



APRIL 14, 2023

DevOps Classroomnotes 14/Apr/2023

Fixing issue with startup of .net application

- [Refer Here](#) for the Dockerfile

- [Refer Here](#) the document to host the .net application on 0.0.0.0

Setting Environment Variables in the container

- ENV instruction [Refer Here](#)
- This instruction adds environmental variable in the container and it also allows us to change environmental variables while creating containers
- [Refer Here](#) for the changes done to include environmental variables
- docker container exec will allow us to execute commands in the container

```
[node1] (local) root@192.168.0.8 ~/nop
$ docker container exec nop1 printenv
PATH=/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin
HOSTNAME=c30b870756f5
ASPNETCORE_URLS=http://0.0.0.0:5000
DOTNET_RUNNING_IN_CONTAINER=true
DOTNET_VERSION=7.0.5
ASPNET_VERSION=7.0.5
DOTNET_GENERATE_ASPNET_CERTIFICATE=false
DOTNET_NOLOGO=true
DOTNET_SDK_VERSION=7.0.203
DOTNET_USE_POLLING_FILE_WATCHER=true
NUGET_XMLDOC_MODE=skip
POWERSHELL_DISTRIBUTION_CHANNEL=PSDocker-DotnetSDK-Debian-11
HOME=/root
[node1] (local) root@192.168.0.8 ~/nop
$
```

- `docker container exec -it <c-name> <shell>` will allow us to login into container

```
[node1] (local) root@192.168.0.8 ~/nop
$ docker container exec -it nop1 /bin/bash
root@c30b870756f5:/nop# printenv
NUGET_XMLDOC_MODE=skip
HOSTNAME=c30b870756f5
DOTNET_VERSION=7.0.5
ASPNETCORE_URLS=http://0.0.0.0:5000
PWD=/nop
POWERSHELL_DISTRIBUTION_CHANNEL=PSDocker-DotnetSDK-Debian-11
HOME=/root
DOTNET_SDK_VERSION=7.0.203
TERM=xterm
DOTNET_GENERATE_ASPNET_CERTIFICATE=false
SHLVL=1
ASPNET_VERSION=7.0.5
DOTNET_NOLOGO=true
DOTNET_RUNNING_IN_CONTAINER=true
DOTNET_USE_POLLING_FILE_WATCHER=true
PATH=/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin
_=/usr/bin/printenv
root@c30b870756f5:/nop# echo $ASPNETCORE_URLS
http://0.0.0.0:5000
root@c30b870756f5:/nop#
```

- ARG instruction allows us to set the values while building the image [Refer Here](#)
- [Refer Here](#) for the BUILD ARGS added
- Build args can be set while creating images. BUILD ARG can be used by using `${ARG_NAME}`.
- We have build two images by changing the HOME_DIR and DOWNLOAD_URL Build args

```
docker image build --build-arg DOWNLOAD_URL=nopCommerce_4.60.2_NoSource_linux_x64.zip -t
docker image build --build-arg HOME_DIR=/publish -t nop:1.0.0 .
```

- USER: [Refer Here](#)
- [Refer Here](#) for the changes done to add a non root user to run the nop commerce application.

```
[node1] (local) root@192.168.0.8 ~/nop
$ docker container run -d -P --name nop2 nop:2.0.0
ffa68cd49148735b7867d81ec4110fb13e7bbc1598e29262025400e328d43e0a
[node1] (local) root@192.168.0.8 ~/nop
$ docker container ls
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS
RTS
ffa68cd49148   nop:2.0.0      "dotnet Nop.Web.dll"     4 seconds ago   Up 3 seconds   0.0.0.0:49159->5000/tcp
0.0.0.0:49159->5000/tcp
fba67e1ce6fd   jenkins/jenkins  "/usr/bin/tini -- /u..." 14 minutes ago   Up 14 minutes   0.0.0.0:49158->8080/tcp, 0.0.0.0:49157->50000/tcp
faa86cfa2047   nop:1.0.2      "dotnet Nop.Web.dll"     19 minutes ago   Up 19 minutes   0.0.0.0:49156->5000/tcp
[node1] (local) root@192.168.0.8 ~/nop
$ docker container exec nop2 whoami
nopcommerce
[node1] (local) root@192.168.0.8 ~/nop
$
```

Exercise:

- Gameof life application:
 - This requires java 8
 - this requires tomcat 8 or 9
 - copy the gameoflife.war application into webapps folder of tomcat [Refer Here](#)
 - This runs on port 8080

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