Set up mysql database:

It's better to start with an mysql instance blank with no databases or users other than the system default.

Step 1: Modify the configuration file my.cnf of mysql by adding (or uncomment) the following lines:
    check_proxy_users=ON
    mysql_native_password_proxy_users=ON
    sha256_password_proxy_users=ON

Step 2: Create default roles for romenext by running the script
                                "mysql_create_romenext_default_users.sql".

Step 3: Dump the romenext database by running the script
                                "mysql_romenextdb_dump.sql".

Step 4: Create some users for romenext webgui portal (the users created in the script can login the webgui portal) by running the script "mysql_create_romenext_webgui_users.sql".

Comments:
You need to make sure proxy users are set up correctly to login webgui portal otherwise you will see the "wrong credentials" error in login. To verify you set up mysql successfully, login the mysql instance using username = proxyuser1 and password = user1.
In the mysql CLI, type the following command:
                        select user(),@@proxy_user,current_user();
You should expect proxy_user to be 'proxyuser1'@'%' and current_user() to be ROMENEXTPROXY@'%'.

user()	@@proxy_user	current_user()
proxyuser1@192.168.1.41	'proxyuser1'@'%'	ROMENEXTPROXY@%

If you are seeing same values for proxy_user and current_user(), there might be problem in the global setting. Make sure configurations in Step 1 take effect.

2. Set up Neo4j

Start with a blank neo4j instance.

Step 1: Install the correct version of APOC plugin and modify the configuration file by adding the following lines:
            apoc.uuid.enabled=true
            apoc.import.file.enabled=true

Step 2: Run these cypher commands to allow automatic generation of UUIDs

```
CREATE (:super);
CREATE CONSTRAINT ON (n:super) ASSERT n.sys_uuid IS UNIQUE;
CALL apoc.uuid.install('super', {addToExistingNodes: true, uuidProperty: 'sys_uuid'})
yield label, installed, properties, batchComputationResult;
```

(comments: Here, I am creating a common label for all nodes to allow unique constaint across multiple labels. For more clarifications please read the following two links
https://github.com/neo4j/neo4j/issues/7814
https://neo4j.com/docs/labs/apoc/3.5/graph-updates/uuid/#automatic-uuids)

3. Set up romenext app

For the instructions to install wildfly and set up admin users, please take a look at the following link:

https://www.youtube.com/watch?v=9jHzHKmHy8w

Step 1: After successful installation of wildfly, you should be able to start the server by using the command "standalone" in command prompt, but we will start the wildfly server using the command "standalone -b=0.0.0.0 -bmanagement=0.0.0.0" (this is to allow any ip address).

Step 2: Start Wildfly admin console by opening a incognito window and browse to http://youripaddress:8080/. Login the admin console using the credentials set up in Step 1 and upload the three war files els-romenext-rev2-api-SNAPSHOT.war, els-romenext-rev3-web-admin-portal-SNAPSHOT.war and els-romenext-rev3-web-portal-SNAPSH OT.war in deployments (you can find the war files in the corresponding target folders after the build).

Step 3: Set up users (those who can use the webgui portal) @ the URL http://youripaddress:8080/admin. Please take a look at this video on how to use the admin portal and the webgui portal. You might fast forward 5 minutes to pass the docker part: https://www.youtube.com/watch?v=ak63NhfYVXg

Comments:
If you encounter "Failed To Load Links" error after login the webgui portal, this might be that the ip address of the api doesn't match the ip address you use to open the webgui portal. For example, if you use the url: 192.168.1.41:8080/webguiportal to open the webgui portal and the ip address of the api built in the war is 172.17.0.2:8080/api. Follow these steps to solve the problem:
1. Modify the variable " apiBaseUrl" in the file els-romenext-rev3-web-portal/src/main/webapp/jsp/header/javascriptHeaders.jsp to http://youripaddress:8080/api/.
2. Rebuild the war files (Please see "Instructions to build war files with eclipse.pdf") and replace the war files in wildfly deployments.