Container platform installation

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Content

1 Provided Repositories

This document describes possibilities for running Series M/ products on Docker based Container platforms.

Docker images are available on https://registry.kwsoft.cloud under Project kwsoft. You could create your own account under "Sign up for an account". Please create only one technical user for the whole company. When the sign up procedure is completed, you could request K&W hotline for access rights in Harbor for the project kwsoft.

Under the Project you will find several Repositories with Docker Images, which can be combined at the installation of the product.

1.1 kwsoft/seriem612

The most important Images are in seriem repository. The tag of the image is the last part of the M/TEXT version number. For example, if the M/TEXT version is 6.12.0.311-hotfix2, there will be a seriem612 image with the tag **311-hotfix2**. Every seriem image contains all resources which are bound to one product version. There is a seriem.ear with standard modules (M/OMS, M/DO, M/TEXT TONIC, ContentHub), as well as with M/Workbench, M/TEXT Daemon Client, etc. The Image is used as initial container. Its job is the preparation of resources for other Containers and copying of necessary files on a Volume. It is possible to influence this process and for example add custom jars into the ear. Details of volume mapping and available content are described in Appendix 2.

1.2 kwsoft/wildfly16_init

This container is used for Wildfly container volumes initialization. When the configuration folder is empty, the default setting files are restored.

1.3 kwsoft/wildfly16

This container contains installation of Wildfly 16, which is ready to deploy our application. It uses the default port mapping, so http is on port 8080 and wildfly console on 9990. Under which port wildfly will be available to outside world can be configured when creating a container out of this Docker image.

There are following four database modules installed in Wildfly:

- **PostgreSQL**, postgresql-42.2.22 – ver. 42.2.22
- **Oracle**, ojdbc8 – ver. 21.1
- **DB2**, jcc-11.5.5.0 – ver. 11.5.5.0
- **MSSQL**, mssql-jdbc-9.2.1.jre8 – ver. 9.2.1

The container can be configured by environment variables. It is for example possible to configure CONNECTION_URL, USER_NAME, PASSWORD of external database and wildfly will use this database for data sources. For more details see Appendix 1.

1.4 kwsoft/postgres

This is the standard PostgreSQL Docker image without any data. When the container is started and there is some content on the volume in folder /postgres-init, ddl scripts located in that folder will be executed. to create the schema mtext and all tables, which are needed for the deployment of the product.

1.5 kwsoft/svnserver

Contains the Subversion server with preconfigured Authorization user=mtext, password=mtext. You can create a new user by executing the following command in container shell:

```
htpasswd /etc/subversion/passwd <username>
```

1.6 kwsoft/gitserver

Contains the GIT server with preconfigured Authorization user=mtext, password=mtext.

There are many possibilities how Docker images can be used to build a running environment. We will describe most common scenarios in the next chapters.

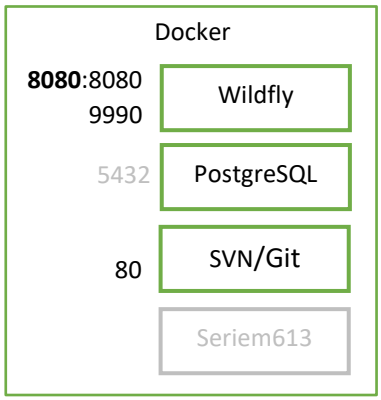
2 Infrastructure architecture

Before we start with the installation, we should decide, which existing parts of the infrastructure will be used, and which parts should be provided by the installation.

2.1 Server topology

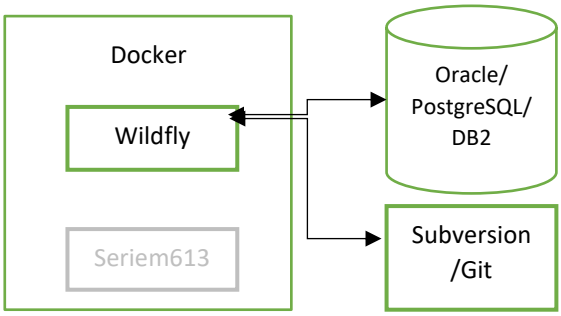
2.1.1 Standalone server

Standalone server is all in one environment, which uses its own application server (kwsoft/wildfly16), database (kwsoft/postgres) and version control system (kwsoft/svnserver, kwsoft/gitserver) like on the following image. In this case we just need to decide on which port wildfly will be published out of the Docker. On the image is internal port 8080 exposed as **8080**. Port 9990 is not explicitly mapped, so it will be exposed by docker on a random port when the container is created.



2.1.2 Integrated server

In many cases it is reasonable to integrate the server into some existing infrastructure like Database or version control system, which will be used instead of the provided docker image. For version control nothing special needs to be done, we just need network access. The Database is configured by the environment variables CONNECTION_URL, DRIVER_CLASS, USER_NAME , PASSWORD and DB_SCHEMA.



3 Installation on target platform

Docker images can be used many ways. We describe most usual usage scenarios.

3.1 Install on Kubernetes using Helm Chart

Helm is the package manager for Kubernetes and is recommended for installation on this container platform.

Current versions of helm charts are available at this address:
https://registry.omscloud.eu/harbor/projects/3/helm-charts/seriem/versions

3.1.1 Prerequisities

Kubernetes Cluster, for example https://aws.amazon.com/de/eks/, tested version 1.21

kubectl, https://kubernetes.io/docs/tasks/tools/, tested with version 1.21

helm, https://helm.sh/docs/intro/install/ tested version 3.7.1

3.1.2 Installation procedure

Add a new chart repository. You must enter the credentials for registry.kwsoft.cloud as mentioned in chapter 1.

```
helm repo add kwsoft https://registry.kwsoft.cloud/chartrepo/kwsoft \
--username xxx
```

As result you should see:

```
"kwsoft" has been added to your repositories
```

Start standalone server by calling upgrade/install of the chart (you must re-enter credentials for the registry in `imageCredentials`).

Remark: You can use own server name instead of myserver, own namespace instead of mynamespace and real dns domain, where the server will be available instead of mydomain.com.

```
helm upgrade --install myserver kwsoft/seriem --namespace mynamespace \
--create-namespace --set general.hostDomain=mydomain.com \
--set imageCredentials.username=xxx --set imageCredentials.password=xxx
```

Check if the Chart was successfully installed by calling:

```
helm list -n mynamespace
NAME    NAMESPACE REVISION UPDATED       STATUS   CHART        APP VERSION
myserver  mynamespace    1        2021-11-22…   deployed seriem-0.3.1
6.12.404-hotfix3
```

Then a pod is automatically created in the Kubernetes cluster. You can check it by calling:

```
kubectl get pods -n mynamespace
NAME                          READY   STATUS    RESTARTS   AGE
dmemyserver-8cb44c5f9-f2qml   3/3     Running   0          2m29s
```

If your server is running, you should be able to open welcome page as described in Section 3.5. The URL where your server is available should be constructed as http://myserver.mydomain.com, but of course you need a corresponding dns entry to be able to access the url.

3.1.3 Customization

As you can see in the command *helm upgrade* used above, we used the set parameter (**--set**) to change helm values as needed. The complete listing of values can be found in chapter *9 Appendix Helm Values* or in Harbour under tab Values.

Example of starting the server with external database and external team support storage:

```
helm upgrade --install myserver kwsoft/seriem --namespace mynamespace --
create-namespace --set general.hosDomain=mydomain.com --set
imageCredentials.username=myuser --set imageCredentials.password=mypassword --
set imageCredentials.email=myemail --set general.createPostgresPod="" --set
general.createSVNPod="" --set
wildfly.database.connectionUrl=jdbc:postgresql://mydbserver:5432/mydatabase --
set wildfly.database.userName=mydbuser --set
wildfly.database.password=mydbpassword
```

3.2 Docker compose

Probably the easiest way to run a Docker based local environment is by usage of docker-compose. It is available for Windows as well as for Linux. This kind of installation is mainly suitable for smaller installations and testing purposes.

You need to define services in a Compose file called docker-compose.yml in your project directory. We provide a docker-compose.yaml file with preconfigured settings for standalone server topology. YAML files are called definition files since they define the service that you are deploying.

The user may adjust some settings in yaml to the target environment like port number or version number.

Example:

```
wildfly:
     image: registry.kwsoft.cloud/kwsoft/wildfly16:4
     ports:
     - "8080:8080"
     environment:
     - EXTERNAL_HOST_NAME=localhost
     - EXTERNAL_HOST_PORT=8080
     volumes:
     - "./volumes/clients:/clients:rw"
     - "./volumes/deployments:/deployments:rw"
     - "./volumes/seriem-home:/seriem:rw"


seriem:
     image: registry.kwsoft.cloud/kwsoft/seriem612:311-hotfix2
     environment:
     - EXTERNAL_HOST_NAME=localhost
     - EXTERNAL_HOST_PORT=8080
     volumes:
     - "./volumes/clients:/clients:rw"
     - "./volumes/deployments:/deployments:rw"
     - "./volumes/seriem-home:/seriem:rw"
```

For the complete set of Environment Variables see Appendix 1 and a full docker-compose.yaml file in Appendix 3.

As a first step, create a project folder for the application resp. the container and save the docker-compose.yaml file in it.

To ensure the access to the docker registry to download the images for the containers from, enter the command:

```
docker login https://registry.omscloud.eu/harbor
```

Enter username and password to complete the login.

Create a folder called volumes, where docker volumes will be placed. It is on the same level as the docker-compose.yml file.

From your project directory, start up your application by running :

```
docker-compose up
```

Compose pulls an image, builds an image for your code, and starts the services you defined. In this case, the code is statically copied into the image at build time.

When containers are started successfully, the welcome page is reachable from the root of the external hostname. For example: *http://localhost:8080*.

3.2.1 Linux

On linux operating systems, it is necessary to create a folder called volumes, where docker volumes will be placed, before running initial docker compose up, so that the folders are not automatically created under root user. The volumes folder is located at the docker-compose.yaml level. You can use this script:

create_docker_compose.sh

```
#!/bin/sh
mkdir -p volumes/postgres-data
mkdir -p volumes/postgres-init
mkdir -p volumes/deployments
mkdir -p volumes/seriem-home
mkdir -p volumes/jboss-config
mkdir -p volumes/clients
mkdir -p volumes/svn-data
mkdir -p volumes/svn-config
mkdir -p volumes/mtext-init
docker-compose up
```

3.3 Kubernetes

If you don't want to use helm in combination with kubernetes, you can create directly a yaml that describes kubernetes objects. Find here the main parts of the YAML file:

```
initContainers:
        - name: seriem
        image: registry.kwsoft.cloud/kwsoft/seriem612:311-hotfix2
        env:
        - name: EXTERNAL_HOST_NAME
          value: example.url
        - name: EXTERNAL_HOST_PORT
          value: "443"
        volumeMounts:
          - mountPath: /home/clients"
            name: ebsvolume
            subPath: dmeRelease/clients
          - mountPath: /opt/jboss/"
            name: ebsvolume
            subPath: dmeRelease/
          - mountPath: /"
            name: ebsvolume
            subPath: dmeRelease/
          - "./volumes/deployments:/deployments:rw"
          - "./volumes/seriem-home:/seriem:rw"

containers:
        - name: wildfly
        image: registry.kwsoft.cloud/kwsoft/wildfly16:4
        env:
        - name: EXTERNAL_HOST_NAME
          value: example.url
        - name: EXTERNAL_HOST_PORT
          value: "443"

volumes:
- name: ebsvolume
  emptyDir: {}
```

Full YAML is showed in chapter 8. Appendix 4 – Full example of Kubernetes pod yaml definition.

After assembling the yaml, the pod can be started by this command:

```
kubectl apply -f example.yaml
```

When containers are started successfully, the welcome page is reachable from the root of the external hostname. For example: *https:*//example.url

3.4 OpenShift

OpenShift is a chargeable distribution of Kubernetes that contains additional features which are not available from the open-source project. The configuration is the same as for Kubernetes and installation using helm should be possible.

You should be aware of problems with Security Context Policy, because OpenShift default SCP is restricted and do not support usage of root UID, fsGroup etc. Installation including postgres image would request root UID. You must configure less restrictive policy or run server with external database. More info regarding SCC: https://cloud.redhat.com/blog/managing-sccs-in-openshift

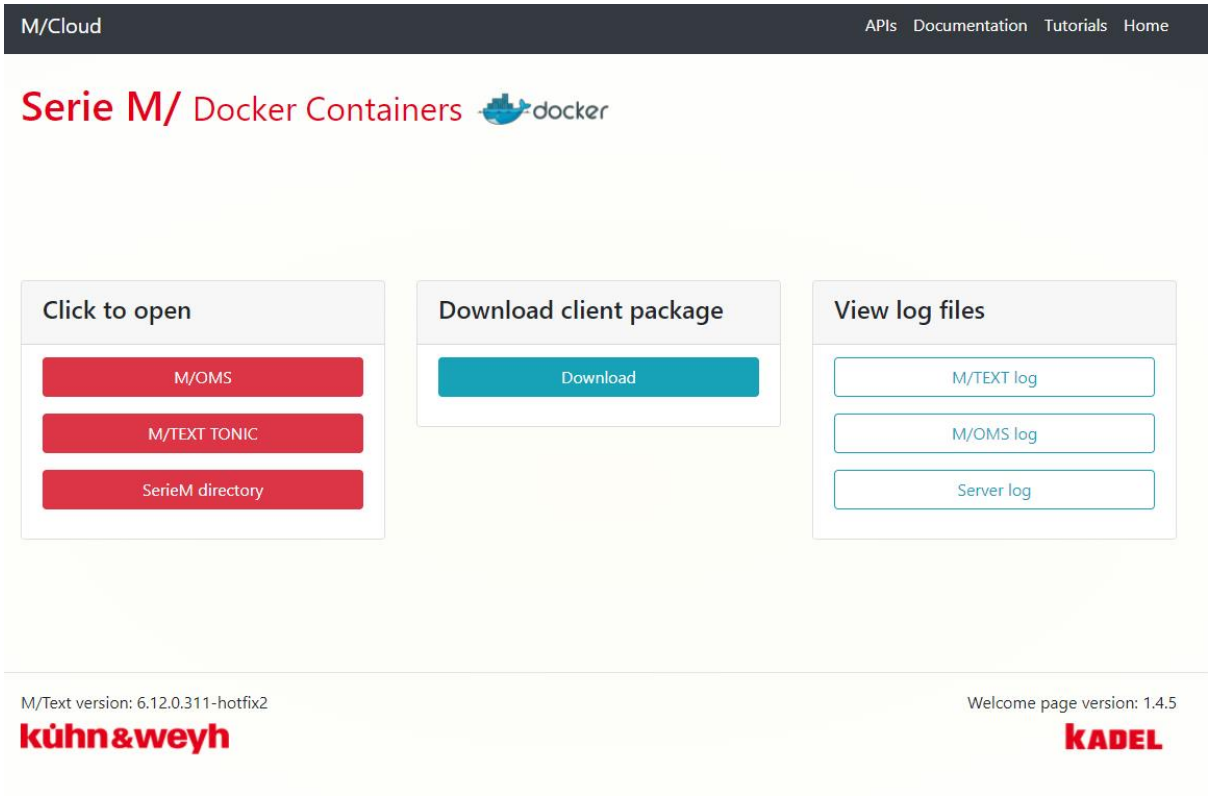
Example of starting the server with external Postgres database and external team support storage on OpenShift as cluster with separately scalable pods for M/TEXT and M/OMS:

```
helm upgrade --install myname kwsoft/seriem-cluster --namespace mynamespace --
create-namespace --set general.hosDomain=mydomain.com --set
imageCredentials.username=myuser --set imageCredentials.password=mypassword --
set imageCredentials.email=myemail --set general.createPostgresPod="" --set
general.createSVNPod="" --set
wildfly.database.connectionUrl=jdbc:postgresql://mydbserver:5432/mydatabase --
set wildfly.database.userName=mydbuser --set
wildfly.database.password=mydbpassword --set mtext.maxReplicas=2 --set
moms.maxReplicas=1 --set general.volumeSize="10Gi" --set-string
general.fsGroup=""
```

3.5 Welcome page

The Welcome page is automatically deployed after the start of the server instance. This page serves as a crossroad and is available in the root of the domain.

For example: *http://localhost:8080/*.



In the left part are links to running services M/OMS Cockpit, M/TEXT TONIC, directory listing on server, SVN or GIT.

In the middle of the page the download of the client package. It contains client-side tools and application. Such as M/Workbench, JEDI client, client jars and the tool for user synchronization.

And in the right part are the three available main log files: M/Text log, M/OMS log and server log. They are usually located on the server at: /home/seriem/server/log

4 Appendix 1 - Environment Variables

4.1 kwsoft/wildfly16

ENV variable	Default value	Description (options)
EXTERNAL_HOST_NAME	127.0.0.1	JMS connection endpoint (docker host HOSTNAME)
EXTERNAL_HOST_PORT	8080	JMS connection endpoint port (docker host PORT)
JBOSS_CONFIG	standalone-full.xml	Wildfly server configuration (standalone-full.xml, standalone-full-ha.xml)
DRIVER_CLASS	postgresql	DB type (postgresql, oracle, db2, mssql)
CONNECTION_URL	jdbc:postgresql://db:5432/mtext	DB connection URL
USER_NAME	postgres	DB username
PASSWORD	postgres	DB password
DB_SCHEMA	mtext	DB schema used in server.ini
MTEXT_HOME	/home/seriem	Seriem home folder / CSHome
SERVER_INI	/home/seriem/ini/server.ini	Seriem configuration file / server.ini
ANOTHER_JAVA_OPTS	-	other JAVA OPTS if needed - agentlib:jdwp=transport=dt_socket,address=8787,server=y,suspend=y
WAIT_TIME	0	delay wildfly start if needed on slow machines
WS_HOST_NAME	localhost	DNS name of the server (example.eu)
WS_HOST_PORT	8080	Port to reach the deployment from outside the container
WS_HTTP_PROTOCOL	http	http / https
WS_HTTPS_PORT	443	Port for HTTPS protocols
CLUSTER_LABELS		Kubeping - labels for cluster members selection
CLUSTER_NAMESPACE		Kubeping - Namespace of the cluster
WEB_ACCESSED_DIR	/home/seriem/server	folder accessible under myserver/output
SHARED_DEPLOYMENTS_FOLDER	/opt/jboss/wildfly/standalone/deployments-shared/	EAR folder for cluster for cluster deployment

4.2 kwsoft/seriem612

ENV variable	Default value	Description (options)
ADMIN_TOOLS	false	delete admin and DDL
DAEMON_CLIENT	true	prepare daemon client
EXTERNAL_HOST_NAME	localhost	server name (docker host HOSTNAME)
EXTERNAL_HOST_PORT	8080	server port (docker host PORT)
WS_ONLY	true	Webservice only

4.3 kwsoft/seriem613

ENV variable	Default value	Description (options)
ADMIN_TOOLS	false	delete admin and DDL
DAEMON_CLIENT	true	prepare daemon client
EXTERNAL_HOST_NAME	localhost	server name (docker host HOSTNAME)
EXTERNAL_HOST_PORT	8080	server port (docker host PORT)
WS_ONLY	true	Webservice only
MTEXT_ONLY	false	Only M/Text will be deployed

4.4 kwsoft/postgres

ENV variable	Default value	Description (options)
SERVER_NAME	-	domain of the new server
SERVER_DESC	-	description of the new server
REPOSITORY_URL	-	url of repository

5 Appendix 2 - volumeMounts

5.1 kwsoft/seriem612

mountPath	subPath	description
/deployments	<volume-name>/deployments	Deployment's folder of Wildfly.
/clients	<volume-name>/clients	Contains clients.zip with M/Workbench, Client jars, etc..
/postgres-init	<volume-name>/postgres-init	Contains database ddl scripts, which will be executed at postgres image start.
/seriem	<volume-name>/seriem-home	Contains files like server.ini and M/Spell dictionaries.
/mtext-init	<volume-name>/mtext-init	This folder provides the possibility to inject customer specific parts into the product. The content of client (resp. ear) subfolder will be included in clients.zip (resp. seriem.ear). For example, if you need to deploy moms extension jar, it is enough to put the jar into /mtext-init/ear/lib folder. The content of the subfolder deployment will be copied to wildfly/standalone/deployments directory "as it is".

5.2 kwsoft/wildfly16

mountPath	subPath	description
/opt/jboss/iwldfly/standalone/configuration	<volume-name>/jboss-config	Saves all configuration files of jboss installation. In a Linux standard installation is this volume mapped to /opt/jboss/wildfly/standalone/configuration.
/home/seriem	<volume-name>/seriem-home	Contains files like server.ini and M/Spell dictionaries.
/opt/jboss/wildfly/standalone/deployments	<volume-name>/deployments	Deployments folder of Wildfly
/home/clients	<volume-name>/clients	Contains clients.zip with M/Workbench, JEDI client, client jars and tool for user synchronization
/opt/jboss/wildfly/standalone/configuration	<volume-name>/jboss-config	Wildfly configuration files
/opt/jboss/wildfly/standalone/log	<volume-name>/jboss-log	Wildfly log files
/home/mtext-init	<volume-name>/mtext-init	This folder provides the possibility to inject customer specific parts into product. The content of client (resp. ear) subfolder will be included in clients.zip (resp. seriem.ear). For example, if you need to deploy moms extension jar, it is enough to put the jar into /mtext-init/ear/lib folder. The content of the

		subfolder deployment will be copied to wildfly/standalone/deployments directory "as it is".

5.3 kwsoft/svn

mountPath	subPath	description
/var/opt/svn/	<volume-name>/svn-data	SVN data folder
/etc/subversion	<volume-name>/svn-config	SVN configuration folder

5.4 kwsoft/git

mountPath	subPath	description
/var/lib/git	<volume-name>/git-data	GIT data folder

5.5 kwsoft/postgres

mountPath	subPath	description
/var/lib/postgresql/data	<volume-name>/postgres-data	This location keeps a database data. In a Linux installation this volume is mapped to */var/lib/postgresql/data/*
/docker-entrypoint-initdb.d	<volume-name>/postgres-init	Contains SQL scripts for the initialization or updating of the database.

6 Appendix 3 – Full example of docker-compose.yaml

Example configuration of docker-compose.yaml. It contains:

- Wildlfy with product, exposed on port 8080
- Postgres database exposed on port 5432
- SVN exposed on port 80

```
# Docker M/Express - Docker Compose
#
# Volumes folder is created next to this file, which contains mapped
# dockervolumes
# Welcome page is reachable at http://localhost:8080/
#
#  user rights must be changed manually on linux machines
#
#  cd volumes
#  chown -R 1000:0 clients/ deployments/ jboss-config/ mtext-init/ seriem-
home/
#  docker-compose down and up
version: '3'
services:
    seriem:  # Container is used for volumes initialization only - exits immed
iately.
        image: registry.kwsoft.cloud/kwsoft/seriem612:311-hotfix2
        entrypoint: /home/volumes_init.sh
        environment:
        - EXTERNAL_HOST_NAME=localhost
        - EXTERNAL_HOST_PORT=8080
        - DEFAULT_WORKSPACE=false
        - WS_ONLY=false
        volumes:
        - "./volumes/clients:/clients:rw"
        - "./volumes/deployments:/deployments:rw"
        - "./volumes/seriem-home:/seriem:rw"
        - "postgres-init:/home/postgres_init:rw"
        - "./volumes/mtext-init:/mtext-init:rw"
    wildfly-
init: # Container is used for initialization of wildfly configuration - exits
immediately.
        image: registry.kwsoft.cloud/kwsoft/wildfly16_init:2
        volumes:
        - "./volumes/jboss-config:/configuration"
    postgres: # Database container
        image: registry.kwsoft.cloud/kwsoft/postgres
        ports:
        - "5432"
        volumes:
        - "postgres-init:/docker-entrypoint-initdb.d"
```

```
        - "./volumes/postgres-data:/var/lib/postgresql/data/"
        depends_on:
        - seriem
        environment:
        - SERVER_NAME="localhost"
        - SERVER_DESC="SerieM docker-compose server"
        - REPOSITORY_URL="http://svn/svn/seriem"
    svn: # SVN container
        image: registry.kwsoft.cloud/kwsoft/svnserver:1
        ports:
        - "80:80"
        volumes:
        - "./volumes/svn-data:/var/opt/svn/"
        - "./volumes/svn-config:/etc/subversion/"
        depends_on:
        - postgres
    wildfly: # Application server container
        image: registry.kwsoft.cloud/kwsoft/wildfly16:4
        ports:
        - "8080:8080"
        - "8787:8787"
        - "9990"
        environment:
        - EXTERNAL_HOST_NAME=localhost
        - EXTERNAL_HOST_PORT=8080
        - DB_SCHEMA=mtext
        links:
        - postgres:db
        - svn:svn
        volumes:
        - "./volumes/deployments:/opt/jboss/wildfly/standalone/deployments/"
        - "./volumes/seriem-home:/home/seriem"
        - "./volumes/jboss-
config:/opt/jboss/wildfly/standalone/configuration/"
        - "./volumes/clients:/home/clients/"
        - "./volumes/mtext-init:/home/mtext-init"
        depends_on:
        - postgres
        - seriem
        - wildfly-init
volumes:
    postgres-data: # Database data
    postgres-init: # Initialization SQL scripts for database
    deployments: # Deployments folder of an application server
    seriem-home: # Serie/M home folder
    jboss-config: # JBoss folder configuration
    clients: # Contains archive with preconfigurated client environment
    svn-data: # SVN data folder
```

```
  svn-config: # SVN configuration folder
  mtext-init: # Folder for custom changes of deployment and client archive
```

7 Appendix 4 – Full example of Kubernetes pod yaml definition

Example configuration of Kubernetes resources. It contains:

- Wildlfy with product, exposed on https://example.eu/
- Postgres database exposed on port 5432 only for internal purposes (wildfly access)
- SVN exposed on port https://example.eu/svn

```
# Docker M/Express - Kubernetes
#
# Volumes are defines as Amazon EBS volumes.
# Welcome page is reachable at https://example.eu/
kind: Service
apiVersion: v1
metadata:
  name: dmeexample
  namespace: seriem
  labels:
    app.kubernetes.io/name: dme
    app.kubernetes.io/instance: example
    app.kubernetes.io/createdby: k8sadmin
spec:
  selector:
    app.kubernetes.io/name: dme
    app.kubernetes.io/instance: example
  ports:
  - name: http
    protocol: TCP
    port: 8080
    targetPort: http
  - name: jboss
    protocol: TCP
    port: 9990
    targetPort: jboss
  - name: svn
    protocol: TCP
    port: 80
    targetPort: svnhttp
  - name: debuging
    protocol: TCP
    port: 8787
    targetPort: debuging
  type: NodePort
---
kind: Ingress
apiVersion: extensions/v1beta1
metadata:
  name: dmeexample
  namespace: seriem
  labels:
```

```
    app.kubernetes.io/name: dme
    app.kubernetes.io/instance: example
    app.kubernetes.io/createdby: k8sadmin
  annotations:
    kubernetes.io/ingress.class: "nginx"
    nginx.ingress.kubernetes.io/force-ssl-redirect: "true"
    nginx.ingress.kubernetes.io/proxy-body-size: "200m"
    nginx.ingress.kubernetes.io/whitelist-source-
range: 0.0.0.0/0 #Any source IP address is allowed
    cert-manager.io/cluster-issuer: letsencrypt
spec:
  tls:
  - hosts:
    - example.eu
    secretName: dmeexample.eu
  rules:
  - host: example.eu
    http:
      paths:
      - path: /svn
        backend:
          serviceName: dmeexample
          servicePort: 80
      - path: /
        backend:
          serviceName: dmeexample
          servicePort: 8080
      - path: /console
        backend:
          serviceName: dmeexample
          servicePort: 9990
---
apiVersion: apps/v1
kind: Deployment
metadata:
  name: dmeexample
  namespace: seriem
  metadata:
  annotations:
    MTEXT_VERSION: MTEXTCS_6.12
  creationTimestamp: null
  labels:
    app.kubernetes.io/name: dme
    app.kubernetes.io/instance: example
    app.kubernetes.io/createdby: k8sadmin
spec:
  replicas: 1
  strategy:
```

```
    type: Recreate
  selector:
    matchLabels:
      app.kubernetes.io/name: dme
      app.kubernetes.io/instance: example
  template:
    metadata:
      creationTimestamp: null
      labels:
        app.kubernetes.io/name: dme
        app.kubernetes.io/instance: example
    spec:
      imagePullSecrets:
        - name: registry-omscloud-credentials
      initContainers:
      - name: wildfly-
init # Container is used for initialization of wildfly configuration - exits i
mmediately.
        image: registry.kwsoft.cloud/kwsoft/wildfly16_init:4
        imagePullPolicy: IfNotPresent
        command: ["/bin/sh"]
        args: ["-c", "/home/init.sh"]
        volumeMounts:
        - mountPath: /configuration
          name: ebsvolume
          subPath: dmeexample/jboss-config
      - name: seriem
        image: registry.kwsoft.cloud/kwsoft/seriem612:311-
hotfix2 # Container is used for volumes initialization only - exits immediatel
y.
        imagePullPolicy: IfNotPresent
        command: ["/bin/sh"]
        args: ["-c", "/home/volumes_init.sh"]
        env:
        - name: EXTERNAL_HOST_NAME
          value: example.eu
        - name: EXTERNAL_HOST_PORT
          value: "443"
        - name: DEFAULT_WORKSPACE
          value: "false"
        - name: WS_ONLY
          value: "true"
        volumeMounts:
        - mountPath: /deployments
          name: ebsvolume
          subPath: dmeexample/deployments
        - mountPath: /clients
          name: ebsvolume
```

```
        subPath: dmeexample/clients
      - mountPath: /postgres-init
        name: ebsvolume
        subPath: dmeexample/postgres-init
      - mountPath: /seriem
        name: ebsvolume
        subPath: dmeexample/seriem-home
      - mountPath: /mtext-init
        name: ebsvolume
        subPath: dmeexample/mtext-init
    containers:
    - name: postgres # Database container
      image: registry.kwsoft.cloud/kwsoft/postgres
      imagePullPolicy: IfNotPresent
      env:
      - name: SERVER_NAME
        value: example.eu
      - name: SERVER_DESC
        value: example.eu
      - name: REPOSITORY_URL
        value: svn://localhost/seriem
      readinessProbe:
        tcpSocket:
          port: 5432
        initialDelaySeconds: 30
        periodSeconds: 30
      resources:
        requests:
          memory: "50Mi"
        limits:
          memory: "1000Mi"
      ports:
      - containerPort: 5432
        name: postgres
        protocol: TCP
      volumeMounts:
      - mountPath: /var/lib/postgresql/data
        name: ebsvolume
        subPath: dmeexample/postgres-data
      - mountPath: /docker-entrypoint-initdb.d
        name: ebsvolume
        subPath: dmeexample/postgres-init
    - name: svn # SVN container
      image: registry.kwsoft.cloud/kwsoft/svnserver:1
      imagePullPolicy: IfNotPresent
      readinessProbe:
        httpGet:
          path: /svn/seriem
```

```
            port: 80
            httpHeaders: # Probe for checking health of SVN service. Http head
er contains Basic authentication token composed of name and password of SVN us
er(mtext:mtext)
              - name: Authorization
                value: Basic bXRleHQ6bXRleHQ=
          initialDelaySeconds: 15
          periodSeconds: 30
          timeoutSeconds: 4
        resources:
          requests:
            memory: "50Mi"
          limits:
            memory: "500Mi"
        ports:
        - containerPort: 3690
          name: svn
          protocol: TCP
        - containerPort: 80
          name: svnhttp
          protocol: TCP
        volumeMounts:
        - mountPath: /var/opt/svn/
          name: ebsvolume
          subPath: dmeexample/svn-data
        - mountPath: /etc/subversion/
          name: ebsvolume
          subPath: dmeexample/svn-config
      - name: wildfly # Application server container
        image: registry.kwsoft.cloud/kwsoft/wildfly16:4
        imagePullPolicy: IfNotPresent
        ports:
        - containerPort: 8080
          name: http
          protocol: TCP
        - containerPort: 8443
          name: https
          protocol: TCP
        - containerPort: 9990
          name: jboss
          protocol: TCP
        - containerPort: 8787
          name: debuging
          protocol: TCP
        env:
        - name: EXTERNAL_HOST_NAME
          value: example.eu
        - name: EXTERNAL_HOST_PORT
```

```
          value: "443"
        - name: DB_SCHEMA
          value: "mtext"
        - name: WS_HOST_NAME
          value: example.eu
        - name: WS_HTTP_PROTOCOL
          value: "https"
        - name: JBOSS_CONFIG
          value: "standalone-full.xml"
        - name: WEB_ACCESSED_DIR
          value: "/home/seriem/server/"
        - name: CONTENT_HUB_URL
          value: "http://localhost/svn/seriem"
        - name: ANOTHER_JAVA_OPTS
          value: "-XX:MaxMetaspaceSize=512m -Xmx3072m -
XX:NativeMemoryTracking=summary -XX:+PrintFlagsFinal -XX:+PrintFlagsFinal -
XX:MaxRAM=$(($(cat /sys/fs/cgroup/memory/memory.limit_in_bytes)*95/100)) -
agentlib:jdwp=transport=dt_socket,address=8787,server=y,suspend=n -
Djava.net.preferIPv4Stack=true"
        readinessProbe:
          httpGet:
            path: /mtext-integration-adapter/version-info
            port: 8080
          initialDelaySeconds: 20
          periodSeconds: 30
          timeoutSeconds: 4
        resources:
          requests:
            memory: "2048Mi"
          limits:
            memory: "4096Mi"
```

8 Appendix 5 – Helm Values

All possible values for the seriem helm chart and its default values.

```yaml
Images:
  Postgres: registry.kwsoft.cloud/kwsoft/postgres
  Seriem: registry.kwsoft.cloud/kwsoft/seriem612:404-hotfix3
  Svn: registry.kwsoft.cloud/kwsoft/svnserver:2
  Wildfly: registry.kwsoft.cloud/kwsoft/wildfly16:9
  WildflyInit: registry.kwsoft.cloud/kwsoft/wildfly16_init:7
  imagePullPolicy: IfNotPresent
general:
  FSGroup: 0
  createIngress: "true"
  createPostgresPod: "true"
  createSVNPod: "true"
  externalHostPort: 443
  hostDomain: null
  imagePullSecrets: registry-omscloud-credentials
  storageClass: null
  volumeSize: 10Gi
  whitelistSourceRange: 0.0.0.0/0
imageCredentials:
  email: null
  password: null
  registry: registry.kwsoft.cloud
  username: null
postgres:
  limits:
    cpu: 8000m
    memory: 1000Mi
  requests:
    cpu: 100m
    memory: 50Mi
svn:
  limits:
    cpu: 8000m
    memory: 1000Mi
  requests:
```

```
    cpu: 100m
    memory: 50Mi
wildfly:
  WSProtocol: https
  database:
    connectionUrl: ""
    driverClass: postgresql
    password: postgres
    schema: mtext
    userName: postgres
  jbossConfig: standalone-full.xml
  jvm:
    opts: -XX:MaxMetaspaceSize=512m -Xmx3072m -XX:NativeMemoryTracking=summary
-XX:+PrintFlagsFinal
      -XX:+PrintFlagsFinal -XX:MaxRAM=$(($(cat
/sys/fs/cgroup/memory/memory.limit_in_bytes)*95/100))
  limits:
    cpu: 8000m
    memory: 4096Mi
  requests:
    cpu: 1000m
    memory: 2048Mi
  svnUrl: http://localhost/svn/seriem
```