Experiment-10: Create FOG Topology in iFogSim

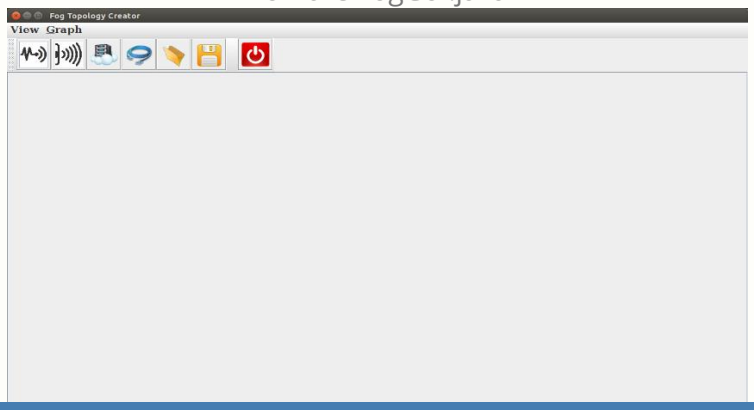
Objective: To create FOG Topology in iFogSim

Description

Topology contains the network layout for any given use-case that is to be simulated using the iFogSim. The format used for saving the layout is JSON based and is utilized by the simulation engine to define the infrastructure for the test simulation.

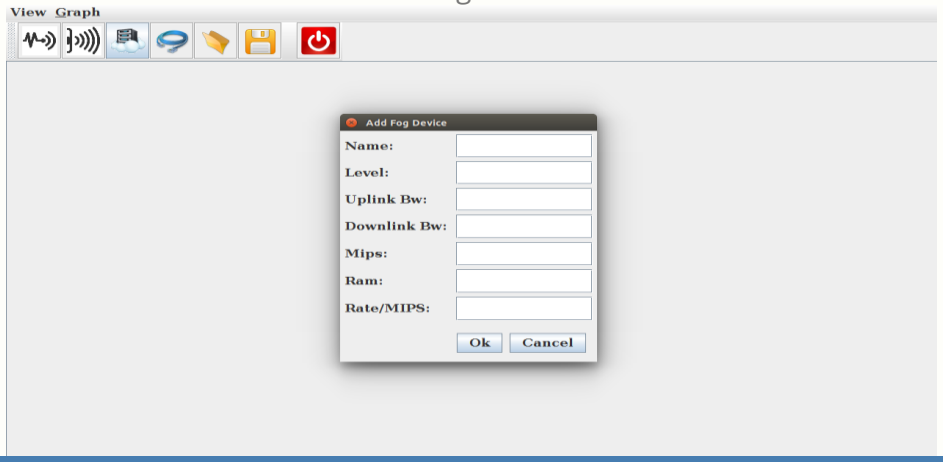
Step 1

Run the FogGui.java



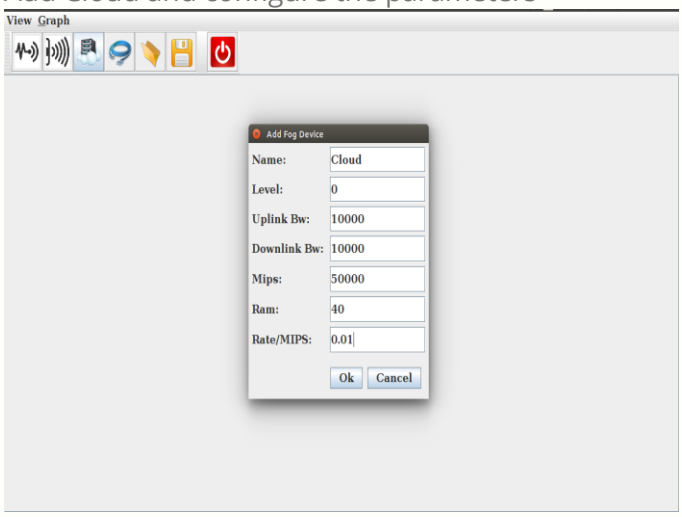
Step 2

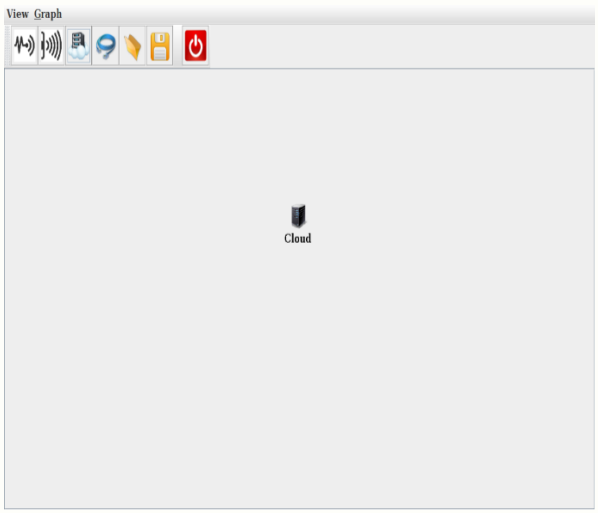
Add Fog Devices



Step 3

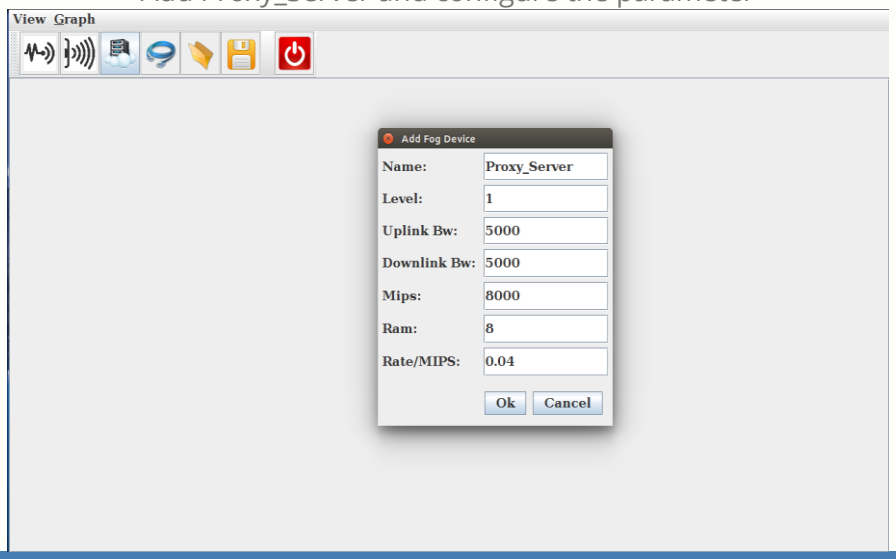
Add Cloud and configure the parameters





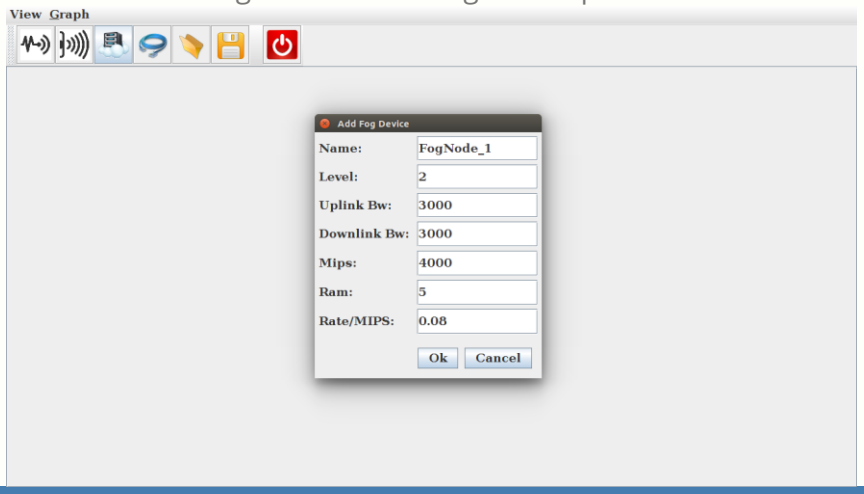
Step 4

Add Proxy_Server and configure the parameter



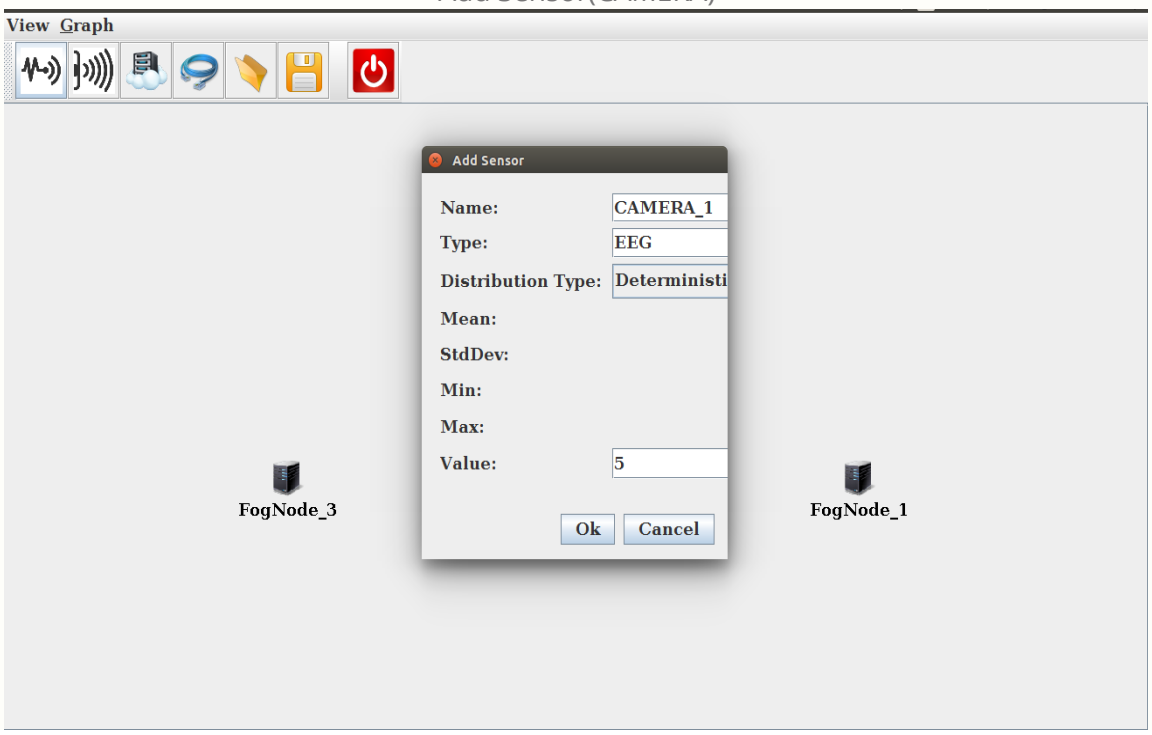
Step 5

Add FogNodes and configure the parameter



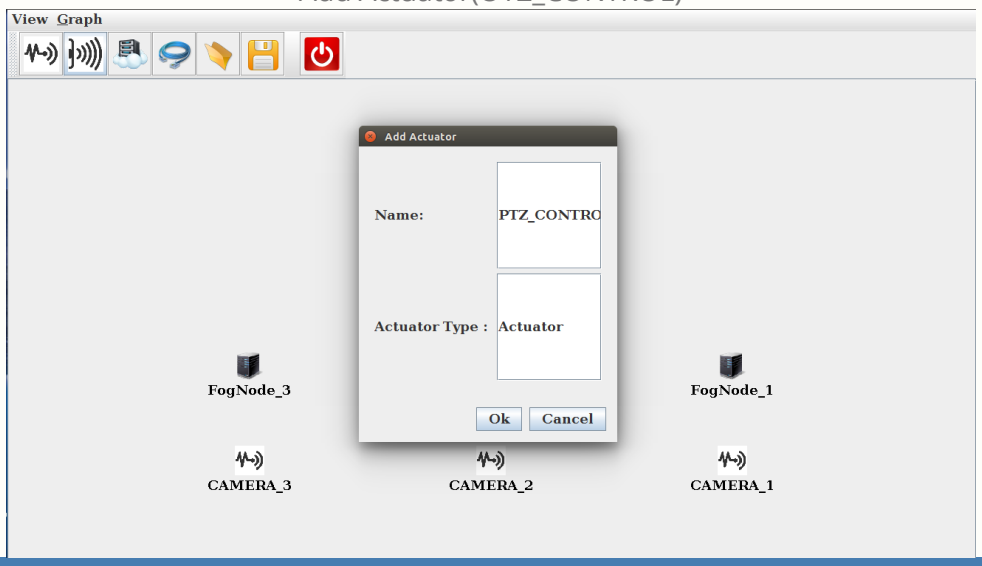
Step 6

Add Sensor(CAMERA)



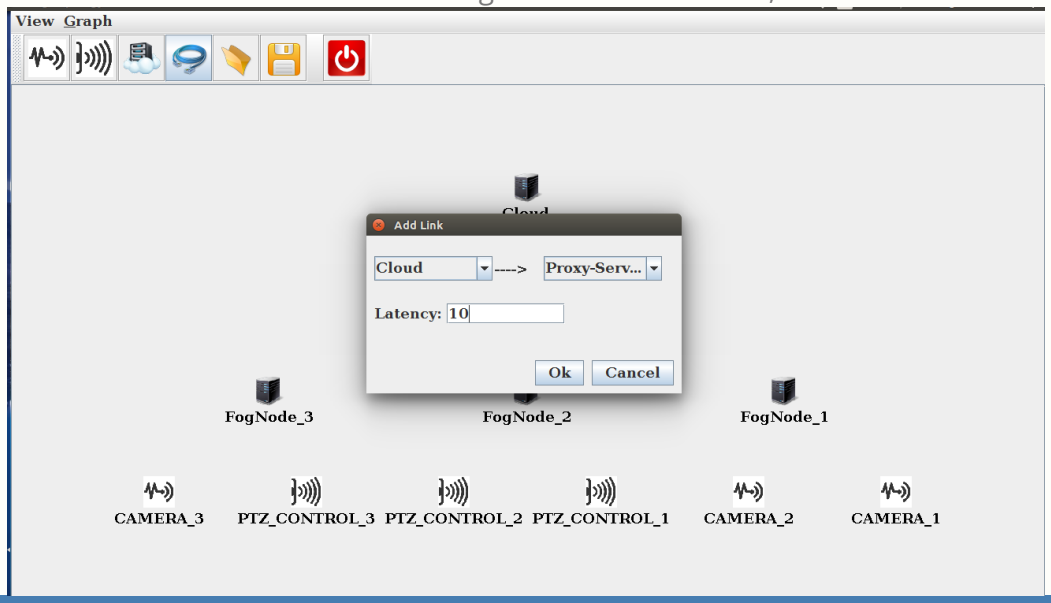
Step 7

Add Actuator(OTZ_CONTROL)

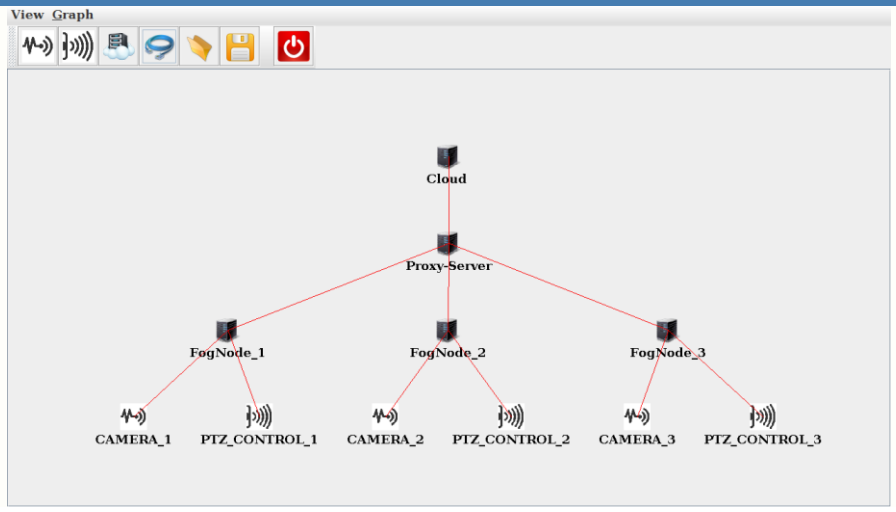


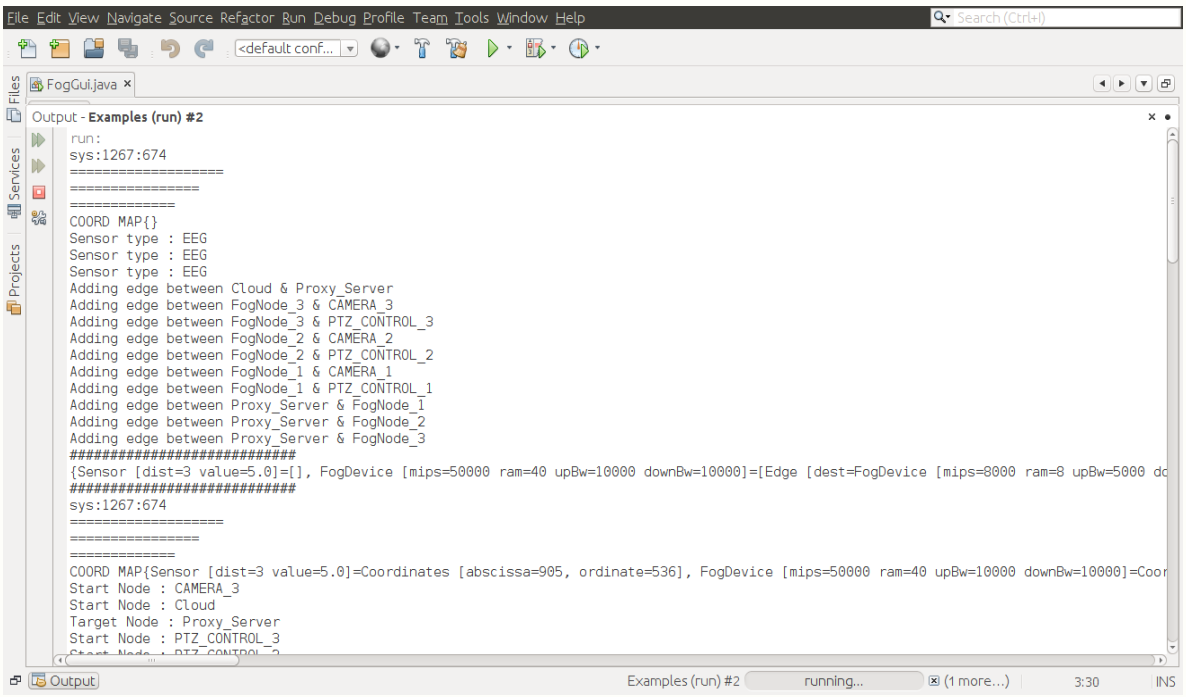
Step 8

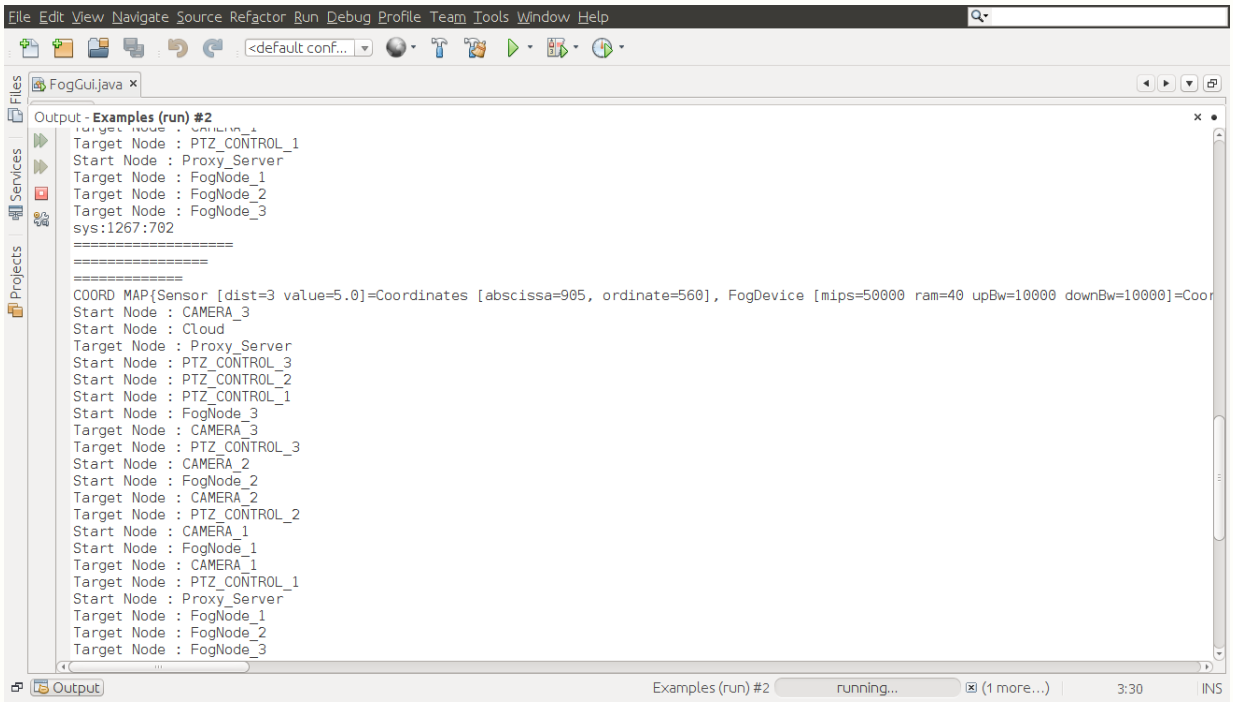
Add Link between the Fog Devices and Sensors, Actuator



Output




File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
Search (Ctrl+I)
<default conf...
FogGui.java
Output - Examples (run) #2
run:
sys:1267:674
==========
==========
==========
COORD MAP{}
Sensor type : EEG
Sensor type : EEG
Sensor type : EEG
Adding edge between Cloud & Proxy_Server
Adding edge between FogNode_3 & CAMERA_3
Adding edge between FogNode_3 & PTZ_CONTROL_3
Adding edge between FogNode_2 & CAMERA_2
Adding edge between FogNode_2 & PTZ_CONTROL_2
Adding edge between FogNode_1 & CAMERA_1
Adding edge between FogNode_1 & PTZ_CONTROL_1
Adding edge between Proxy_Server & FogNode_1
Adding edge between Proxy_Server & FogNode_2
Adding edge between Proxy_Server & FogNode_3
##########
{Sensor [dist=3 value=5.0]=[], FogDevice [mips=50000 ram=40 upBw=10000 downBw=10000]=[Edge [dest=FogDevice [mips=8000 ram=8 upBw=5000 do
##########
sys:1267:674
==========
==========
==========
COORD MAP{Sensor [dist=3 value=5.0]=Coordinates [abscissa=905, ordinate=536], FogDevice [mips=50000 ram=40 upBw=10000 downBw=10000]=Coor
Start Node : CAMERA_3
Start Node : Cloud
Target Node : Proxy_Server
Start Node : PTZ_CONTROL_3
Output
Examples (run) #2
running...
(1 more...)
3:30
INS


File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
<default conf...
FogGui.java
Output - Examples (run) #2
Target Node : PTZ_CONTROL_1
Start Node : Proxy_Server
Target Node : FogNode_1
Target Node : FogNode_2
Target Node : FogNode_3
sys:1267:702
==========
==========
==========
COORD MAP{Sensor [dist=3 value=5.0]=Coordinates [abscissa=905, ordinate=560], FogDevice [mips=50000 ram=40 upBw=10000 downBw=10000]=Coor
Start Node : CAMERA_3
Start Node : Cloud
Target Node : Proxy_Server
Start Node : PTZ_CONTROL_3
Start Node : PTZ_CONTROL_2
Start Node : PTZ_CONTROL_1
Start Node : FogNode_3
Target Node : CAMERA_3
Target Node : PTZ_CONTROL_3
Start Node : CAMERA_2
Start Node : FogNode_2
Target Node : CAMERA_2
Target Node : PTZ_CONTROL_2
Start Node : CAMERA_1
Start Node : FogNode_1
Target Node : CAMERA_1
Target Node : PTZ_CONTROL_1
Start Node : Proxy_Server
Target Node : FogNode_1
Target Node : FogNode_2
Target Node : FogNode_3
Output
Examples (run) #2
running...
(1 more...)
3:30
INS