

Document Showcasing SMP Cloud Platform Using Appcelerator Sample APP

Reference Guide, Including Code for Sample App

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INTRODUCTION

SAP Mobile Platform (SMP) enterprise edition, cloud version provides a single comprehensive Web administration and monitoring portal for configuring and managing mobile applications. The platform offers authentication, secure on-boarding, native push notifications, and reporting capabilities for enterprise mobile applications.

The SAP Mobile Platform, enterprise edition, cloud version enables SAP partners and customers to deploy quality Business-to-Consumer (B2C), Business-to-Employee (B2E), and custom online mobile applications in a cloud environment, which is an essential part of SAP onDemand strategy. The platform is also known as Mobile as a Service (MaaS).

Application developers can use the mobile platform to build lightweight, on-demand applications (for example, productivity applications) that complement and extend existing SAP enterprise solutions. The platform enables interoperability through openness, while at the same time ensuring security and integrity required by applications operating in a distributed network environment. It provides all the required tools, infrastructure and services to get your on-demand applications up and running easily and quickly.

PREREQUISITES

SAP HANA Cloud account subscribed with SAP Mobile Platform application. For information on how to Obtain HANA account with SMP, refer the following [link](#).

Download here:

Step1

Configuring an application in SMP

Before getting into to the Configuring an application in SMP Cloud one has to have a Back end URL Which returns the Data to the Mobile Client Application.

In Our case we have used a Back end URL mentioned below.

<http://vmw3815.wdf.sap.corp:50009/sap/opu/sdata/iwfnd/RMTSAMPLEFLIGHT/>

The Above Mentioned URL is an simple GateWay Service Which is present on an OnPremise System.

Note: User has to have a Back End Gate Way Service of their own to Proceed Further.

From the Back end we get a Collection Named Travel Agency Collection. In our Sample Example we will show how to Get, Put, Post and Delete Requests to Fetch a Record, Update a Record, Add a Record to the Collection and Delete a Record from Collection through SMP.

Configuring an application on SMP administration and monitoring portal is the first step in using SMP. You can learn on how to configure the application on SMP using the following link

<https://help.hana.ondemand.com/mobile/frameset.htm?doc/html/mdw1349845411470.html>

Also all the documentation on SMP can be accessed from the link

<https://help.hana.ondemand.com/mobile/frameset.htm>

Step2

Creating Clinet Application

Here we use Titanium Studio(Third Party Mobile Application development tool) to develop our sample application.

Appcelerator is a third party Mobile Application Tool which enables user to Develop Mobile APP's on Android, Apple, BlackBerry, Windows Devices and Browser based App's Using the API's provided by Titanium Studio which was built on HTML5, jQuery by simulates the native APP experience on respective device.

Download and Install Titanium Studio and the SDK's to Develop an Client APP.

Below Mentioned URL will guide the user in downloading and installing Titanium Studio. Along with that, it will enable you to create your own app.

http://docs.appcelerator.com/titanium/latest#!/guide/Quick_Start

Request URL's, Headers and XML Body Used in the Sample Application

OnBoarding:

URL: <http://{{Cloud Space}}/odata/applications/latest/{{App Name}}/Connections>

Cloud Space: Is the location where the SMP Admin is deployed.

App Name: Name of the Application created in SMP Admin with Back End Configured.

Headers:

Authorization: Basic c3VwdXNlcjl6czNwdXNlcg==

Here the Authorization is base64 Encoded user id and password for the Backend URL if any. Otherwise the header is not mandatory.

XML Body:

```
<?xml version='1.0' encoding='utf-8'?><entry xmlns="http://www.w3.org/2005/Atom"
xmlns:d="http://schemas.microsoft.com/ado/2007/08/dataservices"
xmlns:m="http://schemas.microsoft.com/ado/2007/08/dataservices/metadata"><title
type='text'/><updated>2012-06-15T02:23.29Z</updated><author><name/></author><category
term='applications.Connection'
scheme='http://schemas.microsoft.com/ado/2007/08/dataservices/scheme'/><content
type='application/xml'><m:properties><d:DeviceType>iPhone</d:DeviceType></m:properties></content></e
ntry>
```

HTTP Response

The Response Status will be 201 i.e. Created when the onboarding is successful along with that an XML with Appcid(Unique Identifier) which should be passed for further req/res indication the Application has onboarded already.

If the Credentials Entered are wrong then 401 i.e. unauthorized responses is returned.

GET Request

URL: [http://{Cloud Space}/{App Name}/TravelAgencyCollection\(Agency Number\)](http://{Cloud Space}/{App Name}/TravelAgencyCollection(Agency Number))

Cloud Space: Is the location where the SMP Admin is deployed.

App Name: Name of the Application created in SMP Admin with Back End Configured.

Agency Number: Unique Number for Agency i.e. 00000002

Headers:

Authorization: Basic c3VwdXNlcjl6czNwdXNlcg==

X-SUP-APPCID: APPCID (got from the Onboarding Response)

Here the Authorization is base64 Encoded user id and password for the Backend URL if any. Otherwise the header is not mandatory.

HTTP Response

The Response Status will be 200 with the Collection of TravelAgency in Response Body as an XML.

If there is no record with Agency Number Entered Response will be 400 (No Record Available with the Agency Number).

POST Request

URL: <http://{Cloud Space}/{App Name}/TravelagencyCollection>

Cloud Space: Is the location where the SMP Admin is deployed.

App Name: Name of the Application created in SMP Admin with Back End Configured.

Headers:

Authorization: Basic c3VwdXNlcjl6czNwdXNlcg==

X-SUP-APPCID: APPCID (got from the Onboarding Response)

X-Requested-With : XMLHttpRequest

XML Body:

```
<?xml version="1.0" encoding="utf-8"?><entry
xml:base="http://ldcigkq.wdf.sap.corp:50080/sap/opu/sdata/iwfd/RMTSAMPLEFLIGHT/
xmlns="http://www.w3.org/2005/Atom"
xmlns:m="http://schemas.microsoft.com/ado/2007/08/dataservices/metadata"
xmlns:d="http://schemas.microsoft.com/ado/2007/08/dataservices" <category
term="RMTSAMPLEFLIGHT.Travelagency"
scheme="http://schemas.microsoft.com/ado/2007/08/dataservices/scheme" <content
type="application/atom+xml"><m:properties><d:agencynum>+AgencyNO.value+</d:agencynum><d:NAME>POSTAgency</d:NAME><d:STREET>Rastenburger Str. 12</d:STREET><d:POSTBOX
/><d:POSTCODE>28779</d:POSTCODE><d:CITY>Bremen</d:CITY><d:COUNTRY>DE</d:COUNTRY><d
:REGION>04</d:REGION><d:TELEPHONE>1111</d:TELEPHONE><d:URL>http://www.happy
</d:URL><d:LANGU>D</d:LANGU><d:CURRENCY>EUR</d:CURRENCY><d:mimeType>text/html</d:mim
eType></m:properties></entry>
```

HTTP Response

The Response Status will be 201 if the Record is created in the Collection.

If there is a Duplicate record exists in the Collection then Response will be 400 (Record Already exists with the Agency Number).

PUT Request

URL: [http://{Cloud Space}/{App Name}/TravelagencyCollection\(Agency Number\)](http://{Cloud Space}/{App Name}/TravelagencyCollection(Agency Number))

Cloud Space: Is the location where the SMP Admin is deployed.

App Name: Name of the Application created in SMP Admin with Back End Configured.

Agency Number: Unique Number for Agency i.e. 00000002

Headers:

Authorization: Basic c3VwdXNlcjI6czNwdXNlcg==

X-SUP-APPCID: APPCID (got from the Onboarding Response)

X-Requested-With : XMLHttpRequest

XML Body:

```
<?xml version="1.0" encoding="utf-8"?><entry
xml:base="http://ldcigkq.wdf.sap.corp:50080/sap/opu/sdata/iwfn/RMTSAMPLEFLIGHT/
xmlns="http://www.w3.org/2005/Atom"
xmlns:m="http://schemas.microsoft.com/ado/2007/08/dataservices/metadata"
xmlns:d="http://schemas.microsoft.com/ado/2007/08/dataservices" <category
term="RMTSAMPLEFLIGHT.Travelagency"
scheme="http://schemas.microsoft.com/ado/2007/08/dataservices/scheme" <content
type="application/atom+xml"><m:properties><d:agencynum>+AgencyNO.value+</d:agencynum><d:NAME
E>PutAgency</d:NAME><d:STREET>Rastenburger Str. 12</d:STREET><d:POSTBOX
/><d:POSTCODE>28779</d:POSTCODE><d:CITY>Bremen</d:CITY><d:COUNTRY>DE</d:COUNTRY><d
:REGION>04</d:REGION><d:TELEPHONE>1111</d:TELEPHONE><d:URL>http://www.happy
</d:URL><d:LANGU>D</d:LANGU><d:CURRENCY>EUR</d:CURRENCY><d:mimeType>text/html</d:mim
eType></m:properties></entry>
```

HTTP Response

The Response Status will be 204 if the Record is updated in the Collection.

If there is no record with Agency Number Entered Response will be 400 (No Record Available with the Agency Number).

DELETE Request

URL: [http://{Cloud Space}/{App Name}/TravelAgencyCollection\(Agency Number\)](http://{Cloud Space}/{App Name}/TravelAgencyCollection(Agency Number))

Cloud Space: Is the location where the SMP Admin is deployed.

App Name: Name of the Application created in SMP Admin with Back End Configured.

Agency Number: Unique Number for Agency i.e. 00000002

Headers:

Authorization: Basic c3VwdXNlcjI6czNwdXNlcg==

X-SUP-APPCID: APPCID (got from the Onboarding Response)

Here the Authorization is base64 Encoded user id and password for the Backend URL if any. Otherwise the header is not mandatory.

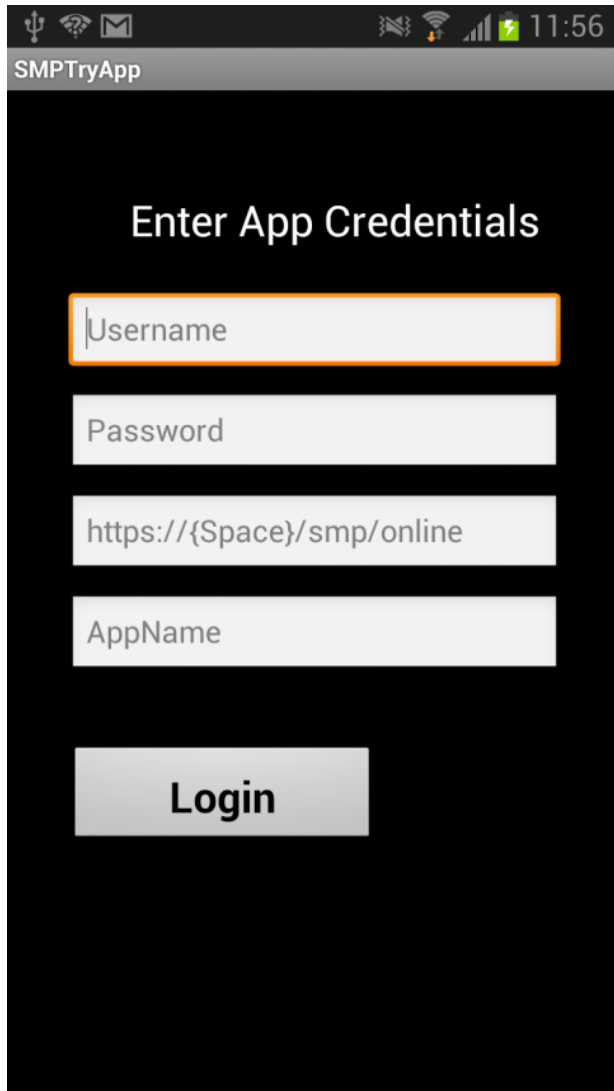
HTTP Response

The Response Status will be 204 with the Collection of TravelAgency in Response Body as an XML.

If there is no record with Agency Number Entered Response will be 400 (No Record Available with the Agency Number).

Sample Application Screen Shots

a) Login Screen



Here User id and password are the credentials required to authenticate the Gateway Service configured in SMP Admin Portal.

Url Should be the SMP Admin Portals URL which the user can get it from SAP HANA Cloud account which he has subscribed to.

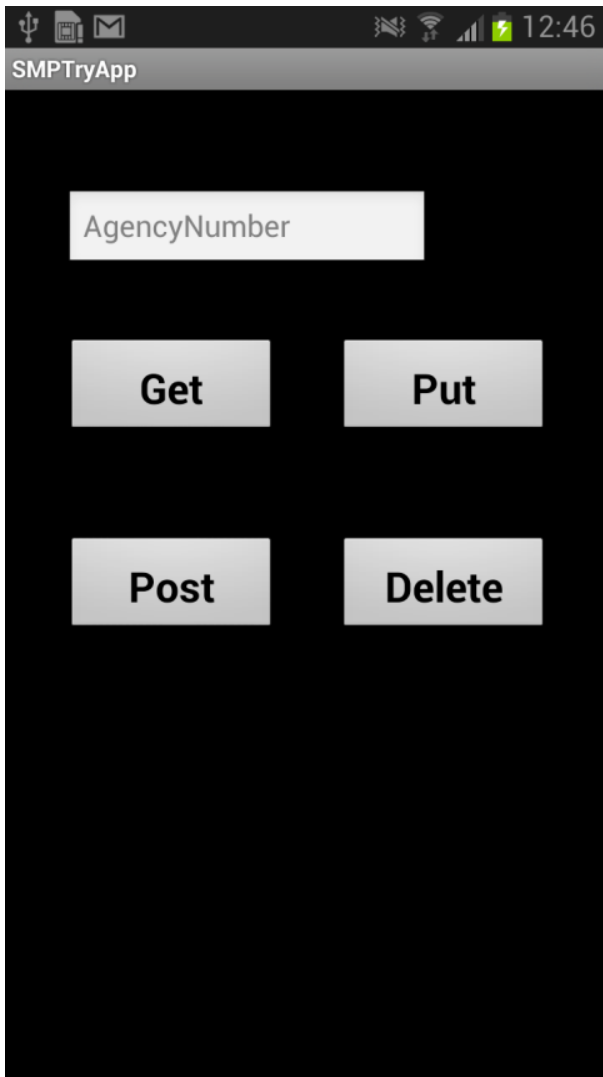
Note: The URL will be in the Format shown Below.

<https://{SPACE}/Admin> i.e. <https://abc.com/Admin>

but User should enter <https://{SPACE}> in the URL Field of the APP. i.e. Skip the /Admin Part.

APP Name should be same as the Application name configured in SMP Admin Portal.

b) Home Screen



Wrappers

Onboarding:

APPCID will be returned when onboarding happens properly otherwise corresponding error code will be Returned.

```
var xhr = Ti.Network.createHTTPClient({
  onload : function(e) {
    // function called in readyState DONE (4)
    Ti.API.info('onload called, HTTP status = ' + this.status);

    if (this.status == '201')
    {
      Ti.API.info("cookies: " + xhr.getResponseHeader('Set-Cookie'));
      var cookie = xhr.getResponseHeader('Set-Cookie');
      var Appcid = getSessID(cookie);
      function getSessID(cookie) {
        var split1 = cookie.split(',');
        var split2 = split1[0].split('X-SUP-APPCID=');
        return split2[1];
      }

      //Captcha = 'no';
      onBoarding(Appcid);
    } else {
      alert('HTTP status = ' + this.status);
    }

  },
  onerror : function(e) {
    Ti.API.info('error1, HTTP status = ' + this.status);
    Ti.API.info('error, HTTP status = ' + this.responseText);
    if (this.status == '401') {
      alert('Not Authorized pls Verify and re-enter the Credentials');
    } else {
      alert('HTTP status = ' + this.status);
    }

  },
});
Var str =
BaseUrl.concat('/odata/applications/latest/').concat(AppName.value).concat('/Connections'
);
Ti.API.info('error, HTTP status = ' + str);

xhr.open("POST", str);
```

```
var base = Ti.Utils.base64encode(username.value.concat(":").concat(password.value));
xhr.setRequestHeader("Authorization", "Basic ".concat(base));
xhr.setRequestHeader("content-type", "application/atom+xml");
var xmlbody = "<?xml version='1.0' encoding='utf-8'?>\n" + "<entry
xmlns='http://www.w3.org/2005/Atom'\n" +
"xmlns:d='http://schemas.microsoft.com/ado/2007/08/dataservices'\n" +
"xmlns:m='http://schemas.microsoft.com/ado/2007/08/dataservices/metadata'>\n" + "<title
type='text' /><updated>2012-06-15T02:23.29Z</updated>\n" + "<author><name/></author>\n" +
"<category term='applications.Connection'
scheme='http://schemas.microsoft.com/ado/2007/08/dataservices/scheme' />\n" + "<content
type='application/xml'>\n" + "<m:properties>\n" + "<d:DeviceType>iPad</d:DeviceType>\n" +
"</m:properties>\n" + "</content>\n" + "</entry>";
xhr.send(xmlbody);
```

GET Request:

```
var xhr = Ti.Network.createHTTPClient({
  onload : function(e) {
    // function called in readyState DONE (4)
    Ti.API.info('onload called, HTTP status = ' + this.status);
    if (this.status == '200') {
      alert("Http Response:" + this.responseText);
    } else {
      alert('HTTP status = ' + this.status);
    }
  },
  onerror : function(e) {
    Ti.API.info('error1, HTTP status = ' + this.status);
    Ti.API.info('error, HTTP status = ' + this.responseText);
    if (this.status == '400') {
      alert('Record with specified Agency no doesnot exists');
    } else {
      alert('HTTP status = ' + this.status);
    }
  },
});
var str =
BaseUrl.concat('/') .concat (AppName.value) .concat ('/TravelagencyCollection('+AgencyNO.value+')');
Ti.API.info('error, HTTP status = ' + str);
xhr.open("GET", str);
var base = Ti.Utils.base64encode(username.value.concat(":").concat(password.value));
xhr.setRequestHeader("Authorization", "Basic ".concat(base));
xhr.setRequestHeader("content-type", "application/atom+xml");
xhr.send();
```

POST Request:

```
var xhr = Ti.Network.createHTTPClient({
  onload : function(e) {
    // function called in readyState DONE (4)
    Ti.API.info('onload called, HTTP status = ' + this.status);
    if (this.status == '201'){
      alert("Post is Sucessful");
    }
    else {
      alert('HTTP status = ' + this.status);
    }
  },
  onerror : function(e) {
    Ti.API.info('error1, HTTP status = ' + this.status);
    Ti.API.info('error, HTTP status = ' + this.responseText);
    if (this.status == '400') {
      alert('Record with Agency Number already exists');
    } else {
      alert('HTTP status = ' + this.status);
    }
  },
});
var str = BaseUrl.concat('/') .concat(AppName.value).concat('/TravelagencyCollection');
Ti.API.info('error, HTTP status = ' + str);
xhr.open("POST", str);
var base = Ti.Utils.base64encode(username.value.concat(":").concat(password.value));
xhr.setRequestHeader("Authorization", "Basic ".concat(base));
xhr.setRequestHeader("content-type", "application/atom+xml");
xhr.setRequestHeader("X-Requested-With", "XMLHttpRequest");
var xmlbody = "<?xml version=\"1.0\" encoding=\"utf-8\"?>\n"
+"<entry\n"
+"xml:base=\"http://ldcigkq.wdf.sap.corp:50080/sap/opu/sdata/iwfd/RMTSAMPLEFLIGHT/\" \n"
+"xmlns=\"http://www.w3.org/2005/Atom\" \n"
+"xmlns:m=\"http://schemas.microsoft.com/ado/2007/08/dataservices/metadata\" \n"
+"xmlns:d=\"http://schemas.microsoft.com/ado/2007/08/dataservices\">\n"
+"<category term=\"RMTSAMPLEFLIGHT.Travelagency\" \n"
+"scheme=\"http://schemas.microsoft.com/ado/2007/08/dataservices/scheme\" />\n"
+"<content type=\"application/atom+xml\">\n"
+"<m:properties>\n"
+"<d:agencynum>"+AgencyNO.value+"</d:agencynum>\n"
+"<d:NAME>PostAgency</d:NAME>\n"
+"<d:STREET>RichMond</d:STREET>\n"
+"<d:POSTBOX />\n"
+"<d:POSTCODE>28779</d:POSTCODE>\n"
```

```
+ "<d:CITY>Blore</d:CITY>\n"  
+ "<d:COUNTRY>IND</d:COUNTRY>\n"  
+ "<d:REGION>04</d:REGION>\n"  
+ "<d:TELEPHONE>1111</d:TELEPHONE>\n"  
+ "<d:URL>http://www.abc.com</d:URL>\n"  
+ "<d:LANGU>D</d:LANGU>\n"  
+ "<d:CURRENCY>EUR</d:CURRENCY>\n"  
+ "<d:mimeType>text/html</d:mimeType>\n"  
+ "</m:properties>\n"  
+ "</content>\n"  
+ "</entry>";  
xhr.send(xmlbody);
```


PUT Request:

```
var xhr = Ti.Network.createHTTPClient({
  onload : function(e) {
    // function called in readyState DONE (4)
    Ti.API.info('onload called, HTTP status = ' + this.status);
    if (this.status == '204' || this.status == '1223') {
      alert("Put is Successful");
    } else {
      alert('HTTP status = ' + this.status);
    }
  },
  onerror : function(e) {
    Ti.API.info('error1, HTTP status = ' + this.status);
    Ti.API.info('error, HTTP status = ' + this.responseText);
    if (this.status == '400') {
      alert('Record with specified Agency no doesnot exists!');
    } else {
      alert('HTTP status = ' + this.status);
    }
  },
});
var str =
BaseUrl.concat('/') .concat (AppName.value) .concat ('/TravelagencyCollection('+AgencyNO.value+')');
Ti.API.info('error, HTTP status = ' + str);
xhr.open("PUT", str);
var base = Ti.Utils.base64encode(username.value.concat(":").concat(password.value));
xhr.setRequestHeader("Authorization", "Basic ".concat(base));
xhr.setRequestHeader("content-type", "application/atom+xml");
xhr.setRequestHeader("X-Requested-With", "XMLHttpRequest");
var xmlbody = "<?xml version=\"1.0\" encoding=\"utf-8\"?>\n"
+"<entry\n"
+"xml:base=\"http://ldcigkq.wdf.sap.corp:50080/sap/opu/sdata/iwfd/RMTSAMPLEFLIGHT/\" \n"
+"xmlns=\"http://www.w3.org/2005/Atom\" \n"
+xmlns:m=\"http://schemas.microsoft.com/ado/2007/08/dataservices/metadata\" \n"
+"xmlns:d=\"http://schemas.microsoft.com/ado/2007/08/dataservices\">\n"
+"<category term=\"RMTSAMPLEFLIGHT.Travelagency\" \n"
+"scheme=\"http://schemas.microsoft.com/ado/2007/08/dataservices/scheme\" />\n"
+"<content type=\"application/atom+xml\">\n"
+"<m:properties>\n"
+"<d:agencynum>"+AgencyNO.value+"</d:agencynum>\n"
+"<d:NAME>PutAgency</d:NAME>\n"
+"<d:STREET>Rastenburger Str. 12</d:STREET>\n"
+"<d:POSTBOX />\n"
+"<d:POSTCODE>28779</d:POSTCODE>\n"
```

```
+ "<d:CITY>Bremen</d:CITY>\n"  
+ "<d:COUNTRY>DE</d:COUNTRY>\n"  
+ "<d:REGION>04</d:REGION>\n"  
+ "<d:TELEPHONE>1111</d:TELEPHONE>\n"  
+ "<d:URL>http://www.happy</d:URL>\n"  
+ "<d:LANGU>D</d:LANGU>\n"  
+ "<d:CURRENCY>EUR</d:CURRENCY>\n"  
+ "<d:mimeType>text/html</d:mimeType>\n"  
+ "</m:properties>\n"  
+ "</content>\n"  
+ "</entry>";  
xhr.send(xmlbody);
```

DELETE Request:

```
var xhr = Ti.Network.createHTTPClient({
  onload : function(e) {
    // function called in readyState DONE (4)
    Ti.API.info('onload called, HTTP status = ' + this.status);
    if (this.status == '204' || this.status == '1223') {
      alert('Delete Sucessful');
    } else {
      alert('HTTP status = ' + this.status);
    }
  },
  onerror : function(e) {
    Ti.API.info('error1, HTTP status = ' + this.status);
    Ti.API.info('error, HTTP status = ' + this.responseText);
    if (this.status == '400') {
      alert('Record Not Deleted');
    } else {
      alert('HTTP status = ' + this.status);
    }
  },
});
var str =
BaseUrl.concat('/') .concat (AppName.value) .concat ('/TravelagencyCollection('+AgencyNO.valu
e+')');
Ti.API.info('error, HTTP status = ' + str);
xhr.open("DELETE", str);
var base = Ti.Utils.base64encode(username.value.concat(":").concat(password.value));
xhr.setRequestHeader("Authorization", "Basic ".concat(base));
xhr.setRequestHeader("content-type", "application/atom+xml");
//xhr.setRequestHeader("X-Requested-With", "XMLHttpRequest");
xhr.send();
```

FURTHER INFORMATION

You can download the complete source code for this project from here:

[Source code](#)

[Mobile application](#)

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