

Rest Assured



Hello!

I am Bart Szulc

I am here because I love to talk about and teach quality.
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Rest Assured

What we will cover.

- Structure.
- Requests and responses.
- JSON path.
- Authentication.
- Schema validation.
- Specifications.
- Filters.

Rest Assured

What we won't cover.

- Spring Mock Mvc.
- XML Support.
- Legacy syntax.
- Customisation.

Rest Assured

Agenda.

1. Introduction.
2. Installation.
3. Request.
4. Response.
5. Authentication.
6. JSON validation.
7. Defaults.
8. Specifications.
9. Filters.
10. Other.

1. Introduction

What is Rest Assured and why it's useful?

Rest Assured

Introduction.

Yet another http client... ~~but with very nice user experience and needed features~~ but with very nice API and a lot of support for testing.

2. Installation

Because you need the tool before you start working with it.

Rest Assured Installation.

```
<dependency>  
  <groupId>io.rest-assured</groupId>  
  <artifactId>rest-assured</artifactId>  
  <version>3.0.7</version>  
  <scope>test</scope>  
</dependency>
```

Rest Assured Installation.

What it includes?

- JsonPath - to parse JSON documents.
- XmlPath - to parse XML documents.
- Hamcrest - to write nice assertions.

What it doesn't include?

- JSON Schema Validator.

Rest Assured Installation.

```
<dependency>
  <groupId>io.rest-assured</groupId>
  <artifactId>json-schema-validator</artifactId>
  <version>3.0.7</version>
  <scope>test</scope>
</dependency>
```

3. Request.

How to request things.

Rest Assured

Usage.

```
io.restassured.RestAssured.*  
io.restassured.matcher.RestAssuredMatchers.*  
org.hamcrest.Matchers.*  
io.restassured.module.jsv.JsonSchemaValidator.*
```

Rest Assured Requests.

How to?

- Make a simple request.
- Set query params.
- Set path params.
- Set headers.
- Set method.
- Set payload.
- Set cookies.
- Multipart.

Rest Assured GPath.

- `key` - get value under key
- `key1.key2` - get value under key2 that is a child of key1
- `array[0]` - get first element of an array under key 'array'
- `array[-1]` - get last element of an array under key 'array'
- `array[0..2]` - get first three elements of an array under key 'array'
- `$` - anonymous path, like [1, 2, 3]

Rest Assured Structure.

What is so special about test structure in Rest Assured?

- Fluent API, everything chained.
- Given, when, then structure. Setting test, executing tested function, asserting results.

Rest Assured Introduction.

```
git clone https://bitbucket.org/bartoszu/restassured-wiremock.git
```

Rest Assured Request.

Exercise:

Request hello with extra query param called 'prefix' set to mr, mrs, miss.
Confirm message includes the prefix.

Rest Assured Request.

Exercise:

Request hello with two headers:

- X-User-Id set to 1000,
- X-Role set to 'admin'.

Check what happens.

4. Response.

How to inspect result.

Rest Assured Response.

How to?

- Get cookies.
- Get status.
- Get headers.
- Get response in various formats.
- Extract specific data from response.
- Measure response time.

Rest Assured Response.

Exercise:

Requests `/rest/api/2/project` and extract links to avatars 48x48.

Rest Assured Response.

Exercise:

Create a book and confirm href links to book by its isbn.

Rest Assured Advanced GPath.

How to?

- Filter entries according to provided search criteria.
- Manipulate entries in collection to extract only relevant data.

Rest Assured

Advanced GPath.

- `find` - find first element in collection matching given criteria
- `findAll` - find all elements in collection matching given criteria
- `collect` - transforms all elements in collection
- `unique` - finds unique elements in collection for given formula

Rest Assured Advanced GPath.

Exercise:

Request book and confirm the total number of books for which title starts with 'S' equals 2.

Rest Assured Authentication.

How to?

- Basic auth.
- Custom auth.

5. Authentication.

How to get access.

Rest Assured Authentication.

Exercise:

Create project in Jira. Assert for status code and self link to created project. Check how long it took to create project. Confirm it takes no longer than 5 seconds.

Rest Assured Authentication.

<https://infoshare-rest-assured.atlassian.net>

kenneth.signy.training@gmail.com / b0dHa04lkpr4K50H8x4TAB6C

/rest/simplified/latest/project

```
{  
  "name": "project name",  
  "key": "project key",  
  "templateKey": "com.pyxis.greenhopper.jira:gh-simplified-agility-kanban"  
}
```

6. JSON validation.

How to validate against schema.

Rest Assured JSON Schema.

How to?

- Validate response against JSON Schema of given resource.

Rest Assured JSON Schema.

Exercise:

Generate JSON Schema with help of <https://jsonschema.net/> for one of your resources and validate it.

7. Defaults.

How to manage default settings.

Rest Assured

Defaults.

```
RestAssured.baseURI = "http://myhost.org";  
RestAssured.port = 80;  
RestAssured.basePath = "/resource";  
RestAssured.authentication = basic("username", "password");
```

```
get("/hello") -> http://myhost.org:80/resource/hello
```

```
RestAssured.reset();
```

8. Specifications.

How to share objects.

Rest Assured Specification.

How to?

- Create shared expectations towards response.
- Create prescribed requests.

Rest Assured Specification.

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- Create shared expectations towards response.
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Rest Assured Specification.

Exercise:

Create project in Jira. Assert for status code and self link to created project. Check how long it took to create project. Confirm it takes no longer than 5 seconds.

Create two different classes of projects and use specifications to set requests and validate responses. Extra points for creating a filter that sets project template key and project type key.

9. Filters.

How to manipulate requests and responses.

Rest Assured Filter.

How to?

- AOP requests.
- Manipulate responses.

Rest Assured Filter.

```
Response newResponse = new ResponseBuilder()  
    .clone(originalResponse)  
    .setBody("Something")  
    .build();
```

10. Other.

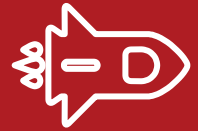
Other features.

Rest Assured Other.

What else?

- Logging.
- SSL.
- Proxy.

QUESTIONS



Let's talk about what we learnt.

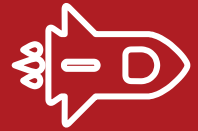


Thanks!!

Any questions?

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FEEDBACK



What do you think?