Integrating with Cloudant by using an adapter

fork and edit tutorial (https://github.ibm.com/MFPSamples/DevCenter/tree/master/tutorials/en/foundation/7.0/server-side-development/cloudant.html) | report issue (https://github.ibm.com/MFPSamples/DevCenter/issues/new)

What is Cloudant?

Cloudant is a NoSQL Database based on CouchDB that is included with the product as a component called IBM MobileFirst Cloudant Local Data Layer Edition. Cloudant is also available as a standalone installed product and as a Database as a Service (DBaaS) on IBM Bluemix and cloudant.com.

The Cloudant API is documented at https://docs.cloudant.com/index.html (https://docs.cloudant.com/index.html)

Cloudant adapter

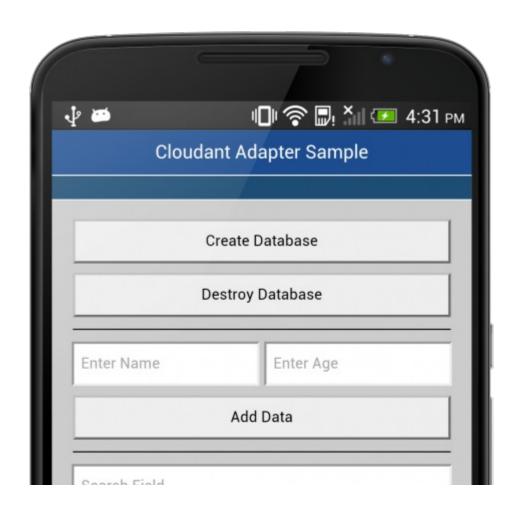
You can create and use a MobileFirst adapter to communicate with Cloudant.

The adapter within the sample that is provided with this module is an HTTP adapter.

- This adapter implements a subset of the Cloudant API.
- You can extend it to implement more Cloudant API

Sample Application

The sample module contains an application that





demonstrates the use of the adapter to store, list, and query a set of names and ages in a Cloudant-hosted database.

Configuring the sample application

First, download and import the sample module.

Then, open the CloudantAdapterDemo/adapters/CloudantAdapter/CloudantAdapter.xml file.

The adapter uses basic authentication to connect to the Cloudant database. Enter your database location and username and password into the CloudantAdapter.xml file. You can obtain this information from Cloudant.

To avoid exposing the user credentials in CloudantAdapter.xml, you can leverage Cloudant support for API keys and passwords.

```
<?xml version="1.0" encoding="UTF-8"?>
<wl>wl:adapter name="CloudantAdapter" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:wl
="http://www.ibm.com/mfp/integration" xmlns:http="http://www.ibm.com/mfp/integration/http">
  <displayName>CloudantAdapter</displayName>
  <description>CloudantAdapter</description>
  <connectivity>
    <connectionPolicy xsi:type="http:HTTPConnectionPolicyType">
      cprotocol>https
      <domain>mylogin.cloudant.com</domain
      <port>443</port>
      <connectionTimeoutInMilliseconds>30000</connectionTimeoutInMilliseconds>
      <socketTimeoutInMilliseconds>30000</socketTimeoutInMilliseconds>
      <authentication>
         <basic/>
         <serverIdentity>
           <username>mylogin</username>
           <password>mypassword</password>
         </serverIdentity>
      </authentication>
      <maxConcurrentConnectionsPerNode>4</maxConcurrentConnectionsPerNode>
      <!-- Following properties used by adapter's key manager for choosing specific certificate from key st
ore
      <sslCertificateAlias></sslCertificateAlias>
       <sslCertificatePassword></sslCertificatePassword>
    </connectionPolicy>
  </connectivity>
  rocedure name="createDB"/>
  cprocedure name="deleteDB"/>
  cprocedure name="getAllDocs"/>
  cprocedure name="updateDocs"/>
  cedure name="createDoc"/>
  cprocedure name="getDoc"/>
  cprocedure name="updateDoc"/>
  cprocedure name="deleteDoc"/>
  cprocedure name="createDesignDoc"/>
  cprocedure name="search" />
  cprocedure name="getView" />
</wl></wl></wl></l></l></l></l></l>
```

Starting the sample application and adapter

Right-click adapters/CloudantAdapter and select Run As > Deploy MobileFirst Adapter.

Right-click apps/CloudantSampleApp and select Run As > Run on MobileFirst Development Server.

From the MobileFirst Platform Operations Console, select **Preview as Common Resources** (or view the app in the environment of your choice).

Cloudant adapter methods

• createDB (name)
Returns JSON result statement

• deleteDB (name)

Returns JSON result statement

• getAllDocs (name, limit, include_docs) Arguments: o name - database name limit - limit on the number of docs include_docs - whether or not to include the full body of the docs in the return Returns JSON object with document information • updateDocs (name, updates) Arguments: o name - database name o updates - list of objects to create or update Returns JSON result statement • createDoc (name, doc) Arguments: o name - database name o doc - JSON document to create Returns JSON result statement • getDoc (name, docID) Arguments: o name - database name docID - document ID Returns JSON document • updateDoc (name, doc) Arguments: o name - database name docID - document to update Returns JSON result statement • createDesignDoc (name, docName, designDoc) Arguments: o name - database name o docName - design doc name o designDoc - JSON design document to create Returns JSON result statement search (name, designDocName, viewName, limit, include_docs, query) Arguments: o name - database name o designDocName - design doc name

viewName - view name

• limit - limit on number of results

- o include_docs whether or not to include the full body of the docs in the return
- o query the query

Returns JSON document with results

getView (name, designDocName, viewName, group)
 Arguments:

- o name database name
- o designDocName design doc name
- o viewName view name
- o group if results must be grouped

Returns JSON documents from the view

Using the Cloudant adapter in your app

To use the adapter in your app, copy the CloudantAdapter folder to your MobileFirst app.

Extend the adapter as needed with the functionality for your app.

Sample application

Click to download

(http://public.dhe.ibm.com/software/products/en/MobileFirstPlatform/docs/v700/CloudantAdapterDemoProject.zip) the Studio project.