Docker einrichten

- Defintion
  - Schritt-für-Schritt-Anleitung für Windowsuser

Defintion

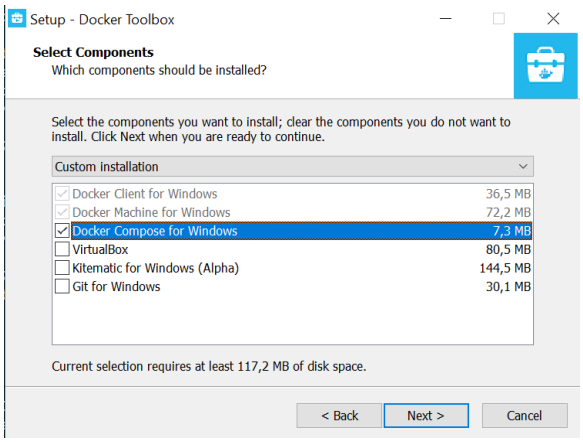
Docker ist eine freie Software zur Isolierung von Anwendungen mit Hilfe von Containervirtualisierung. Docker vereinfacht die Bereitstellung von Anwendungen, weil sich Container, die alle nötigen Pakete enthalten, leicht als Dateien transportieren und installieren lassen.

Um das gesamte Nuclos-Projekt zu bauen wird Java und Maven benötigt. Für den Webclient werden weitere Build-Tools benötigt (NodeJS, Angular-CLI, etc..). Diese Build-Tools werde mittels Docker zur Verfügung gestellt.

Schritt-für-Schritt-Anleitung für Windowsuser

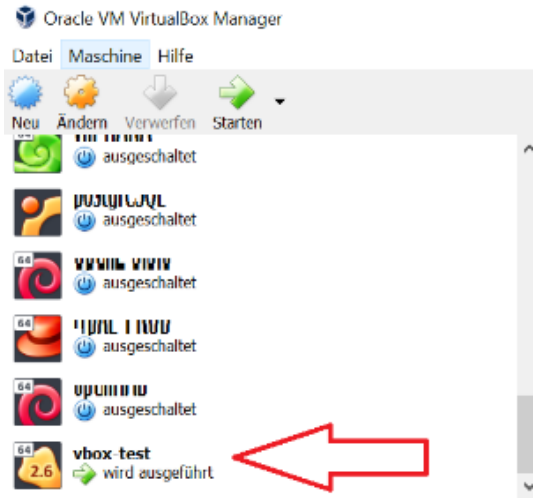
Virtualbox hat sich in der Praxis bewährt, diese Anleitung setzt deshalb auf den Betrieb von Docker mit Virtualbox. Das Docker for Windows hingegen läuft mit HyperV. Es gibt keine Möglichkeit HyperV und Virtualbox parallel laufen zu lassen.

- Download der Docker Toolbox von https://docs.docker.com/toolbox/overview/
- Installation der Toolbox



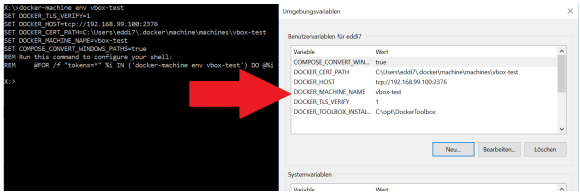
- als nächstes muss automatisiert eine Virtualle Maschine in Virtualbox erzeugt werden

  CMD: docker-machine create --driver=virtualbox vbox-test



- Anschließend müssen die generierten EVN-Parameter in den Windows Umgebungsvariablen übertragen werden

  CMD: docker-machine env vbox-test



> Die Umgebungsvariablen werden in der Eingabeaufforderung erst nach einem Neustart dieser übernommen

- Danach kann man das Webclient-Projekt direkt unter Windows bauen:

```
C:\Logbuchaufforderung> mvn dependencies:tree -Dtest=!*Test
Warning: java.io.Serializable' used in 'LegalDisclaimer.<interface>'
Warning: Unknown serializer 'com.fasterxml.jackson.databind.ser.impl.UnknownSerializer' for class 'interface java.io.Serializable'
Warning: java.lang.Cloneable' used in 'LegalDisclaimer.<interface>'
Warning: Unknown serializer 'com.fasterxml.jackson.databind.ser.impl.UnknownSerializer' for class 'interface java.lang.Cloneable'
Warning: org.jvnet.jaxb2_commons.lang.CopyTo' used in 'LegalDisclaimer.<interface>'
Warning: Unknown serializer 'com.fasterxml.jackson.databind.ser.impl.UnknownSerializer' for class 'interface org.jvnet.jaxb2_commons.lang.CopyTo'
Warning: org.jvnet.jaxb2_commons.lang.Equals' used in 'LegalDisclaimer.<interface>'
Warning: Unknown serializer 'com.fasterxml.jackson.databind.ser.impl.UnknownSerializer' for class 'interface org.jvnet.jaxb2_commons.lang.Equals'
Warning: org.jvnet.jaxb2_commons.lang.HashCode' used in 'LegalDisclaimer.<interface>'
Warning: Unknown serializer 'com.fasterxml.jackson.databind.ser.impl.UnknownSerializer' for class 'interface org.jvnet.jaxb2_commons.lang.HashCode'
Warning: org.jvnet.jaxb2_commons.lang.ToString' used in 'LegalDisclaimer.<interface>'
Warning: Unknown serializer 'com.fasterxml.jackson.databind.ser.impl.UnknownSerializer' for class 'interface org.jvnet.jaxb2_commons.lang.ToString'
Warning: javax.xml.datatype.XMLGregorianCalendar' used in 'News.validFrom'
Warning: Unknown serializer 'com.fasterxml.jackson.databind.ext.CoreXMLSerializers$XMLGregorianCalendarSerializer' for class 'class javax.xml.datatype.XMLGregorianCalendar'
Writing declarations to: X:\dev\nuclos-gvl\nuclos\nuclos-webclient\src\app\shared\entities.d.ts
[INFO]
[INFO] --- maven-resources-plugin:3.3.1:resources (default-resources) @ nuclos-webclient ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] skip non existing resourceDirectory X:\dev\nuclos-gvl\nuclos\nuclos-webclient\src\main\resources
[INFO]
[INFO] --- maven-compiler-plugin:3.1:compile (default-compile) @ nuclos-webclient ---
[INFO] No sources to compile
[INFO]
[INFO] --- exec-maven-plugin:1.6.0:run (build-docker-image) @ nuclos-webclient ---
[INFO] Executing tasks

main:
    [exec] Sending build context to Docker daemon  4.005MB
    [exec] Step 1/25 : ARG NODE_VERSION=10.4.1
    [exec] Step 2/25 : FROM node:$NODE_VERSION as builder
    [exec] 10.4.1: Pulling from library/node
    [exec] 3d77ce448101: Pulling fs layer
    [exec] 7d2f32934963: Pulling fs layer
    [exec] 0c5cf711b090: Pulling fs layer
    [exec] 9593dc852d6b: Pulling fs layer
    [exec] 4b16c2780ba5: Pulling fs layer
    [exec] 1fcdaeabfe651: Pulling fs layer
    [exec] c5fa4ac2b88b: Pulling fs layer
    [exec] 454c585741ia: Pulling fs layer
    [exec] 9593dc852d6b: Waiting
    [exec] 4b16c2780ba5: Waiting
    [exec] 1fcdaeabfe651: Waiting
    [exec] c5fa4ac2b88b: Waiting
    [exec] 454c585741ia: Waiting
    [exec] 7d2f32934963: Verifying Checksum
    [exec] 7d2f32934963: Download complete
    [exec] 0c5cf711b090: Verifying Checksum
    [exec] 0c5cf711b090: Download complete
    [exec] 4b16c2780ba5: Verifying Checksum
    [exec] 4b16c2780ba5: Download complete
    [exec] 1fcdaeabfe651: Verifying Checksum
    [exec] 1fcdaeabfe651: Download complete
    [exec] 3d77ce448101: Verifying Checksum
    [exec] 3d77ce448101: Download complete
    [exec] 454c585741ia: Verifying Checksum
    [exec] 454c585741ia: Download complete
    [exec] c5fa4ac2b88b: Verifying Checksum
    [exec] c5fa4ac2b88b: Download complete
    [exec] 3d77ce448101: Pull complete
    [exec] 7d2f32934963: Pull complete
    [exec] 9593dc852d6b: Verifying Checksum
    [exec] 9593dc852d6b: Download complete
    [exec] 0c5cf711b090: Pull complete
    [exec] 9593dc852d6b: Pull complete
    [exec] 4b16c2780ba5: Pull complete
    [exec] 1fcdaeabfe651: Pull complete
    [exec] c5fa4ac2b88b: Pull complete
    [exec] 454c585741ia: Pull complete
    [exec] Digest: sha256:ahcfd9ad1ef9a3a0ad2f5911f46f5580541f54a3d9ad518ed3f6c2fc0f5f608
    [exec] Status: Downloaded newer image for node:10.4.1
    [exec]  ---> 4df1f5a94ef9
    [exec] Step 3/25 : RUN wget -q -O - https://dl-ssl.google.com/linux/linux_signing_key.pub | apt-key add -
    [exec]  ---> Running in 27a2cbeee741
    [exec] OK
    [exec] Removing intermediate container 27a2cbeee741
    [exec]  ---> b46cfa00aa65
    [exec] Step 4/25 : RUN sh -c 'echo "deb [arch=amd64] http://dl.google.com/linux/chrome/deb/ stable main" >> /etc/apt/sources.list.d/google.list'
    [exec]  ---> Running in 2cbc7fab7c70
    [exec] Removing intermediate container 2cbc7fab7c70
    [exec]  ---> 54e5f7172f77
    [exec] Step 5/25 : RUN apt-get update && apt-get install -y google-chrome-stable
    [exec]  ---> Running in 013c090cf67d
    [exec] Ign:1 http://dl.google.com stable InRelease
    [exec] Get:1 http://dl.google.com stable Release.gpg [819 B]
    [exec] Get:2 http://dl.google.com stable Release [943 B]
```