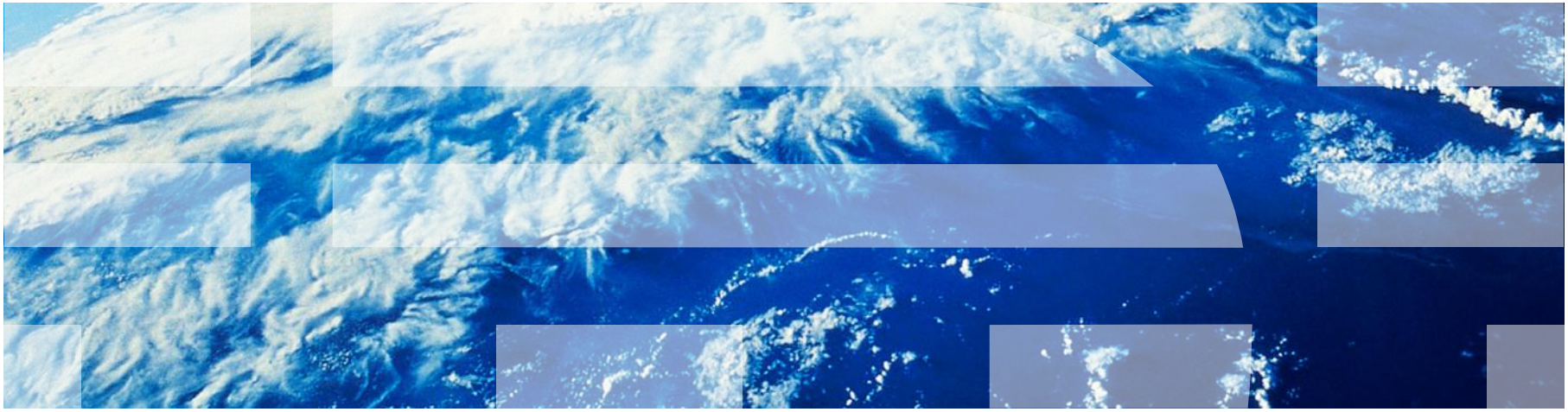
IBM Worklight Foundation V6.2.0
Getting Started

JSONStore – JavaScript API



5 Sep 2014

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Agenda

- What is JSONStore?
- Follow along with the code sample
- Code sample walkthrough
- Expected output
- For more information

What is JSONStore?

- Optional client-side API with the following key features:
  - Data indexing for efficient searching.
  - Data encryption in production environments.
  - Mechanism for tracking local-only changes to the stored data.
  - Support for multiple users.
- Available in the following environments:
  - Native: Android and iOS
  - Hybrid: Android, iOS, Windows Phone 8, and Windows 8
  - Preview Common Resources / Mobile Browser Simulator (not for production use)

Note: This module shows how to get started with the JSONStore API. Some features such as data encryption are beyond the scope of this module. All features are documented in detail in the IBM Worklight® Foundation user documentation.

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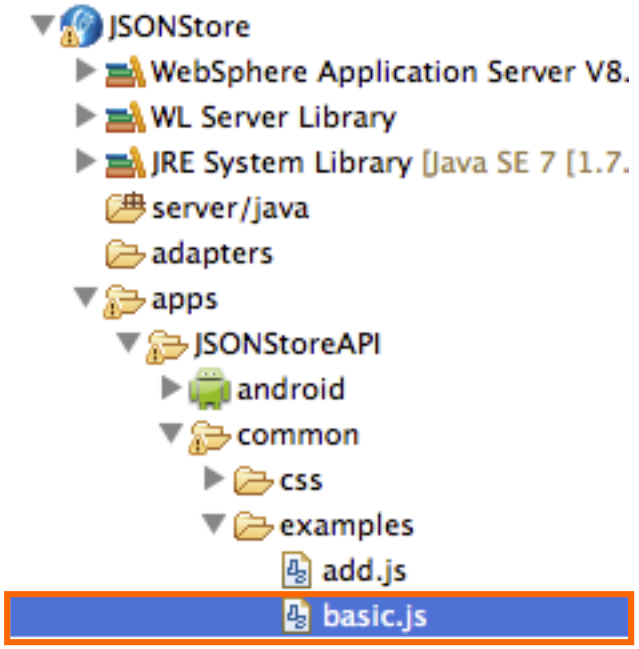
Follow along with the code sample

1. Download the compressed file with the code sample that is associated with this module.
2. Open the `basic.js` file. The sample image provides context.
3. Run the application on one of the environments listed (for example: Android, iPhone). The *"Setting up your environment"* and *"Hello Worklight"* Getting Started Modules cover this procedure in detail.

Note: The code sample uses a JavaScript™ Unit Test framework that is called QUnit (qunitjs.com). Explaining how it works is beyond the scope of this module.



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Code sample walkthrough (1 of 9)

The `destroy` API removes all JSONStore content from the application. It is used here to start with no data. Doing it this way ensures that the output is predictable in the code sample.

```
WL.JSONStore.destroy()

.then(function () {

    var collections = {
            people : {
                searchFields: {name: 'string', age: 'integer'}
            }
    };

    return WL.JSONStore.init(collections);
})

.then(function () {

    var data = [{name: 'carlos', age: 20},
                {name: 'mike', age: 30}];

    return WL.JSONStore.get('people').add(data);
})

.then(function () {
    return WL.JSONStore.get('people').findAll();
})

.then(function (res) {

    deepEqual(res, [{_id: 1, json: {name: 'carlos', age: 20}},
                    {_id: 2, json: {name: 'mike', age: 30}}]);

    start();
})

.fail(function (err) {
    ok(false, 'Got failure: ' + err.toString());
    start();
});
```

Code sample walkthrough (2 of 9)

To persist data, you must first define at least one collection. These collections are entities that hold data. Shown here is the definition of a collection that is called `people`.

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```

Code sample walkthrough (3 of 9)

Search fields are fields that are indexed inside a collection. You can use those fields when you search for data that is inside a collection.

You can see here the definition of two search fields:

- `name` (string)
- `age` (integer)

The data types, such as `string`, `integer`, `number`, `Boolean`, are used to better store input data.

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```

Code sample walkthrough (4 of 9)

The `init` API is used to open one or more collections. If the collection was never opened before, a file is created on the file system to persist data that is inside the collection. Before the operation finishes, an accessor to that file is created.

The accessor allows the caller to call collection-level APIs such as `add` and `findAll`, which are shown later in this code sample walkthrough.

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```

Code sample walkthrough (5 of 9)

The data that is stored inside the `people` collection is defined here. Notice that the data is a hardcoded array of two JSON objects with key value pairs for `name` and `age`. This data can be acquired from multiple sources (for example: Network Request, File I/O, User Input).

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```

Code sample walkthrough (6 of 9)

The accessor that is created by the completion of the `init` API is accessed via the `get` API. That accessor provides access to store data inside the people collection. The input data must be in JSON format.

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})

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});
```

Code sample walkthrough (7 of 9)

You can find documents inside a JSONStore collection in different ways. For example: `find`, `findById`.

The easiest way, and the way that is shown here, is by using the `findAll` API. This method returns all the data that is stored inside a collection.

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```

Code sample walkthrough (8 of 9)

Data that is stored inside a collection is called a document.

Documents have `_id` and `json` key value pairs. The `_id` pair is an internal identifier that is added automatically when data is added. The `json` pair contains all the data that was added.

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```

Code sample walkthrough (9 of 9)

If one of the API calls fails (for example: `init`, `add`, `findAll`) the function inside `.fail` is called with an error object.

Make sure that the error object contains enough information for the user to understand what went wrong. For example, it can contain:

- `src` - source of the error, for example: `find`
- `msg` - message that is related to the error, for example: `BAD_PARAMETER_EXPECTED_STRING`

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Expected Output

When the application is executed in one of the supported environments, the output looks similar to the sample image.

The green line indicates that everything is working as expected.

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For more information

- For more information about JSONStore, see JSONStore in the product user documentation.
- For more information about JSONStore performance and best practices, see JSONStore performance in the product user documentation.s

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