**Starting the labs VM**

*SOA December 2019*

1. In the top right corner of the desktop you should see an icon labelled “Macintosh HD”
2. Double Click on that.
3. Click on Courses
4. Click on SOA
5. Double Click on the VMware Fusion icon labelled **oxsoa2019.vmwarevm**
6. Select **Don’t Upgrade**
7. Select **I copied it**
8. Wait until the VM boots up, and you should be ready to go.
9. Use this VM for all the exercises.

**SOA Exercise Guide - December 2019**

**The VM is available on a hard disk in the room, or you can get it from the net (slowly).**

It is available either for VMWare (zip file) or for VirtualBox (.ova).   
  
VirtualBox is a free download at [https://virtualbox.org](http://virtualbox.org)

**VMWare VM:** <https://oxsoa-2019.s3.eu-west-2.amazonaws.com/oxsoa2019-vmware.zip>  
**VirtualBox VM:** <https://oxsoa-2019.s3.eu-west-2.amazonaws.com/oxsoa-2019.ova>   
**VM User/Password:** *oxsoa/oxsoa*

*The exercises are all in Github here:* [*https://freo.me/ox-soa-labs*](https://freo.me/ox-soa-labs)

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| Exercise | Description and PDF link |
| 1 | Simple HTTP JSON Server in node.js |
| 2 | Simple HTTP JSON Client in Python |
| 3 | Creating a RESTful API in Java – framework |
| 4 | The Richardson Maturity Model – making our Java API RESTful |
| 5 | Using Swagger to describe services |
| 6 | Performance testing HTTP with wrk |
| 7 | Getting started with Docker |
| 8 | Docker packaging of your microservice |
| 9 | Event Publishing |
| 10 | gRPC |
| 11 | SSL certificates |
| 12 | OAuth2 based identities for API calls |
| 13 | API Management |
| 14 | SOAPUI |
| 15 | SOAP to REST conversion using Ballerina |
| 16 | Building a BPMN process |