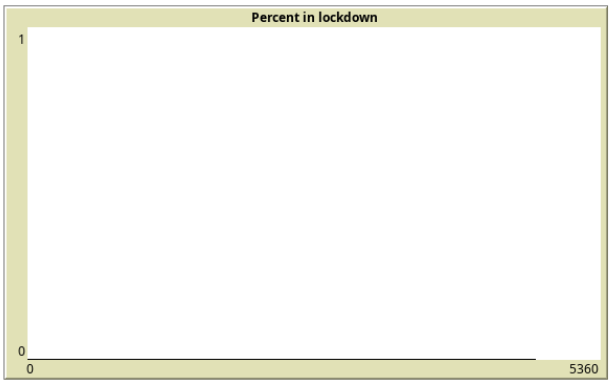
Understand the model. Explore baseline 1. Open the model and read the code. Create monitor with total demand of all users for previous day. The idea of power generation is to generate the same amount users are demanding. Create adjustment procedure, so power plant will produce the mean amount of demanded power for previous 5 days (each tick max-power should be equal to mean-day-demand / 24). Create plot: total demand per day of all users with days as x-axis steps

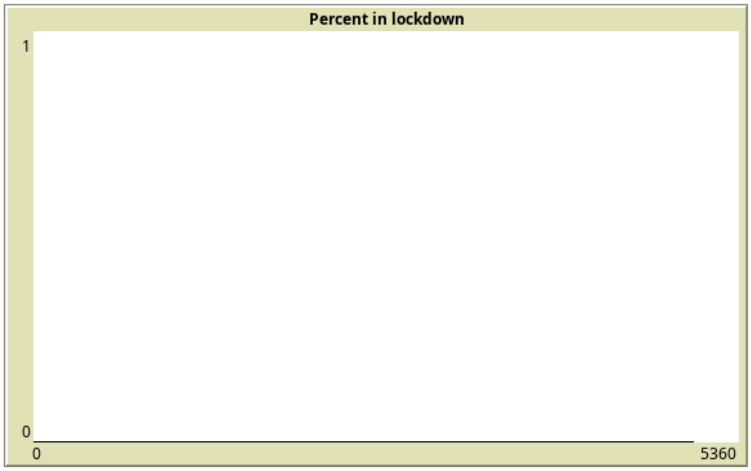
2. Consider network with 1 plant, 5 distribution stations and 100 users. For three implemented network types explore how productivity (number of satisfied users) will change with grow of demands. Set stations to maximum levels (generation-capacity should change with user demands grow). Find threshold when more then 10% users will face power shutdown.

1. Network: minimal

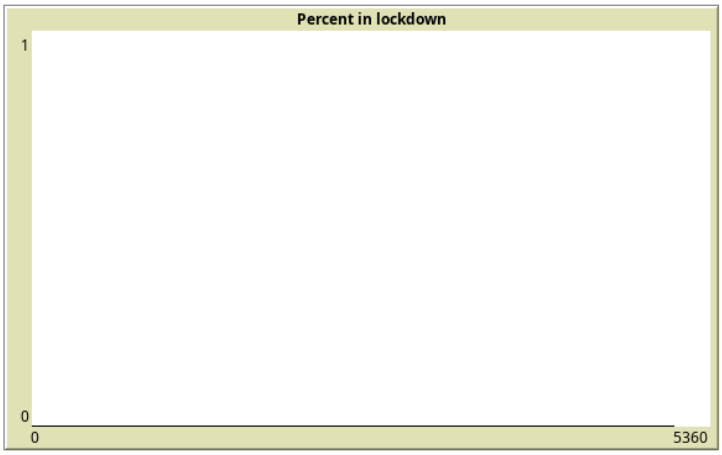
1)Max-demand-users = 0



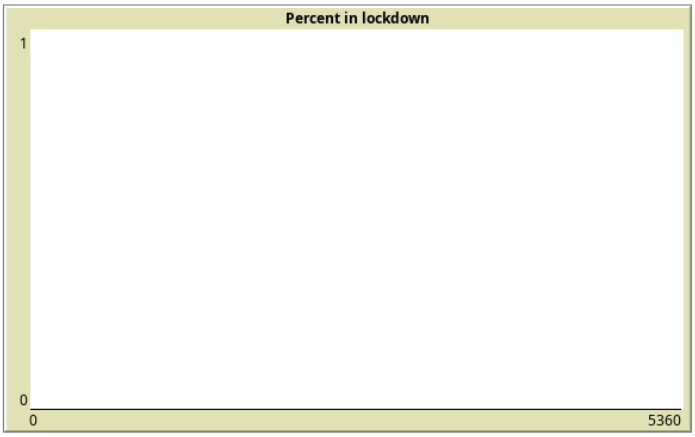

2)Max-demand-users = 0.1



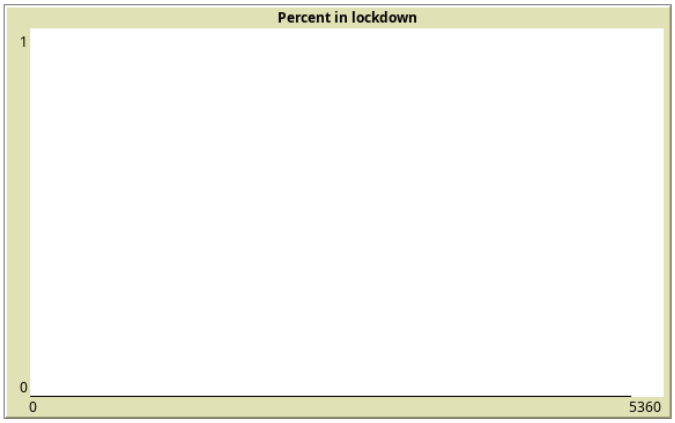
3)Max-demand-users = 0.2



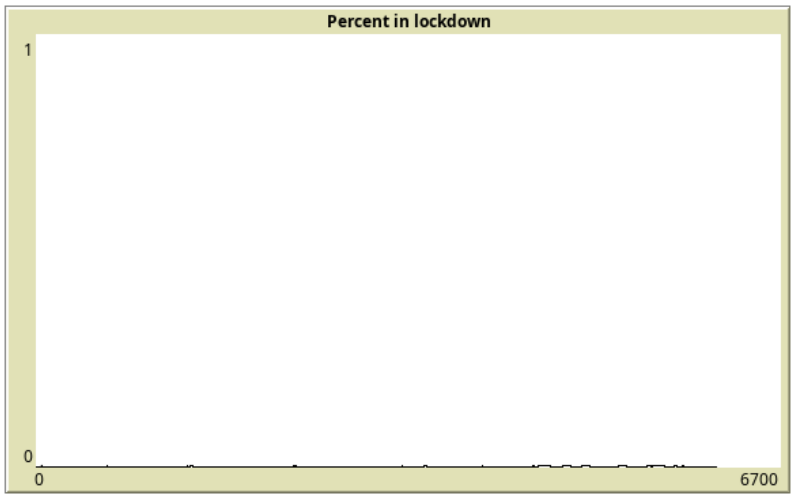

4)Max-demand-users = 0.3



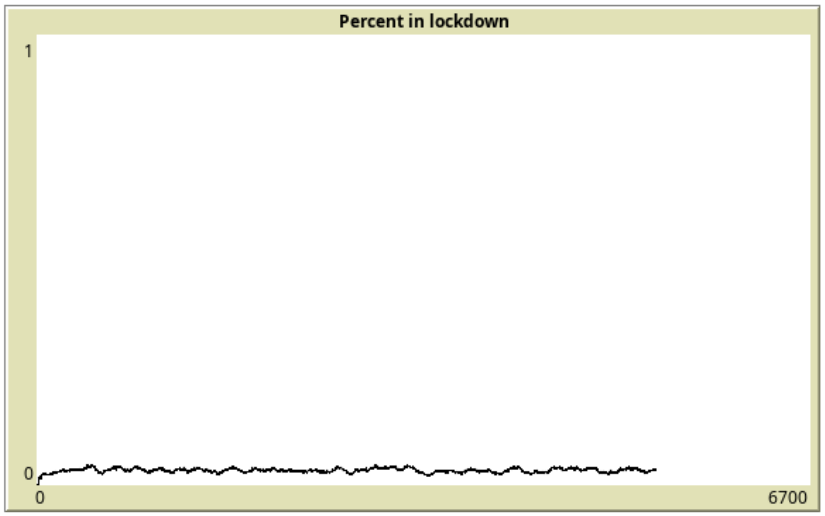

5)Max-demand-users = 0.4



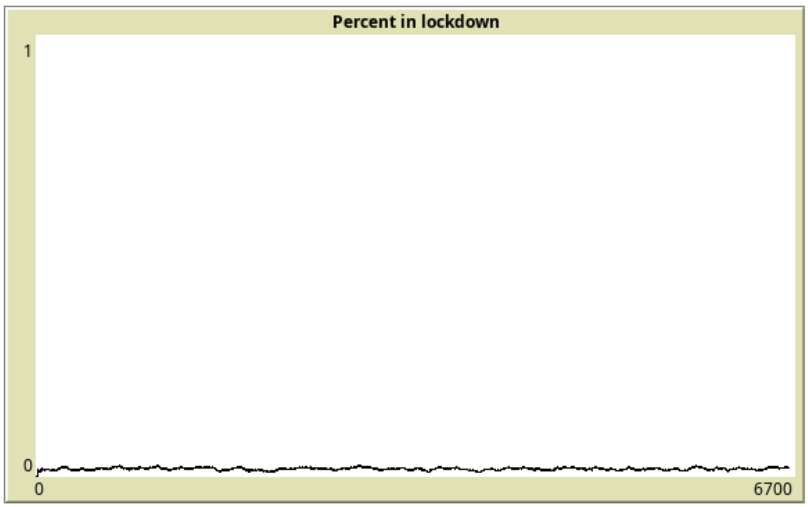
6)Max-demand-users = 0.46



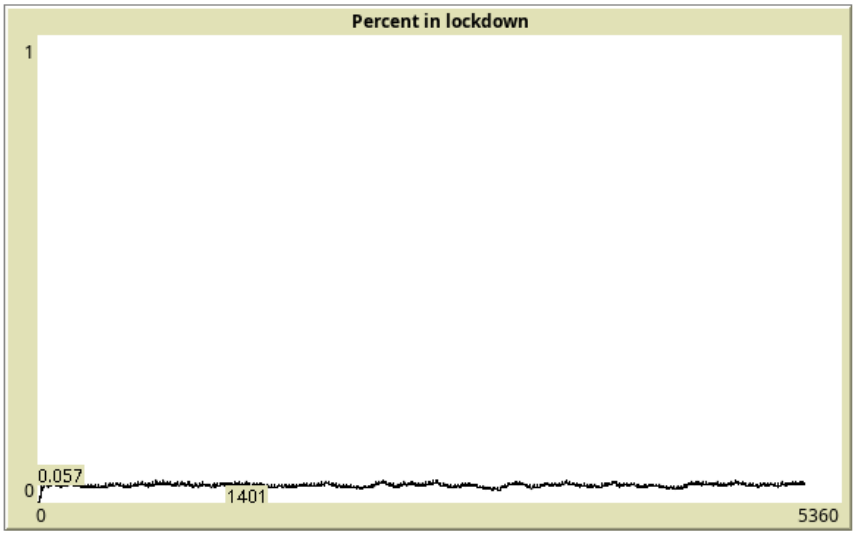

7)Max-demand-users = 0.47



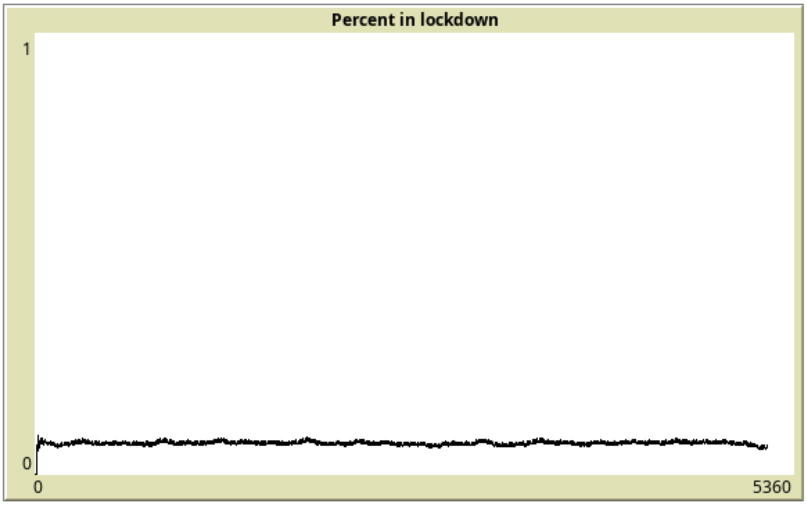

8)Max-demand-users = 0.5



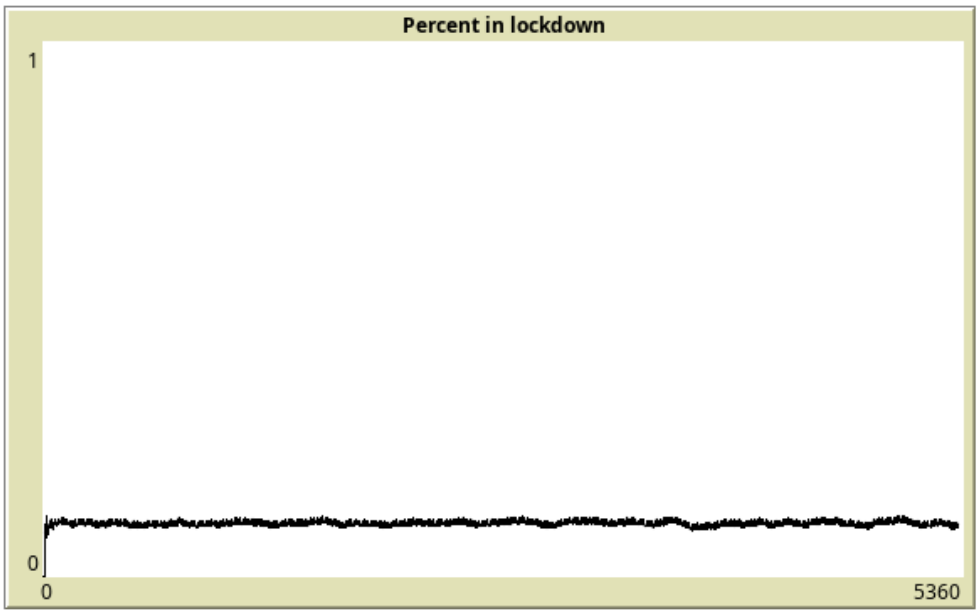
8)Max-demand-users = 0.6



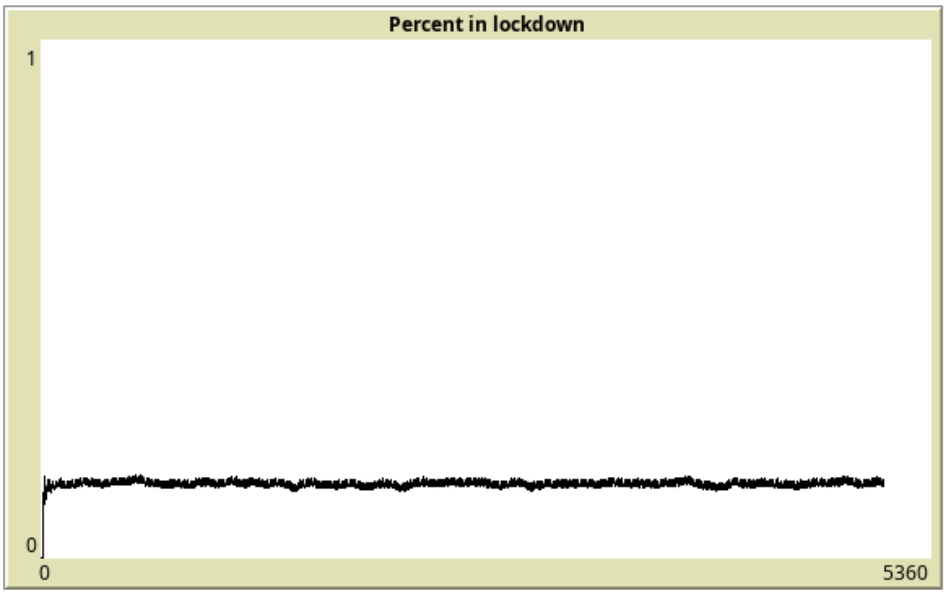

9)Max-demand-users = 0.7



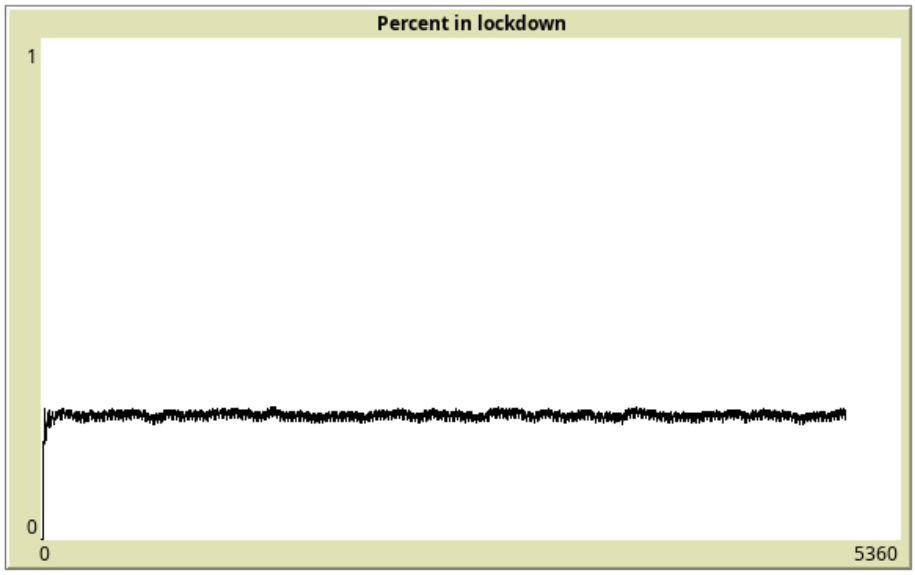
10)Max-demand-users = 0.8




11)Max-demand-users = 0.9



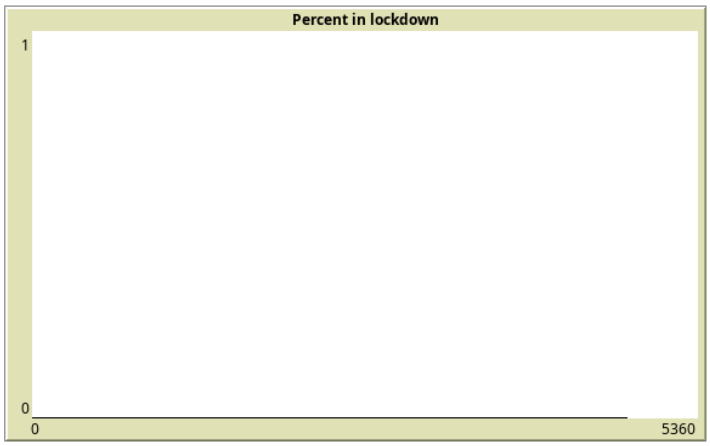
12)Max-demand-users = 1



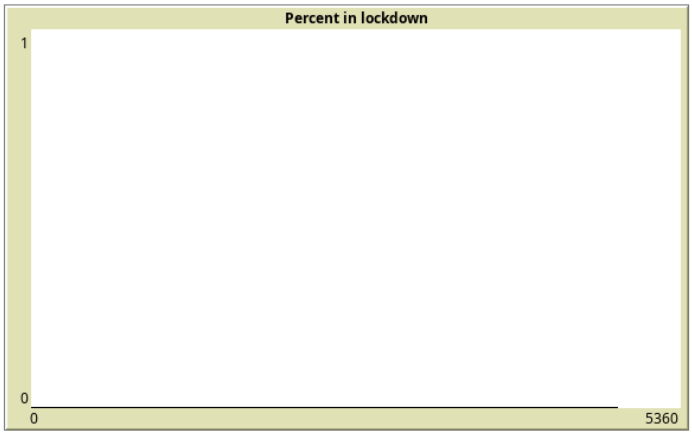

Some unsatisfied users appear after max-demands increased to 0.46.
From 0.0 to 0.45 all users are satisfied.
On 0.46 there are some tiny jumps, but the shart increase of unsatisfied users become on point 0.47, where constantly some small amount of users are unsatisfied (about 3 to 4 percent)
8) 0.04-0.045
9)0.075-0.08
10) 0.1-0.11
11)0.145-0.15
12)0.245-0.25
Тут ше висновки

2. Network: random

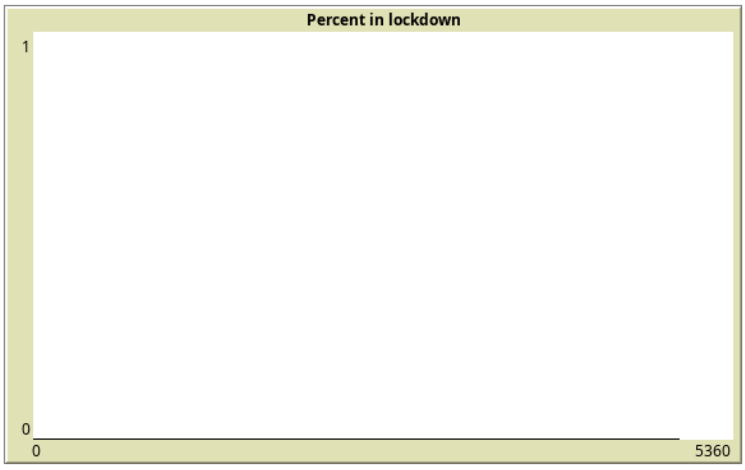
1)Max-demand-users=0



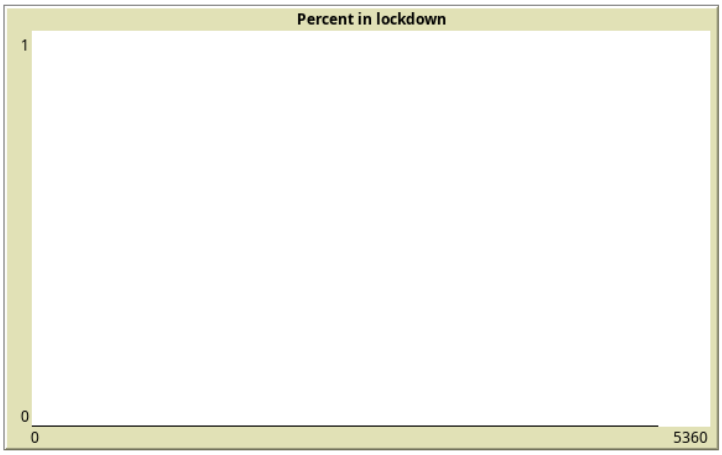

2)Max-demand-users=0.1



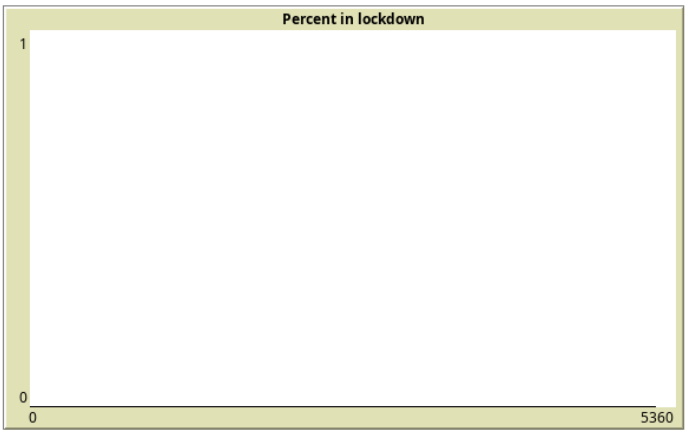

3)Max-demand-users=0.2



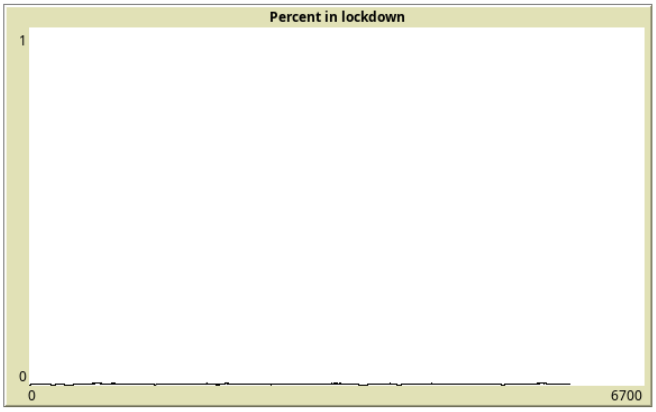
4)Max-demand-users=0.3



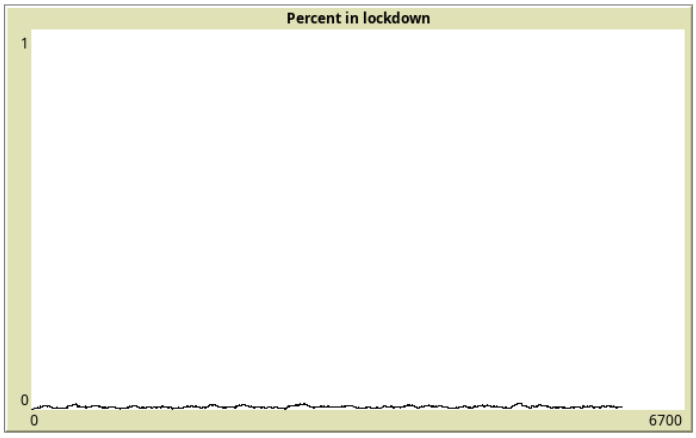

5)Max-demand-users=0.4



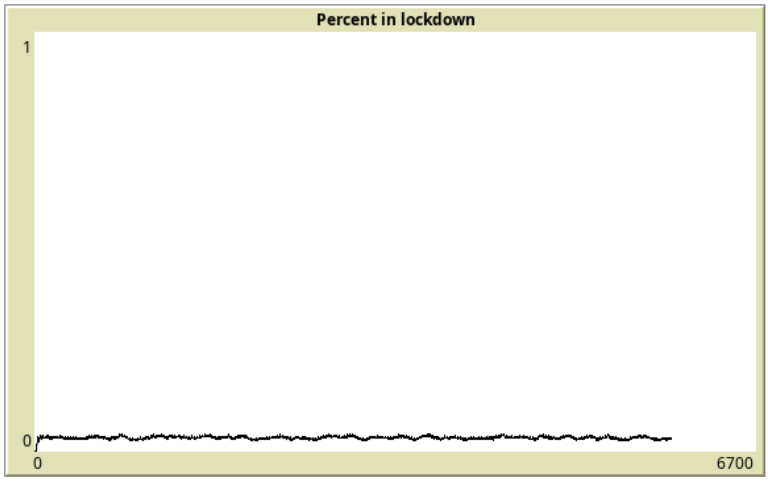

6)Max-demand-users=0.51



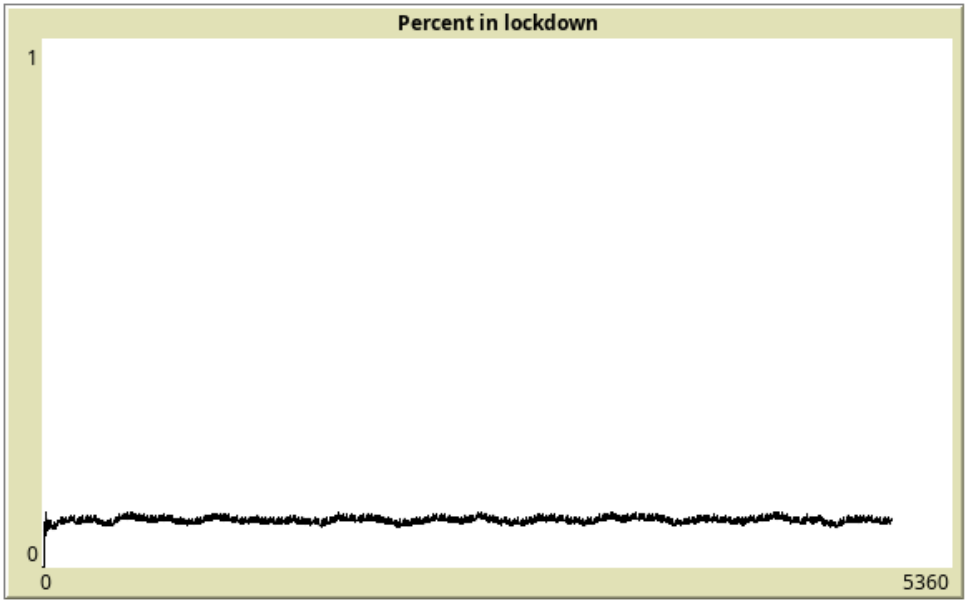
7)Max-demand-users=0.6



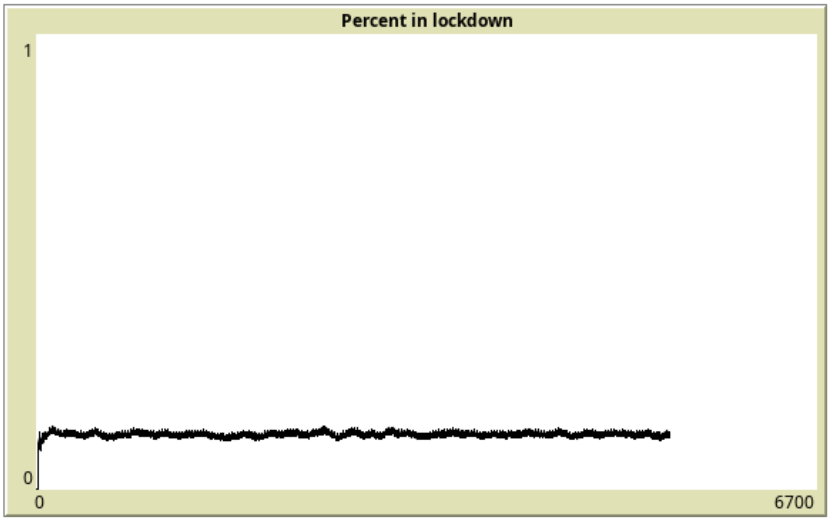

8)Max-demand-users=0.71



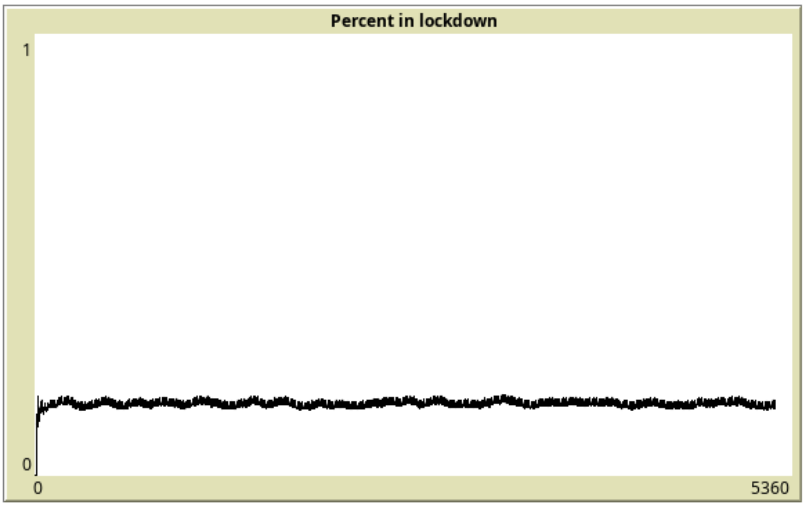

9)Max-demand-users=0.81



10)Max-demand-users=0.89




11)Max-demand-users=1




6)0.01-0.012
7)0.02
8)0.04
9)0.09-0.1
10)0.12-0.13
11) 0.17-0.18