

ScientiaMobile WURFL Cloud Client for ASP .NET

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About

The WURFL Cloud Service by ScientiaMobile, Inc., is a cloud-based mobile device detection service that can quickly and accurately detect over 500 capabilities of visiting devices. It can differentiate between portable mobile devices, desktop devices, SmartTVs and any other types of devices that have a web browser.

This is the ASP .NET Client for accessing the WURFL Cloud Service, and it requires a free or paid WURFL Cloud account from ScientiaMobile:

<http://www.scientiamobile.com/cloud>

Installation

Requirements

- .NET 2.0+
- Newtonsoft.Json 4.5

Signup for WURFL Cloud

First, you must go to ScientiaMobile.com and signup for a free or paid WURFL Cloud account (see above). When you've finished creating your account, and have selected the WURFL Capabilities that you would like to use, you must copy your API Key, as it will be needed in the Client.

Integration

You should review the included example (CloudDemo) to get a feel for the Client API, and how best to use it in your application.

Here's a quick example of how to get up and running quickly:

```
public DeviceInfoViewModel GetDataByRequest(HttpContext context)
{
    var config = new DefaultCloudClientConfig
    {
        ApiKey = "123456:xxxxxxxxxxxxxxxxxxxxxxxxxxxx"
    };
    var manager = new CloudClientManager(config);
    var info = manager.GetDeviceInfo(context, new[] { "is_wireless_device", "model_name" });
    var model = new DeviceInfoViewModel
    {
```

```

        DeviceId = info.Id,
        ServerVersion = info.ServerVersion,
        DateOfRequest = info.WurflLastUpdate.ToString(),
        Library = manager.GetClientVersion(),
        Capabilities = info.Capabilities,
        Errors = info.Errors,
        Source = info.ResponseOrigin
    };
    return model;
}

```

The `CloudDemo\ViewModels\DeviceInfoViewModel` is a helper class that gathers information from the WURFL cloud client API and makes it ready for display. You can directly check a capability as below:

```
var isMobileAsText = info.Get("is_wireless_device"); // Returns a string!
```

If you want to test capabilities starting from a user agent string, you proceed as follows:

```

var ua = "apple iphone";
var manager = new CloudClientManager(config);
var wurflRequest = new WurflCloudRequest(context) {UserAgent = ua};
var info = manager.GetDeviceInfo(context, new[] { "is_wireless_device", "model_name" });

```

Configuration

The public interface of the WURFL Cloud API is fairly simple and consists of a single class, `Client\WurflCloud\CloudClientManager`. The members of this class are:

- `GetApiVersion`: Gets a string with the version number of the WURFL cloud server API
- `GetCachingModuleName`: Gets a string with the fully qualified name of the .NET class that the WURFL cloud ASP.NET API uses to cache server responses.
- `GetClientVersion`: Gets a string with the version number of the WURFL cloud ASP.NET client API.
- `GetDeviceInfo`: Returns the values of the capabilities available for the requesting device or user-agent string.
- `SetCache`: Allows replacing the default cache module that the ASP.NET client API will use to improve performance.

Config

Before you can start using the `Client\WurflCloud\CloudClientManager`, you should initialize it by providing a valid API key and optionally a caching module. This information is collected in an instance of the `Client\WurflCloud\Config\CloudClientConfig` class. The library offers a default configuration object through the `Client\WurflCloud\DefaultCloudClientConfig` class. Most of the time, all you need to do is getting a new instance of this class and set your API key, as shown below:

```

var config = new DefaultCloudClientConfig
{
    ApiKey = "123456:xxxxxxxxxxxxxxxxxxxxxxxxxxxx"
};
var manager = new CloudClientManager(config);

```

The public members of the `CloudClientConfig` class are:

- `ApiKey`: Gets and sets the API key that identifies your developer account
- `Compression`: Indicates whether GZIP compression is required from cloud server. Compression is disabled by default.

Cache

The ASP.NET cloud API sits in between your ASP.NET application and the WURFL cloud. It tracks all of your requests and caches frequently requested devices. The library provides full control over the caching infrastructure. Caching modules available:

- `Client\WurflCloud\Cache\CookieWurflCloudCache`: Uses a cookie to store the value of returned capabilities.
- `Client\WurflCloud\Cache\MemoryWurflCloudCache`: Server responses are cached in the ASP.NET Cache object. The cached data has no dependencies and expires automatically if not used for 20 minutes.
- `Client\WurflCloud\Cache\NoWurflCloudCache`: No caching layer is used and every request to the ASP.NET WURFL cloud client results in a request to the server cloud. The cache API has been designed to be pluggable. A valid cache module is any class that implements the `Client\WurflCloud\Cache\IWurflCloudCache` interface. For your convenience, the API also provides a half-done cache provider class—the `Client\WurflCloud\Cache\WurflCloudCacheBase`. The simplest and quickest way to create a custom cache module is deriving a new class from `Client\WurflCloud\Cache\WurflCloudCacheBase`. The class `CloudDemo\Common\FlexibleMemoryWurflCloudCache` provides an example that binds the response for any requested user agent string to a helper cache entry. By invalidating the helper cache entry, you can clear all cached data in a single shot.

Querying the Cloud Client API

To query the WURFL database in the cloud, you use the `GetDeviceInfo` method on the `Client\WurflCloud\CloudClientManager` class. The method has a few overloads:

```
public DeviceInfo GetDeviceInfo(IServiceProvider context)
public DeviceInfo GetDeviceInfo(IServiceProvider context, String[] capabilities)
public DeviceInfo GetDeviceInfo(WurflCloudRequest request)
public DeviceInfo GetDeviceInfo(WurflCloudRequest request, String[] capabilities)
```

All methods return a `Client\WurflCloud\Device\DeviceInfo` object, whose public properties are:

- `Capabilities`: Name/value dictionary of capabilities as returned by the server.
- `Errors`: Name/value dictionary of errors as returned by the server.
- `Get`: Method that takes a capability name and returns the corresponding value as a string.
- `Id`: ID of the device corresponding to the user agent string as identified by the WURFL server engine.
- `ResponseOrigin`: Indicates the source of the response. Possible values come from the `Client\WurflCloud\Http\ResponseType` enumeration: `None`, `Cloud`, `Cache`.
- `ServerVersion`: Version of the WURFL server API.
- `WurflLastUpdate`: Date the WURFL database was last updated on the server.

