**MoDaC Deployment Steps**

1. **First Step: Build the war file on the DME server:**

The build is done on DME server instead of MoDaC server since all the DME dependency jars exist on this server. Instead of installing them again on MoDaC server, decided to do the build here. We plan to transition the build to the MoDaC server in future.

* Login into DME dev server (ssh  [fsdsgl-dmeap01d.ncifcrf.gov](http://fsdsgl-dmeap01d.ncifcrf.gov/)).
* Do *sudo su - ncif-hpcdm-svc*
* Go to the directory /opt/nci-doe/nci-doe-data-sharing/
* Do a git pull and switch to the branch needed using the following commands:
* git pull
* git stash (this is done before checking out the new branch to reset any uncommitted changes done on the branch)
* git checkout <branch\_name>
* Example: git checkout v2.3

* Add all the service account, database, google captcha, google client, and secret key passwords (all the properties which says <Configure\_me>) in the config files which are located under the path: /opt/nci-doe/nci-doe-data-sharing/src/main/resources/appconfigs

* + - For DEV: add the passwords in dev-env.conf file
    - For UAT: add the passwords in preprod-env.conf file
    - For PROD: add the passwords in prod-env.conf file
  + The config files back up along with passwords are in the home directory for ncif-hpcdm-svc: /home/NCIF-HPCDM-SVC.
* Do either one depending on the environment.
  + - For DEV: mvn clean install -DskipTests -Pdev
    - For UAT: mvn clean install -DskipTests -Ppreprod
    - For PROD: mvn clean install -DskipTests -Pprod
* Copy the war file to the MoDaC server.
* **For DEV server:**

scp /opt/nci-doe/nci-doe-data-sharing/target/<war\_file> [<user\_name>@fsdsgl-modac01d.ncifcrf.gov:/home/<user\_name>](mailto:gantam2@fsdsgl-modac01p.ncifcrf.gov:/home/gantam2)

* **For UAT server:**

scp /opt/nci-doe/nci-doe-data-sharing/target/<war\_file> [<user\_name>@fsdsgl-modac01t.ncifcrf.gov:/home/<user\_name>](mailto:gantam2@fsdsgl-modac01p.ncifcrf.gov:/home/gantam2)

* **For PROD server:**

scp /opt/nci-doe/nci-doe-data-sharing/target/<war\_file>

[<user\_name>@fsdsgl-modac01p.ncifcrf.gov:/home/<user\_name>](mailto:gantam2@fsdsgl-modac01p.ncifcrf.gov:/home/gantam2)

1. **Second step: Deployment on MoDaC server**:

* ssh to the appropriate MoDaC server:
* MoDaC DEV server: ssh fsdsgl-modac01d.ncifcrf.gov
* MoDaC UAT server: ssh fsdsgl-modac01t.ncifcrf.gov
* MoDaC PROD server: ssh fsdsgl-modac01p.ncifcrf.gov
* Stop tomcat using the command: *sudo systemctl stop tomcat.*
* Change the permissions of the war file using the commands:

chmod 777 <war\_file>

* Move the war file to webapps folder using the command:

sudo mv <war\_file> /usr/share/tomcat/webapps

* Change the server.xml file (located under the path: **/usr/share/tomcat/conf/)**  for the following line. (This step is done as a workaround for schedulers running twice).
* Do sudo su
* Go to the directory **/usr/share/tomcat/conf/**
* In the following line, change **autoDeploy** to true and **deployOnStartUp** to true.

   <Host name="localhost" appBase="webapps"

unpackWARs="true" deployOnStartup=”true" autoDeploy="true">

* Do this step only when doing a first time build for a new branch. Else, skip this step.
* Make sure you are under root user mode, else do “sudo su”.
* Go to the directory **/usr/share/tomcat/conf/** and edit the server.xml file for the following line:

<Context path="" docBase="web-doe-<war\_file\_version>" privileged="true"/>

* Go to directory **/usr/share/tomcat/webapps/**:
  + - Do this step only when doing a first time build for a new branch. Else, skip this step.
* Remove the old war file and directory using the command:

rm web-doe-<old\_war\_file\_version>.war

rm -rf web-doe-<old\_war\_file\_version>/

* + - Add service account group permissions to the war file using the following commands:
* On DEV and UAT:
* *chgrp ncidoesvct2 <war\_file.war>*
* *sudo chown ncidoesvct2 <war\_file.war>*
* On Prod:
* *chgrp ncidoesvcp2 <war\_file.war>*
* *sudo chown ncidoesvcp2 <war\_file.war>*
* Type “exit” (to get out of root user mode) and start tomcat using the command:

*sudo systemctl start tomcat*

* Once the app is started and the war file gets expanded in the webapps directory, go to the directory **/usr/share/tomcat/conf/** and change the server.xml file for the following line. (This step is done as a workaround for schedulers running twice).
  + Do sudo su
  + In the following line, change **autoDeploy** to false and **deployOnStartUp** to false.

   <Host name="localhost" appBase="webapps"

unpackWARs="true" deployOnStartup=”false" autoDeploy="false">

* Type “exit” (to get out of root user mode) and restart the server using the command:

*sudo systemctl restart tomcat*

* Access the app by using the appropriate URL on the browser:
* DEV: <https://fsdsgl-modac01d.ncifcrf.gov/>
* UAT: <https://fsdsgl-modac01t.ncifcrf.gov/>
* PROD: https://modac.cancer.gov/

**To access Tomcat logs:**

* Login into MoDaC server.
* Do “sudo su”.
* Go to the path: /usr/share/tomcat/logs/
* Access the tomcat logs in the file catalina.out (located under the path: /usr/share/tomcat/logs/)

**To access gunicorn logs:**

* Login into MoDaC server.
* Do “sudo su”.
* Go to the path: /var/log
* Access the logs in the file messages (located under the path /var/log).

**Tomcat and gunicorn commands:**

* To start tomcat: sudo systemctl start tomcat
* To stop tomcat: sudo systemctl stop tomcat
* To restart tomcat: sudo systemctl restart tomcat
* To start gunicorn: sudo systemctl start gunicorn
* To stop gunicorn: sudo systemctl stop gunicorn
* To restart gunicorn: sudo systemctl restart gunicorn

**Steps for changing the backend server:**

* Login into DME dev server (ssh  [fsdsgl-dmeap01d.ncifcrf.gov](http://fsdsgl-dmeap01d.ncifcrf.gov/)).
* Do *sudo su - ncif-hpcdm-svc*
* Go to the path: /opt/nci-doe/nci-doe-data-sharing/src/main/resources/appconfigs
* Depending on which environment needs to be changed, do the following:
  + - For DEV: change the property in dev-env.conf file
    - For UAT: change the property in preprod-env.conf file
    - For PROD: change the property in prod-env.conf file
* Do the maven build and copy the war file to MoDaC servers as mentioned in the steps above.
* Do the deployment on MoDaC servers as mentioned in Step 2.

**Steps for adding the maintenance message:**

* Login to MoDaC prod server (ssh fsdsgl-modac01p.ncifcrf.gov)
* Do “sudo su”.
* Go to the path: /usr/share/tomcat/webapps/web-doe-<version>/WEB-INF/classes
* Edit the application.properties file located at this path.
* Change the property “doe.downtime.message” and add the appropiate timings for the maintenance.
* Save the file
* Type “exit” to get out of root user mode
* Restart tomcat using “sudo systemctl restart tomcat”