# DMCM .NET Library

Version 0.1

## Purpose

The Dell Multi Cloud Manager (DMCM, formerly Enstratius) .NET library is an early-stage, proof of concept project that allows .NET applications to consume a small fraction of the DMCM REST-based API.

The functionality of the .NET library encapsulates the following:

- Present a strongly-typed method signature for supported functions
- Construct REST requests using the appropriate HTTP verbs and populate XML payload appropriately in the case of POST and PUT requests
- Inject the required headers for authentication by the DMCM server

The library (all DLLs) is available at: https://github.com/dorongrinstein/dmcm-dotnet-library

The library was compiled to target .NET 4.5

The source code for the project is available at: https://github.com/dorongrinstein/enstratus-api-utils/tree/master/dotnet
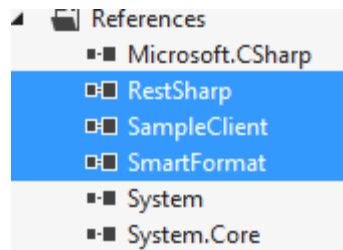
## Supported Methods

The public methods exposed by the library are self-explanatory:

- ```public string GetCustomers()```
- ```public string GetAccount(string id)```
- ```public string CreateUser(string accountId,
                       string givenName,
                       string familyName,
                       string email,
                       string emailTarget,
                       string notifyViaEmail,
                       string notifyViaScreen,
                       string eventType,
                       string severity,
                       string billingCode,
                       string groupId)```

- ```public string CreatehDeployment(Deployment deployment)```
- ```public string LaunchDeployment(string id)```
- ```public string LauchServer(string budget, string name, string description, string machineImageId, string product, string dataCenterId)```
- ```public string StopServer(string serverId)```
- ```public string TerminateServer(string serverId, string reason)```

There are a few additional public methods which can be used to test the server's functionality. They are not meant to be used unless you have intimate understanding of their implementation. They may get documented in future versions.

## How to use the library in your own project

**Step 1** – add reference to the 3 DLLs:



**Step 2** – modify the application's config file (App.config or Web.config) by adding the following:

```
<configSections>
        <sectionGroup name="userSettings" type="System.Configuration.UserSettingsGroup,
System, Version=4.0.0.0, Culture=neutral, PublicKeyToken=b77a5c561934e089" >
          <section name="Dell.CTO.Enstratius.Properties.Settings"
type="System.Configuration.ClientSettingsSection, System, Version=4.0.0.0,
Culture=neutral, PublicKeyToken=b77a5c561934e089" allowExeDefinition="MachineToLocalUser"
requirePermission="false" />
          <section name="SampleClient.Properties.Settings"
type="System.Configuration.ClientSettingsSection, System, Version=4.0.0.0,
Culture=neutral, PublicKeyToken=b77a5c561934e089" allowExeDefinition="MachineToLocalUser"
requirePermission="false" />
        </sectionGroup>
    </configSections>
```

Then, inside the <configuration> element of the config file, paste the following. You should obtain a sample config file from github and not copy/paste from this document because extra characters may render your config file invalid. Note that the values are variable, depending on the DMCM endpoint you wish to call, your API key, version of the API you wish to call and user agent you want to convey to the server. These variables are highlighted in yellow.

```
<userSettings>
    <Dell.CTO.Enstratius.Properties.Settings>
      <setting name="host_name" serializeAs="String">
        <value>http://demo.enstratius.com:15000</value>
      </setting>
      <setting name="api_access_id" serializeAs="String">
        <value>HUFVVXTGJWVZYFWRMAHU</value>
      </setting>
      <setting name="user_agent" serializeAs="String">
        <value>test</value>
      </setting>
      <setting name="api_root" serializeAs="String">
        <value>/api/enstratus/2013-03-13</value>
      </setting>
      <setting name="api_secret_key" serializeAs="String">
```

```xml
      <value>you must set an environment variable called ES_SECRET_KEY. Do not change
this value. It is for information only</value>
    </setting>
    <setting name="deployment_xml" serializeAs="String">
      <value>
        &lt;addDeployment&gt;
        &lt;deployment budget="{budget}" type="{deployment_type}" &gt;
        &lt;name&gt;{name}&lt;/name&gt;
        &lt;description&gt;{description}&lt;/description&gt;
        &lt;label&gt;{label}&lt;/label&gt;
        &lt;forServiceCatalog&gt;{for_service_catalog}&lt;/forServiceCatalog&gt;
        &lt;drStorageRegion regionId="{storage_region_id}" /&gt;
        &lt;backupWindow&gt;
        &lt;timeWindow daysOfWeek="{backup_days_of_week}"
startHour="{backup_start_hour}" startMinute="{backup_start_minute}"
endHour="{backup_end_hour}" endMinute="{backup_end_minute}" /&gt;
        &lt;/backupWindow&gt;
        &lt;maintenanceWindow&gt;
        &lt;timeWindow daysOfWeek="{maintenance_days_of_week}"
startHour="{maintenance_start_hour}" startMinute="{maintenance_start_minute}"
endHour="{maintenance_end_hour}" endMinute="{maintenance_end_minute}" /&gt;
        &lt;/maintenanceWindow&gt;
        &lt;/deployment&gt;
        &lt;/addDeployment&gt;
      </value>
    </setting>
    <setting name="launch_deployment_xml" serializeAs="String">
      <value>
        &lt;deploy&gt;
        &lt;deployment  /&gt;
        &lt;/deploy&gt;
      </value>
    </setting>
  </Dell.CTO.Enstratius.Properties.Settings>
</userSettings>
```

**Step 3 –** You need to obtain the API ID and API Key from the DMCM web console. You need to create an environment variable called ES_SECRET_KEY and set its value to the API secret key.

Once the above 3 steps are completed you are ready to invoke the public methods of the client library. Simply add a using clause at the beginning of the code unit you're writing (shown in C#):

```csharp
using Dell.CTO.Enstratius;
```

Then, inside of a method, instantiate the Client component and call its methods. For example:

```csharp
Client c = new Client();
textBox1.Text = c.GetCustomers();
```

## Any questions

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