



WireMock State Extension

Version 0.2.0

RFC 3912

- Dirk Bolte
- 20 years professional development experience
 - From TypeScript over Java/Kotlin to C & C++
 - From Mobile and Web Frontends over Cloud Backends to Microcontroller
- WireMock usage since 2017



Agenda

- Motivation: The need to create a sandbox
- Demo
- Extension features and progression
- WireMock 3.0.0 extension usage
- Wishlist



The need to create a sandbox

- Webservice which connects to external service
- Service can be used with a Sandbox as a trial
 - Behavior should be close to actual behavior
 - User inputs are interpreted
- Sandbox mimics the external service, drop-in replacement

Options:

1. Create an additional web service to copy the API + behavior
2. Use a Mocking solution -> WireMock

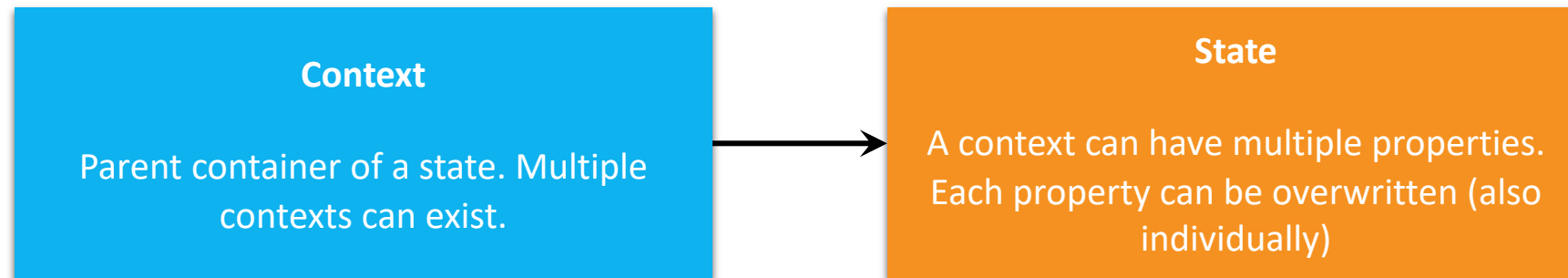


DEMO



Initial feature set: the state

- Creating, updating and deleting a state
- Storing different states in association with a context
- Request matcher to check for existence of a context
- Handlebars support



Example

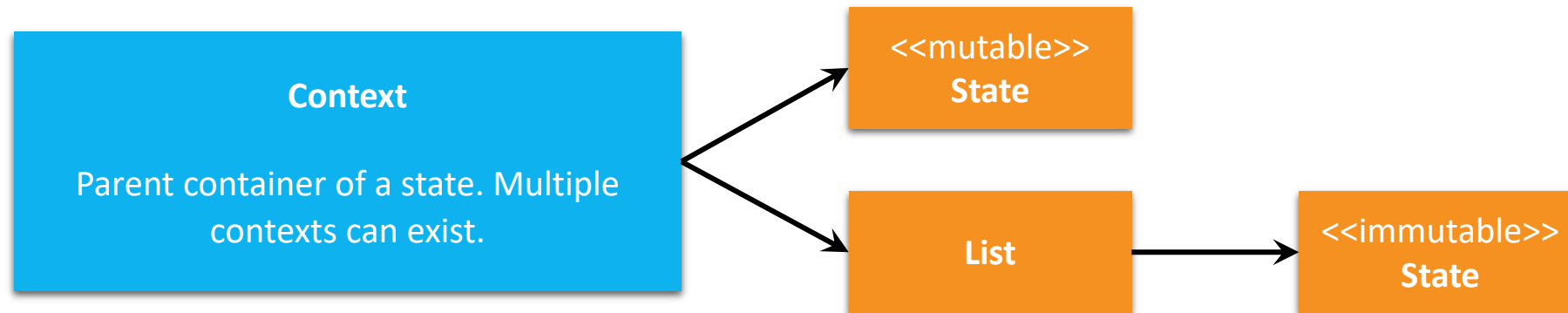
```
"serveEventListeners": [{  
  "name": "recordState",  
  "parameters": {  
    "state": {  
      "firstName": "{{jsonPath request.body '$.firstName'}}",  
      "familyName": "{{jsonPath request.body '$.familyName'}}",  
      "street": "{{jsonPath request.body '$.street'}}",  
      "city": "{{jsonPath request.body '$.city'}}"  
    },  
    "context": "profile"  
  }  
}]
```

```
"response": {  
  "status": 200,  
  "jsonBody": {  
    "firstName": "{{state context='profile' property='firstName' default=''}}",  
    "familyName": "{{state context='profile' property='familyName' default=''}}",  
    "street": "{{state context='profile' property='street' default=''}}",  
    "city": "{{state context='profile' property='city' default=''}}"  
  },  
  "headers": {  
    "content-type": "application/json"  
  }  
}
```



Modeling queues

- Adding new (unmodifiable) states to the context
 - Insert as first or last item
- Read access to first/last/index
- Delete first/last/index
- Check size



Suggested by @ioanngolovko



Example

```
"serveEventListeners" : [ {  
  "name" : "recordState",  
  "parameters" : {  
    "list" : {  
      "addLast" : {  
        "id" : "{{jsonPath response.body '$.id'}}",  
        "title" : "{{jsonPath response.body '$.title'}}",  
        "description" : "{{jsonPath response.body '$.description'}}"  
      }  
    },  
    "context" : "todolist"  
  }  
}
```

```
[  
  {{# each (state context='todolist' property='list' default='[]') }}  
  {  
    "id": {{id}},  
    "title": "{{title}}",  
    "description": "{{description}}"  
  }  
  {{#unless @last}},{{/unless}}  
  {{/each}}  
]
```



Improving usability

- Allow to define default values (suggested by @alexandre-chopin)
 - Expose the "list" to handlebars
- Allow to build listing endpoints
- Query "special" properties: updateCount, listSize, list, property existence
- Delete single properties
- Loadable in WireMock standalone and docker container



Documentation and inspiration

- [README](#) with examples
- [Example tests](#)
- [Demo project with stub files](#)



WireMock 3.0.0 extension usage

- `ServeEventListener`
 - Creating + Updating state
 - Adding as first or last item to the list
 - Deleting state
- `RequestMatcherExtension`
 - `hasContext`, `hasNotContext`
- `Handlebars helper`
 - Accessing context, state, list in handlebars
- `TemplateHelperProviderExtension`
 - Loading all parts of this extension as one bundle
- `ExtensionFactory`
 - Automatic loading of this extension when it's on the classpath



WireMock Wishlist

- Common distribution channel (or even market place) for WireMock extensions
- More event points
- Type-safe extension configuration
 - Support for extension-specific configuration schema
- Making the full power of handlebars usage in "body" in "jsonBody"
- Cache-like general-purpose storage for extensions



Usage and contribution

- Project: <https://github.com/wiremock/wiremock-extension-state>
- Apache License 2.0
- Feedback and contributions welcome
- Contact:
 - WireMock Slack
 - Github: <https://github.com/dirkbolte>
 - LinkedIn: <https://www.linkedin.com/in/dirk-bolte-23aaa88b/>
 - Xing: https://www.xing.com/profile/Dirk_Bolte5/

