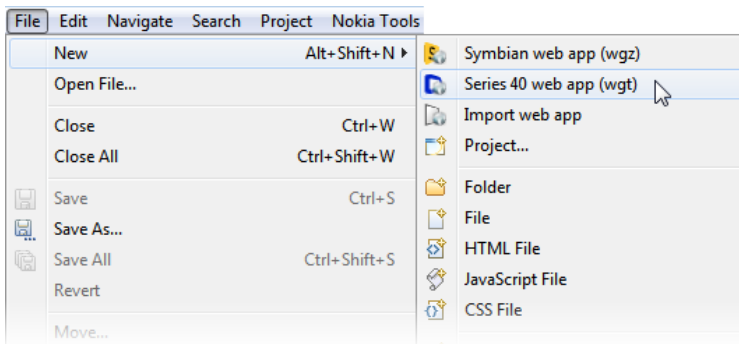


Figure 3: Selecting the Series 40 web app (wgt) option on the File menu is shown.

The **New Series 40 web app** dialogue, shown in Figure 3, displays. In the **Nokia Series 40 Web Apps** folder, click **News web app project** and then **Next**.

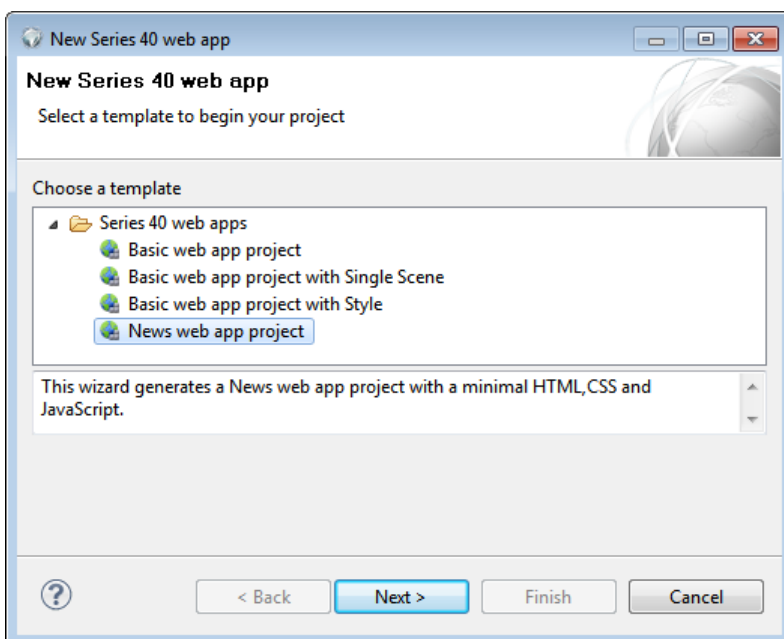


Figure 4: Selecting a template for a new Series 40 web app is shown.

The **New News web app project** dialogue, shown in Figure 4, displays.

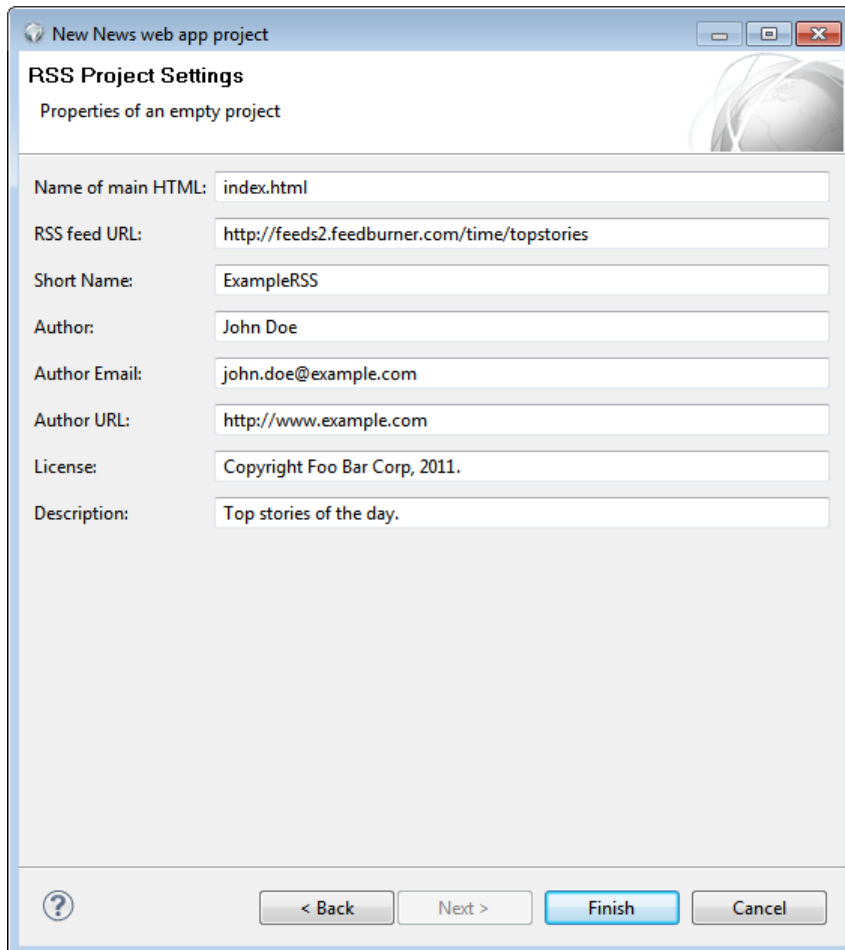
Figure 5: The New News web app project dialogue, where details of the web app project are defined, is shown.

Enter the project name *MyRSS* in the **Project Name** field. When you leave the **Project Name** field the wizard automatically populates the **Display Name** and **Unique Identifier**. You can change these fields as desired: do so for the **Display Name**, using *My RSS app*, and version number, using *1.0.0*.



Note: There is a check box, labeled **Enable Home Screen**, which is used to indicate whether a Symbian WRT web app will contain a home screen implementation. For Series 40 web apps this field is disabled, as Series 40 web apps don't support this type of screen.

Click **Next** and the **RSS Project Settings** dialogue, see Figure 5, displays. This dialogue enables the setting of the main HTML file name that will be used in the project, the URL for the RSS feed to be displayed, and information about the web app. Update the web app information if you wish, the other details can be used unchanged.



The image shows a dialog box titled "New News web app project" with a sub-header "RSS Project Settings" and the text "Properties of an empty project". The dialog contains several text input fields for configuration:

- Name of main HTML: index.html
- RSS feed URL: http://feeds2.feedburner.com/time/topstories
- Short Name: ExampleRSS
- Author: John Doe
- Author Email: john.doe@example.com
- Author URL: http://www.example.com
- License: Copyright Foo Bar Corp, 2011.
- Description: Top stories of the day.

At the bottom of the dialog, there is a help icon (question mark in a circle) and four buttons: "< Back", "Next >", "Finish", and "Cancel". The "Finish" button is highlighted in blue.

Figure 6: The RSS Project Settings dialogue, which enables the setting of web app variables, is shown.

Your News web app project is created by clicking **Finish**. The **Create Project** dialogue, see Figure 6, displays, showing the progress of the project's creation before the project is opened in **Project Explorer**.

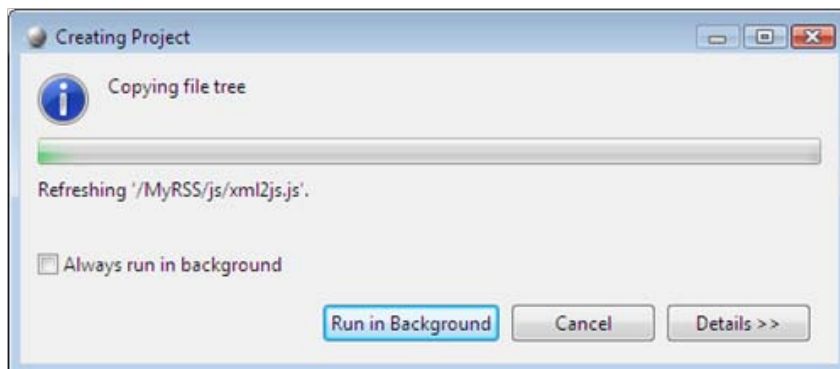


Figure 7: The Create Project dialogue, displaying the progress of project creation, is shown.

2.3 Your News web app project

If you are new to web apps, take a moment to review the content of the project before continuing. To do this, expand the **myRSS** item in **Project Explorer**, as shown in Figure 7.

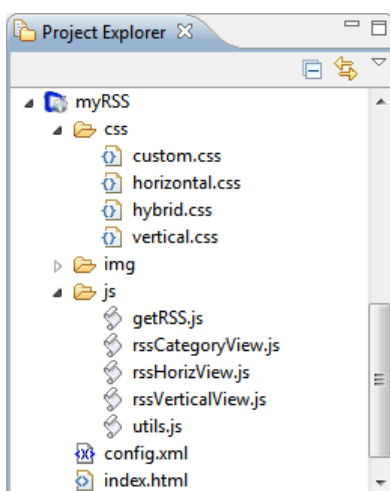


Figure 8: The content of the News web app project in Project Explorer is shown.

The content of the project is as follows:

- *css* — this folder contains the CSS files used by the web app.
- *images* — this folder contains the images used in the web app.



Note: CSS files, images, and any other web app content can be stored anywhere in a project. If stored in a folder, the name and location of the folder is arbitrary. The use of a meaningful folder and single location for logically grouped types of files can help in managing content.

- *Files `config.xml` and `index.html`* — these files define the content and behaviour of the web app. For more information, see the W3C [Widget Packaging and Configuration](#) standard.

2.4 A short guide to editing

The News web app you have created requires no editing, as the template is functionally complete. However, a short introduction to editing a web app's files is worthwhile at this stage.

Double-clicking any web or web app related file in **Project Explorer** opens it in the WDE editor. To see how this works, double-click the `index.html` file in **Project Explorer** and see that it opens in the editor, as shown in Figure 8.

```

<!DOCTYPE html>
<html>
  <head>
    <meta http-equiv="content-type" content="text/html; charset=utf-8"/>
    <title>Time News</title>
    <link rel="stylesheet" type="text/css" href="css/horizontal.css">
    <link rel="stylesheet" type="text/css" href="css/custom.css">
    <script type="text/javascript" src="js/utils.js"></script>
    <script type="text/javascript" src="js/rssHorizView.js"></script>
    <script type="text/javascript" src="lib/mwl/mwl.js"></script>
    <script type="text/javascript" src="js/getRSS.js"></script>
  </head>
  <body>
    <!--Updatable Content -->
    <div id="RSSContentUpdate">Loading...</div>
    <!-- End of RSSContent -->
    <script type="text/javascript">
      /* Putting getRSS() here instead of body onload because
       * we need to have DOM ready before swipe/nav events are added
       */
      getRSS("RSSContentUpdate");
    </script>
  </body>
</html>

```

Figure 9: The `index.html` file open in the WDE editor is shown.

WDE includes a feature designed to simplify code editing: Code completion, which is available in the HTML, RSS, and JavaScript code editors as well as for the `config.xml` file.

More details on code completion are provided in Web Developer Environment Guide for Series 40 Web Apps available from WDC.

2.5 Previewing your web app

Transferring a web app onto a device each time changes are made to the code isn't a practical way of previewing and testing your web app during development. To simplify testing of a web app, WDE integrates with Web App Simulator (WAS).

To preview a web app, on the project's shortcut menu click **Preview web app**, as shown in Figure 9, or on the **Run** menu click **Run**.

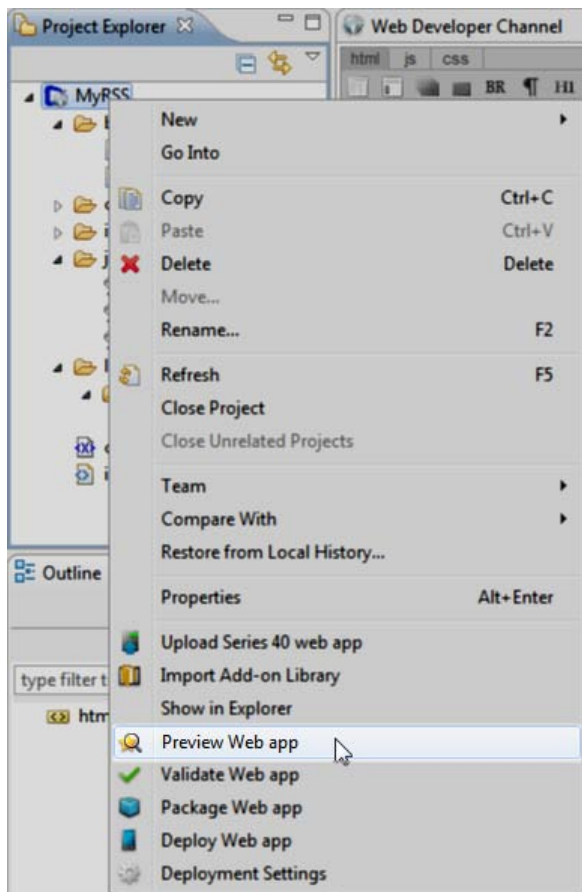


Figure 10: Using the Preview Web app option to launch WAS is shown.

The **Launching preview** dialogue, as shown in Figure 10, displays. It shows the progress of uploading the web app to the Ovi Browser Proxy server.

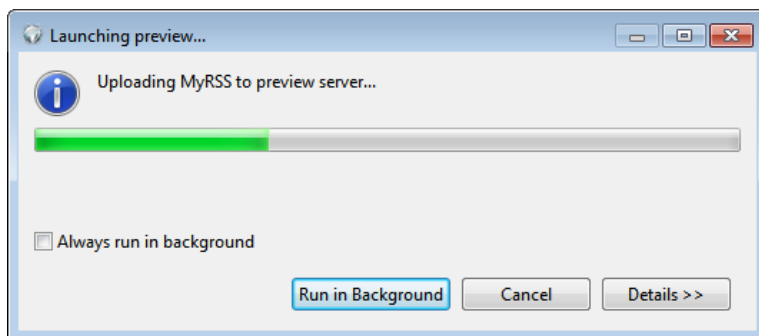


Figure 11: The Launching preview dialogue is shown.

Once the web app has been uploaded WAS starts, as shown in Figure 11, and opens the web app. You can now run the web app in the same way you would on a device.



Warning: WAS doesn't provide full simulation of a web app's look as it would be on a device. As such, all web apps should be tested on a device before distribution to confirm that they look as intended.

For Series 40 web apps, WAS provides features to adjust device characteristics and view settings as well as view log information useful for debugging web apps. For more information on WAS, see *Web App Simulator Guide for Series 40 Web Apps*, available from WDC.



Figure 12: The My RSS App running in WAS is shown.

2.6 Running your web app on a device

Having tested your web app in the simulator the next stage is to run it on a Series 40 device. To do this you'll need the following:

- a [Series 40 device that supports Ovi Browser](#). Ovi Browser is delivered:
 - in firmware for some supported devices. You may need to install new device firmware on your device. To check your device has the latest firmware, connect it to your PC through Ovi Suite. In the menu click **Tools** and then **Software updates**. Ovi Suite will detect if there is a new version of firmware for your device. If there is, click **Update** to install it by following the instructions provided.
 - for supported devices that don't yet include Ovi Browser in firmware, it can be obtained by opening browser.ovi.com in the device's browser. Select or tap download and follow the installation instructions. If Bluetooth Launcher is used and Ovi Browser isn't installed, the launcher will open the device's browser and load the download page.
- optionally, a PC with Bluetooth technology and Bluetooth Launcher. Bluetooth Launcher can be obtained from the [Bluetooth Launcher download page](#) on the Forum Nokia website.

Deployment is achieved using the deploy options in WDE. This process validates and packages the web app (for more information, see Web Developer Environment Guide for Series 40 Web Apps). It then uploads the web app to the Ovi Browser Proxy server. The next step offers two options:

- On a Bluetooth capable PC you can use the Bluetooth Launcher. With this option, after uploading the web app to Ovi Browser Proxy, WDE sends the web app URL to your device and Bluetooth Launcher launches the web app in Ovi Browser Client.
- Use a short URL provided by the deployment process to open the web app directly from Ovi Browser.

The News web app template provides a fully functional web app so, if you have not made any changes to the code, the web app can be deployed.

2.6.1 Deploy with Bluetooth Launcher

To run a web app on a device using a Bluetooth connection you need to set up a Bluetooth connection, install Bluetooth Launcher, define your target device in WDE, and then deploy your web app to run it on a Series 40 device.

2.6.1.1 Set up a Bluetooth connection

Confirm that the PC running WDE and the target Series 40 device can communicate over a Bluetooth connection. One way to do this is by pairing the devices. This is done from the device's **Menu** by opening **Settings**,

Connectivity, Bluetooth, Paired Devices, and Add a New Device. The normal procedure for pairing Bluetooth devices can then be followed.



Tip: The device's Bluetooth name can be found from **Menu** by selecting **Settings, Connectivity, Bluetooth,** and **My phone's name,** as shown in Figure 12.

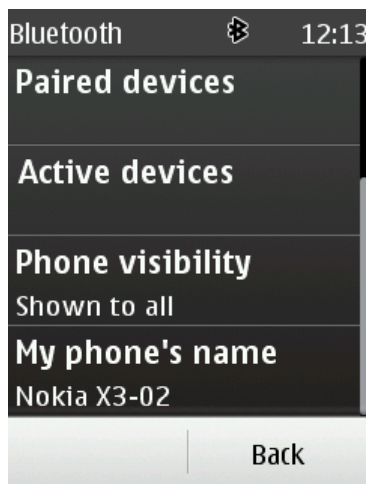


Figure 13: A Series 40 device's Bluetooth name is shown.

2.6.1.2 Install Bluetooth Launcher

Bluetooth Launcher must be installed on the target device. Extract the installation files `BluetoothLauncher.jad` and `BluetoothLauncher.jar` — from the `Bluetooth_Launcher.zip` file you downloaded from the Forum Nokia website — to a suitable folder. The simplest way to install the app is by sending the Bluetooth Launcher JAD and JAR files to your device over the Bluetooth connection you have just checked. You've options also to install the file by connecting your device over a USB cable and copying the files to the device, or copying the files to a memory card that's installed into your device.



Warning: Don't attempt to install the Bluetooth Launcher using Ovi Suite, it will not successfully install the application and the app will not run on your device.

Once the files are on the device, return to the home screen and tap or select **Show** and the **Games** folder will open displaying the **Bluetooth Launcher** app, see Figure 13.

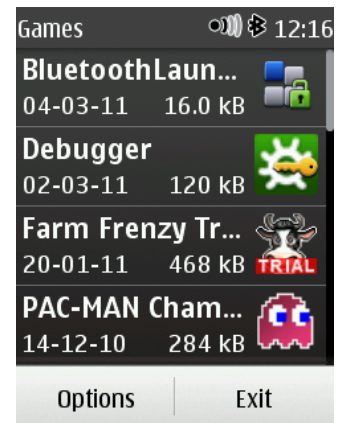


Figure 14: The Bluetooth Launcher app on a Series 40 device is shown.

Start **Bluetooth Launcher** and you will receive a message that states **Bluetooth connection successful**, as shown in Figure 14.

Once the connection message has been displayed, click **OK** to send the app to the background so it can wait to detect the arrival of a deployment instruction over the Bluetooth connection. You're returned to the device's home screen.



Note: When deploying your web app, you can see the Bluetooth connection request only from the home screen of a Series 40 device.

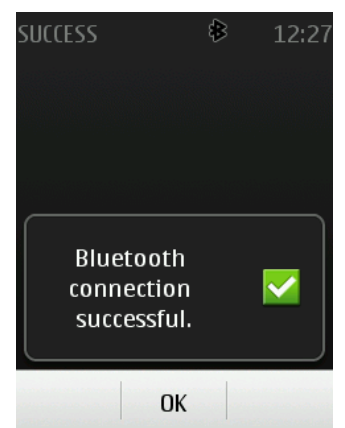


Figure 15: A successful run of Bluetooth Launcher is shown.

2.6.1.3 Define the deployment target

Before deployment can be undertaken the target device needs to be defined to WDE. Before doing this, ensure your target device is visible to your PC over a Bluetooth connection. Then the deployment target is defined by clicking **Deployment Settings** on the project's shortcut menu. The **Preferences** dialogue displays with the **Deployment** item selected, as shown in Figure 15.

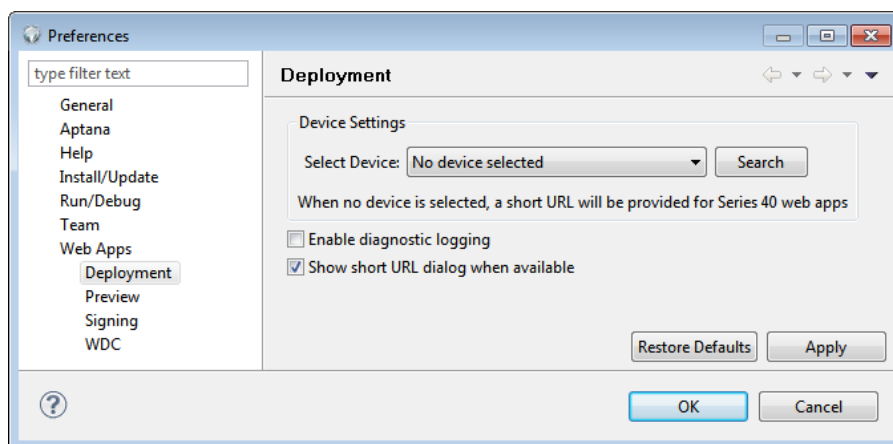


Figure 16: The Deployment settings of the project's preferences are shown.

Click **Search**. A progress information message may display while the available Bluetooth devices are found. When the search process is complete your Series 40 device can be selected from the **Select Device** drop-down list, as shown in Figure 16. The name shown in this list will match the device's Bluetooth name, as shown in Figure 12 on page 15.

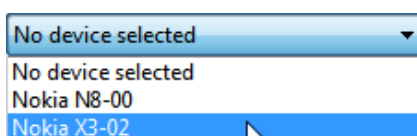


Figure 17: Selecting a device from the list of available Bluetooth devices is shown.

With your device set, click **OK** to save the preferences.

For more information on the options and features of the dialogue see Web Developer Environment Guide for Series 40 Web Apps, available from WDC.

2.6.1.4 Run your web app

Prior to deploying your web app return your device to its home screen. To deploy the web app, on the project's shortcut menu click **Deploy Web app**. The status area displays an indicator, as shown in Figure 17.

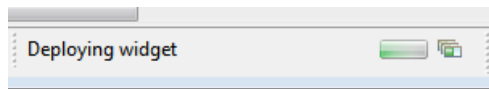


Figure 18: The status bar indicator of a web app deployment in progress is shown.

The **Deploying widget** dialogue, shown in Figure 18, displays. It's suggested that you select **Always run in background** and then click **Run in Background**. This hides the dialogue when undertaking subsequent deployments.

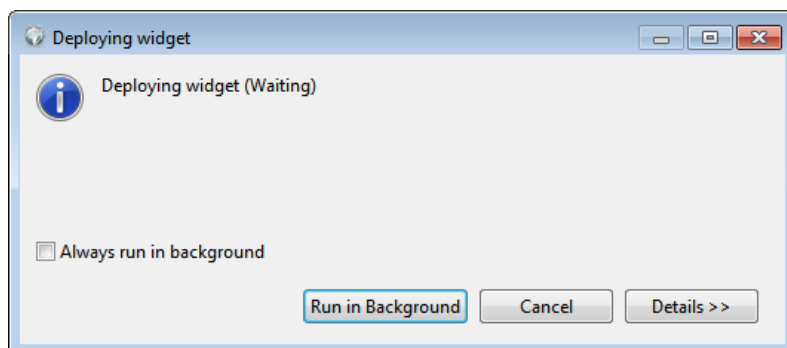


Figure 19: The Deploying widget dialogue is shown.

If not already open, the **Console**, shown in Figure 19, displays and provides details of the web app's deployment to the Ovi Browser preview server and the sending of its URL to the device over the Bluetooth connection.

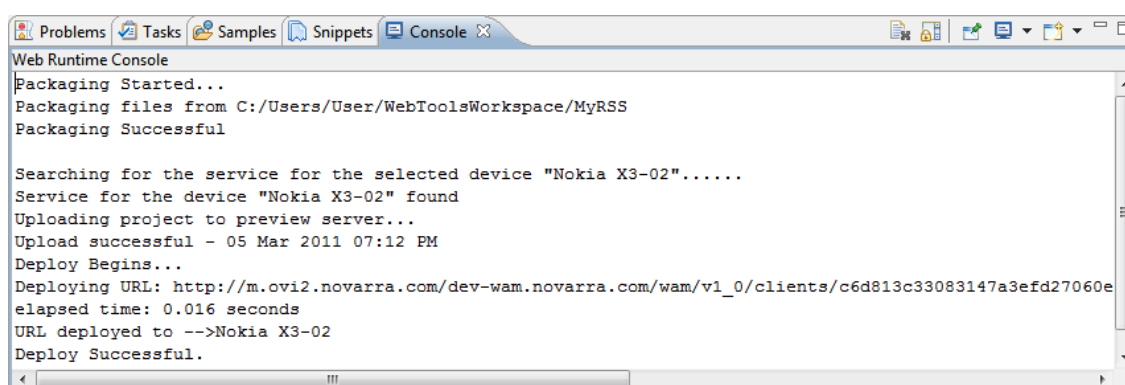


Figure 20: Progress of the web app deployment reported in the Console is shown.

On your device, a message will be displayed asking if Bluetooth Launcher should be started, see Figure 20.

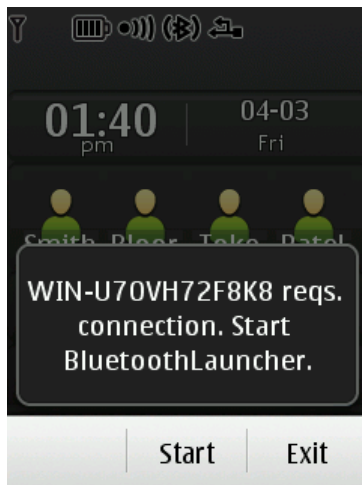


Figure 21: The message asking if Bluetooth Launcher should be started is shown.

Tap or select **Start**.



Note: If your device doesn't include Ovi Browser, Bluetooth Launcher will display a message and give you the opportunity to download and install Ovi Browser. Once Ovi Browser is installed, return to the device home screen and redeploy the web app.

Your web app will now be launched in Ovi Browser, as shown in Figure 22.



Figure 22: The News web app running on a Nokia X3-02 Touch and Type device is shown.

2.6.2 Deploy by use of a short URL

If you don't have a Bluetooth enabled PC or want to share your web app as part of your development and testing process, then the WDE deployment process can provide a short URL. Compared to the full address of a web app on the Ovi Browser preview server, this short URL can be more easily entered into the Ovi Browser Client to run your web app. To use this option, you need to ensure that no device is selected as the deployment target and then deploy your web app.

2.6.2.1 Define the deployment target

If this is the first time you have used your installation of WDE to deploy a web app, WDE will be correctly configured to create a short URL on deployment. However, should you wish to confirm that the configuration is correct click **Deployment Settings** on the project's shortcut menu. The **Preferences** dialogue displays with the **Deployment** item selected, as shown in Figure 23.

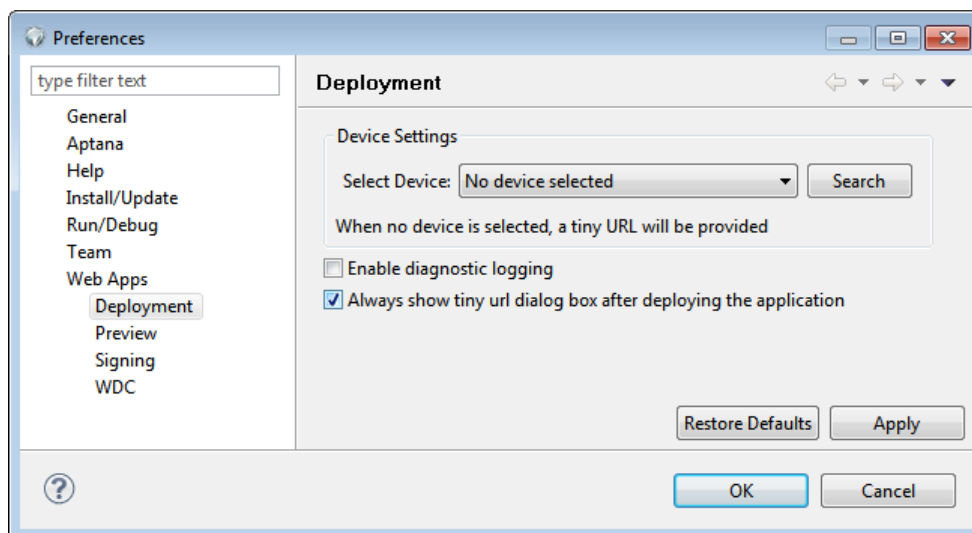


Figure 23: The Deployment settings of the project's preferences are shown.

Ensure **Select Device** is set to **No device selected** and click **OK**. You will receive a warning message, see Figure 24, to indicate you have not selected any options, click **No** to continue and save.

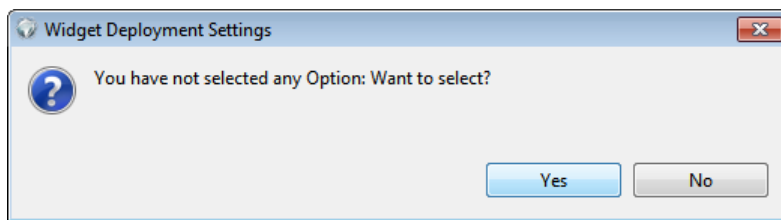


Figure 24: The message warning that no device has been selected is shown.

2.6.2.2 Run your web app

To deploy the web app, on the project's shortcut menu click **Deploy web app**. The status area displays an indicator, as shown in Figure 25.

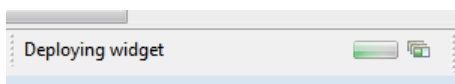


Figure 25: The status bar indicator of a web app deployment in progress is shown.

The **Deploying widget** dialogue, shown in Figure 26, displays. It's suggested that you select **Always run in background** and then click **Run in Background**. This hides the dialogue when undertaking subsequent deployments.

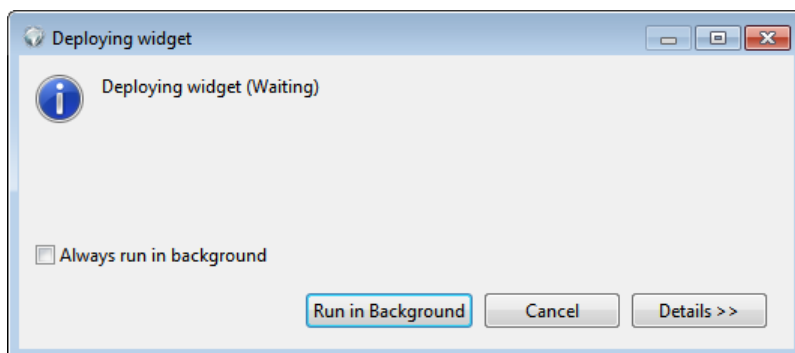


Figure 26: The Deploying widget dialogue is shown.

If not already open, the **Console**, shown in Figure 27, displays and provides details of the web app's deployment to the Ovi Browser preview server and the short URL created.

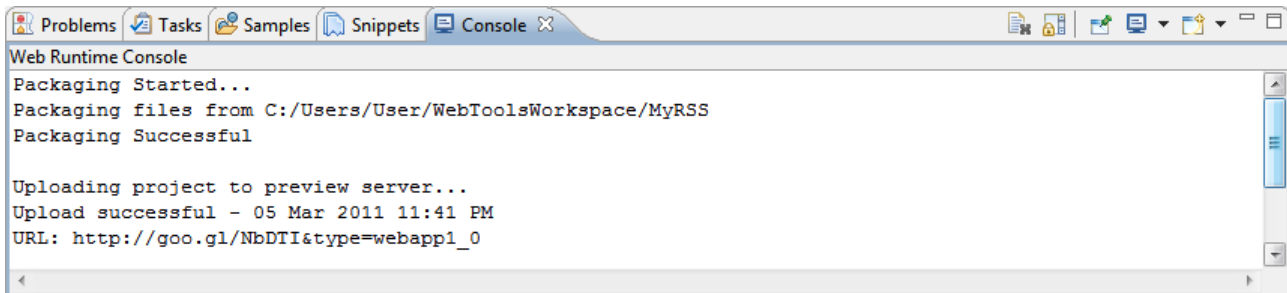


Figure 27: Progress of the web app deployment reported in the Console is shown.

When the web app has been deployed to the server, the **Web App short URL for Ovi Browser** dialogue displays. This dialogue reports the generated short URL in **URL**, shown in Figure 28.

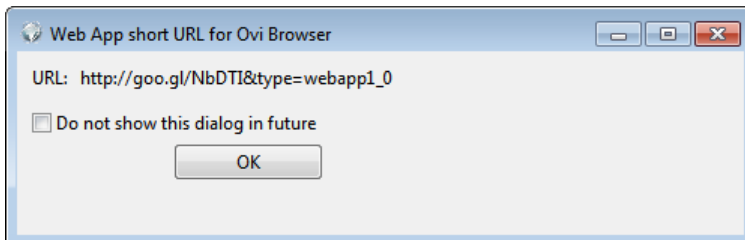


Figure 28: The Web App short URL for Ovi Browser dialogue displaying the URL for the web app is shown.

If you plan to invite others to test the web app, you can copy this URL and send it to your testers.

On your Series 40 device, start Ovi Browser and enter the short URL, your web app will now be launched in Ovi Browser, as shown in Figure 29.



Figure 29: The News web app running on a Nokia X3-02 Touch and Type device is shown.

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