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To run this project, we need the docker environment.

First, we go to folder Project2/JunglePath/

**Then we build all the java files using command:**  
docker build -t javaapptest .

**Then we can create node network like:**  
docker network create --subnet=172.18.0.0/16 nodenet

we reserve id = 108, IPv4 = 172.18.0.10 for the cloud.  
The cloud and all the cameras listen on port 63001.

**To start the cloud(this will put the cloud in a container of 'nodenet' with port 8080):**  
docker run -it -p 8080:8080 --cap-add=NET\_ADMIN --net nodenet --ip 172.18.0.10 javaapptest  
"108 172.18.0.10:63001"

**To start a camera in the same network as cloud in 'nodenet':**  
docker run -it -p 8081:8080 --cap-add=NET\_ADMIN --net nodenet --ip 172.18.0.22 javaapptest  
"2 172.18.0.10:63001"

docker run -it -p 8082:8080 --cap-add=NET\_ADMIN --net nodenet --ip 172.18.0.23 javaapptest  
"3 172.18.0.10:63001"

docker run -it -p 8083:8080 --cap-add=NET\_ADMIN --net nodenet --ip 172.18.0.24 javaapptest  
"4 172.18.0.10:63001"

**To start a camera in the different network from cloud in 'nodenet2'(172.19.0.0/16):**  
docker run -it -p 8084:8080 --cap-add=NET\_ADMIN --net nodenet2 --ip 172.19.0.24  
javaapptest "5 172.18.0.10:63001"

**Other commands:**  
See <https://github.com/ProfFryer/MulticastTestingEnvironment>