# General information for developing desktop applications

## Overview

This tutorial presents general development information for supported desktop environments. IBM MobileFirst Platform Foundation supports the following desktop environments:

- Windows Store Apps – Built into the Windows 8 OS
- Adobe Air
- Desktop Browser web page

The following topics are covered:

- Development environments
- Design
- Optimizing applications
- Network optimization
- Publishing

## Development environments

Development for Windows 8 apps (known as Windows Store apps) is done in MobileFirst Studio and later continued in Microsoft Visual Studio Express 2012 for Windows 8.
To open the project in Visual Studio Express 2012 for Windows 8, double-click the `application_name.jsproj` file that is in the native folder.

For the Adobe Air and Desktop browser web page environments, development is done entirely in MobileFirst Studio.

## Design

When you develop applications, it is useful to always consult the Microsoft Design (http://dev.windowsphone.com/en-us/design) and Develop (http://dev.windowsphone.com/en-us/develop) websites.

## Optimizing applications

### Windows 8

In a Windows 8 application, it is possible to override icons with default icons provided by the system. To do so:

```
document.getElementById('#ID').winControl.icon = 'refresh';
```

Other Windows 8 APIs:

```
Windows.Devices.Geolocation
Windows.Media.Capture
Windows.ApplicationModel.Contacts
```

### Adobe Air

- To minimize a window:

```
window.nativeWindow.minimize();
```

- To maximize a window:

```
window.nativeWindow.maximize();
```

- To restore a window:

```
window.nativeWindow.restore();
```

- To close a window:

```
window.nativeWindow.close();
```

## Network optimization

When developing a Desktop browser application, network performance is a highly important optimization to think about.
You can optimize network performance by implementing the following two actions:

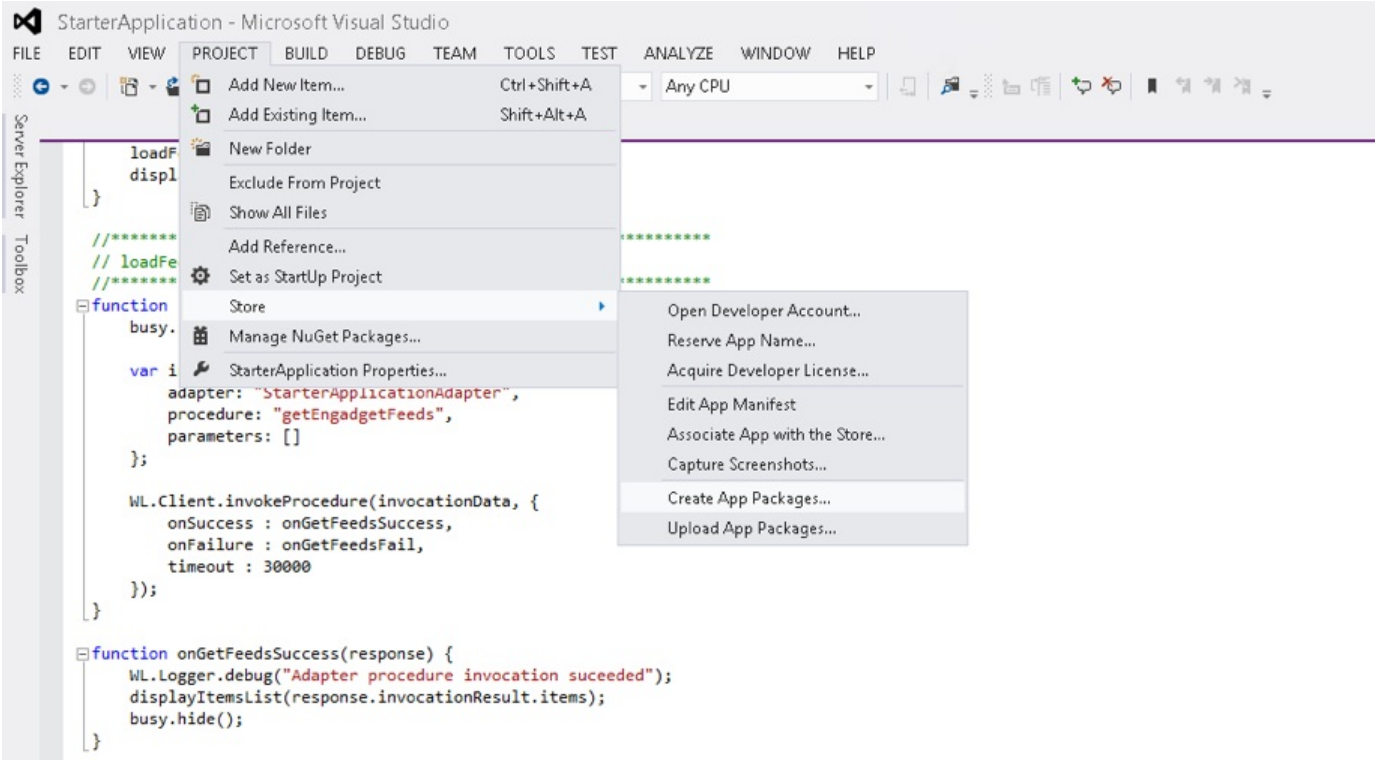
- Use minification and concatenation to reduce the size and number of files that are used within the application. This feature is available for the following environments: Android, iOS, Windows 8, Windows Phone 8, BlackBerry 10, Mobile Web and Desktop Browser.
- Use HTML 5 Application Cache.

> For more information about minification and concatenation, see the topic about optimizing MobileFirst applications, in the user documentation.

## Publishing

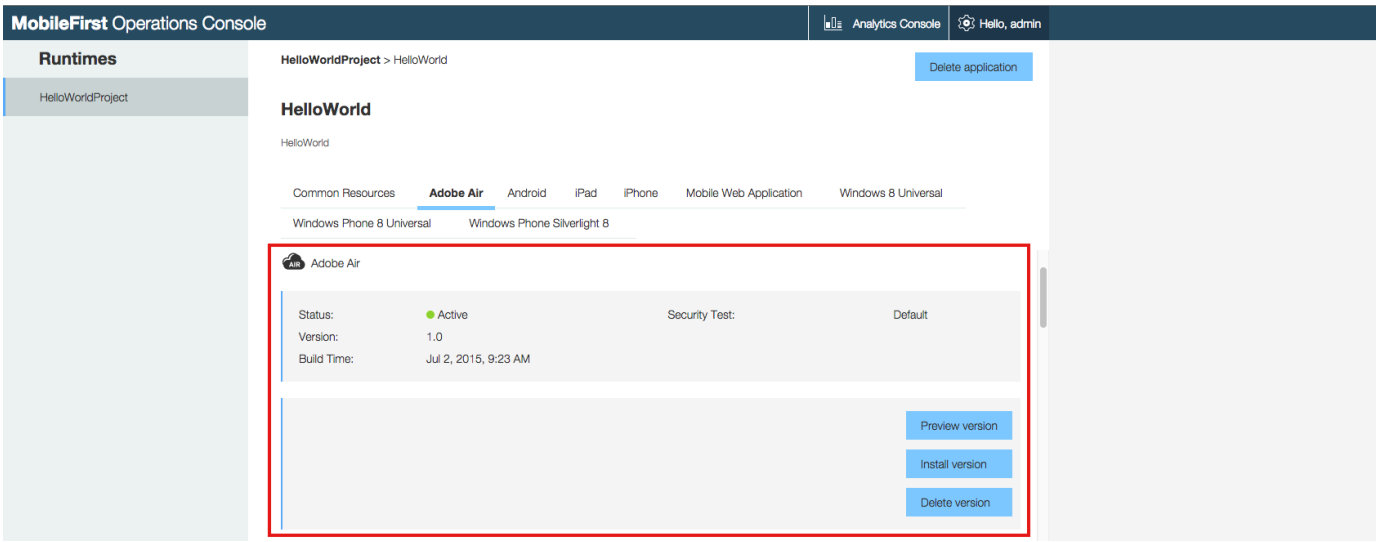
### Windows 8

You need Microsoft Visual Studio Express 2012 for Windows 8 to create App Packages.




## Adobe Air

You can download the Adobe Air package from IBM MobileFirst Platform Operations Console.
When you click the **Install** button, a `.air` file is downloaded. This file is the Adobe Air Installer that installs the application on the computer.




## Desktop Browser

You must embed the Desktop Browser web page in the website code.
To get the URL of the application, look at the Desktop Browser environment in the MobileFirst Operations Console.