

# Resource request from Windows applications

## Overview

MobileFirst applications can access resources using the `WorklightResourceRequest` REST API. The REST API works with all adapters and external resources.

### Prerequisites:

- Ensure you have added the MobileFirst Platform SDK to your Native Windows 8.1 Universal (../adding-the-mf-pf-sdk/windows-8) or Windows 10 UWP (../adding-the-mf-pf-sdk/windows-10) project.
- Learn how to create adapters (../adapters/adapters-overview/).

## WLResourceRequest

The `WorklightResourceRequest` class handles resource requests to adapters or external resources.

Create a `WorklightResourceRequest` object and specify the path to the resource and the HTTP method. Available methods are: `GET`, `POST`, `PUT` and `DELETE`.

```
URI adapterPath = new URI("/adapters/JavaAdapter/users", UriKind.Relative);
WorklightResourceRequest request = WorklightClient.ResourceRequest(adapterPath, "GET");
```

- For **JavaScript adapters**, use `/adapters/{AdapterName}/{procedureName}`
- For **Java adapters**, use `/adapters/{AdapterName}/{path}`. The `path` depends on how you defined your `@Path` annotations in your Java code. This would also include any `@PathParam` you used.
- To access resources outside of the project, use the full URL as per the requirements of the external server.
- **timeout**: Optional, request timeout in milliseconds
- **scope**: Optional, if you know which scope is protecting the resource - specifying this scope could make the request more efficient.

## Sending the request

Request the resource by using the `.send()` method.

```
WorklightResponse response = await request.send();
```

Use the `WorklightResponse response` object to get the data that is retrieved from the adapter.

The `response` object contains the response data and you can use its methods and properties to retrieve the required information. Commonly used properties are `ResponseText`, `ResponseJSON` (if the response is in JSON), `Success` (if the invoke was successful or failure) and `HTTPStatus` (the HTTP status of the response).

## Parameters

Before sending your request, you may want to add parameters as needed.

## Path parameters

As explained above, **path** parameters ( `/path/value1/value2` ) are set during the creation of the `WorklightResourceRequest` object:

```
URI adapterPath = new URI("/adapters/JavaAdapter/users/value1/value2", UriKind.Relative);
WorklightResourceRequest request = WorklightClient.createInstance(adapterPath, "GET");
```

## Query parameters

To send **query** parameters ( `/path?param1=value1...` ) use the `SetQueryParameter` method for each parameter:

```
request.SetQueryParameter("param1", "value1");
request.SetQueryParameter("param2", "value2");
```

## JavaScript adapters

JavaScript adapters use ordered nameless parameters. To pass parameters to a Javascript adapter, set an array of parameters with the name `params`:

```
request.SetQueryParameter("params", "[ 'value1', 'value2' ]");
```

## Form parameters

To send form parameters in the body, use `.Send(Dictionary<string, string> formParameters)` instead of `.Send()`:

```
Dictionary<string, string> formParams = new Dictionary<string, string>();
formParams.Add("height", height.getText().toString());
request.Send(formParams);
```

## JavaScript adapters

JavaScript adapters use ordered nameless parameters. To pass parameters to a Javascript adapter, set an array of parameters with the name `params`:

```
formParams.Add("params", "[ 'value1', 'value2' ]");
```

## Header parameters

To send a parameter as an HTTP header use `.SetHeader()` API:

```
request.SetHeader(KeyValuePair<string, string> header);
```

## Other custom body parameters

- `.Send(requestBody)` allows you to set an arbitrary String in the body.
- `.Send(JObject json)` allows you to set an arbitrary dictionary in the body.

- `.Send(byte[] data)` allows you to set an arbitrary byte array in the body.

## For more information

For more information about `WLResourceRequest`, refer to the user documentation.

## Sample application

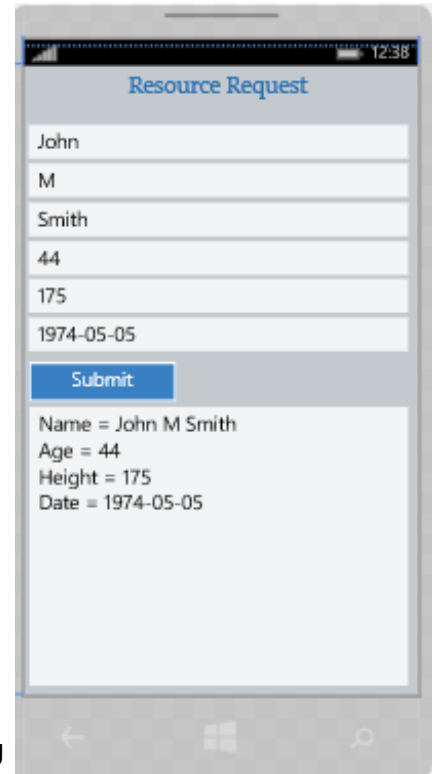
The `ResourceRequestWin8` and `ResourceRequestWin10` projects contain a native Windows 8 Universal/Windows 10 UWP application that makes a resource request using a Java adapter.

The adapter Maven project contains the Java adapter used during the resource request call.

Click to download (<https://github.com/MobileFirst-Platform-Developer-Center/ResourceRequestWin8/tree/release80>) the Windows 8.1 Universal project.

Click to download (<https://github.com/MobileFirst-Platform-Developer-Center/ResourceRequestWin10/tree/release80>) the Windows 10 UWP project.

Click to download (<https://github.com/MobileFirst-Platform-Developer-Center/Adapters/tree/release80>) the adapter Maven project.



The screenshot shows a mobile application interface titled "Resource Request". It features a form with the following fields: "John" (Name), "M" (Middle Initial), "Smith" (Last Name), "44" (Age), "175" (Height), and "1974-05-05" (Date of Birth). Below the form is a blue "Submit" button. Under the button, the entered data is summarized: "Name = John M Smith", "Age = 44", "Height = 175", and "Date = 1974-05-05". The interface is displayed on a mobile device screen with a status bar at the top showing the time as 12:38.

## Sample usage

1. From the command line, navigate to the project's root folder.
2. Ensure the sample is registered in the MobileFirst Server by running the command: `mfpdev app register`.
3. The sample uses the `JavaAdapter` contained in the Adapters Maven project. Use either Maven or MobileFirst Developer CLI to build and deploy the adapter (`../adapters/creating-adapters/`).
4. To test or debug an adapter, see the testing and debugging adapters (`../adapters/testing-and-debugging-adapters`) tutorial.
5. import the project to Visual Studio, and run the sample by clicking the *\*Run* button.