CS5331: Mobile Data Management and Privacy Spring 2023

Project #2: Heartbeat

Instructions how to run the program:

Download and install GlobalProtect from the raiderlink to access the ttu vpn.

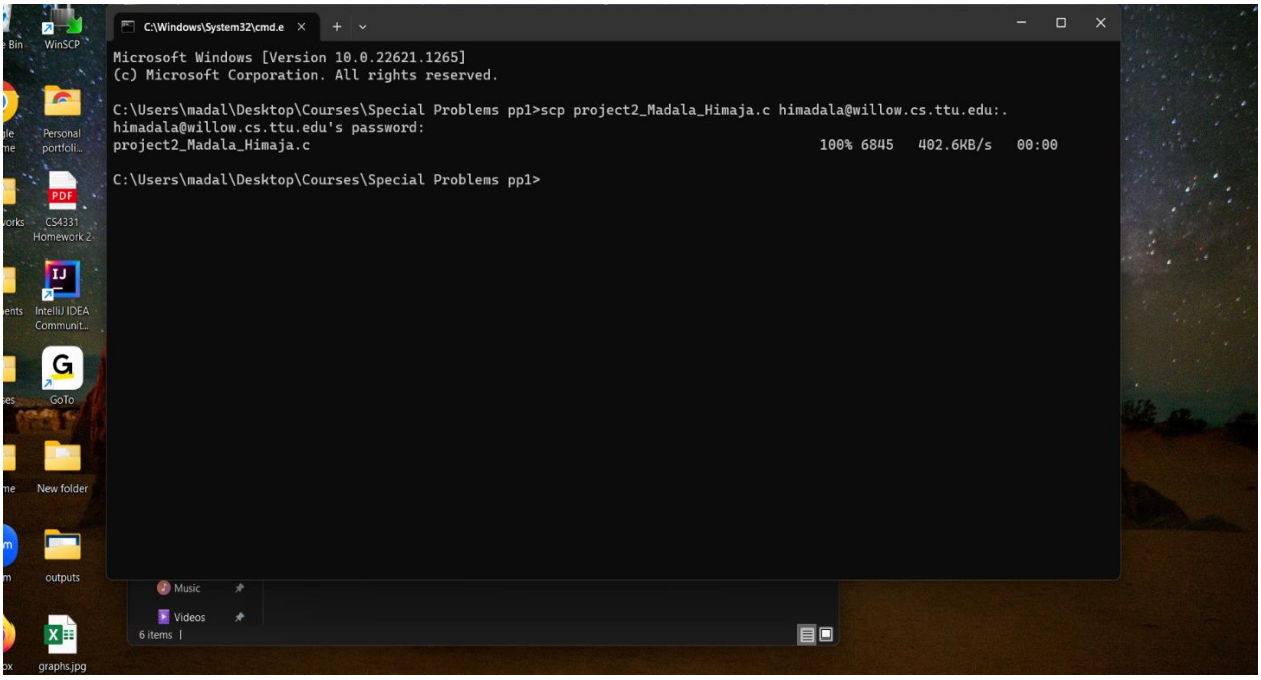
Download and install Winscp to access willow server. Also, download Xming to use PuTTY.

Now create a folder and save the project code with .c extension on desktop.

Open cmd in the path of the folder created on desktop.

Run the following command in cmd:

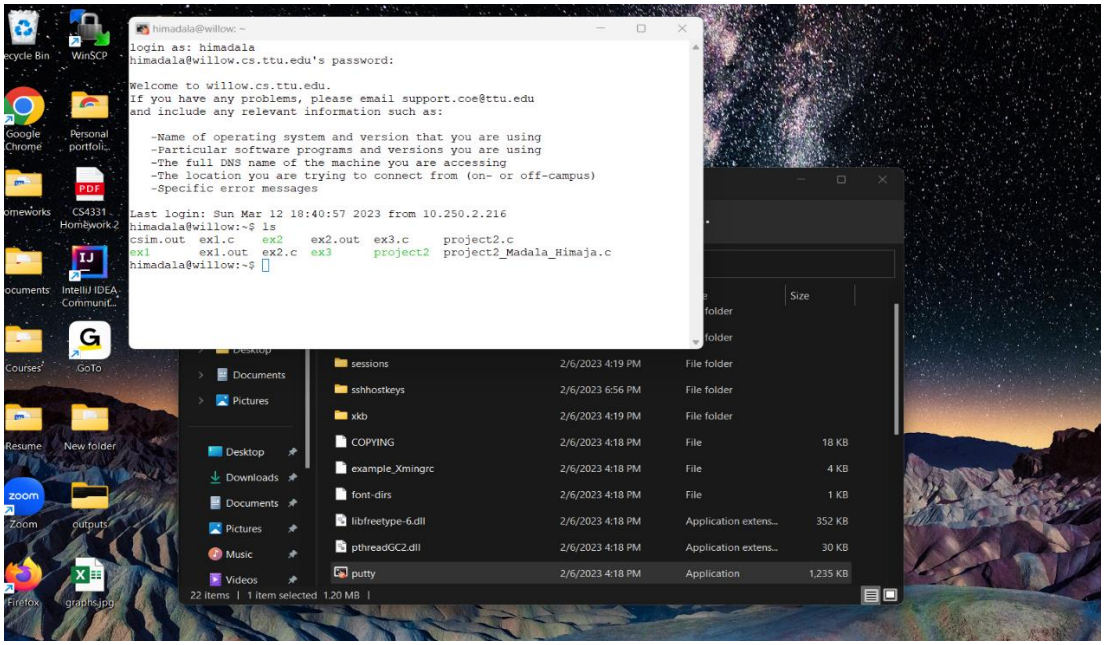
scp project2_Madala_Himaja.c himadala@willow.cs.ttu.edu:.



Now, open Xming and run PuTTY.

Login to PuTTY using your credentials.

Enter the command '**ls**' to see all the saved files and verify whether you can see the project code folder.



After verifying, enter the following command to compile the code:

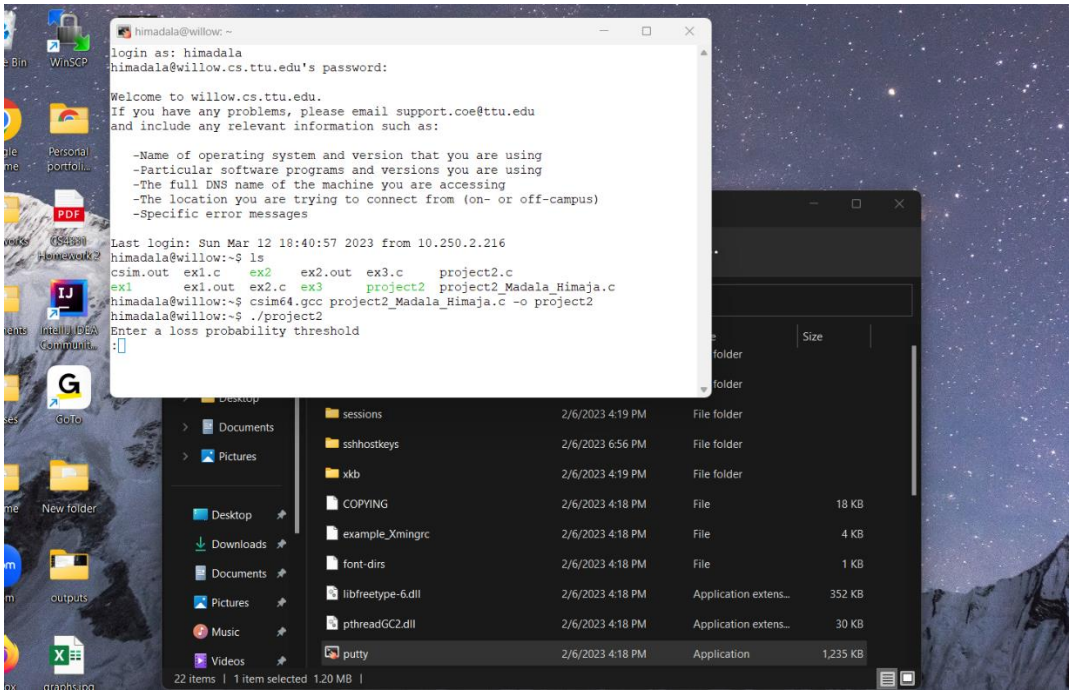
"csim64.gcc project2_Madala_Himaja.c -o project2"

The above command also saves the output in 'project2'

Now, in order to check the output, enter the following command:

"./project2"

It will then ask us to enter the threshold probability

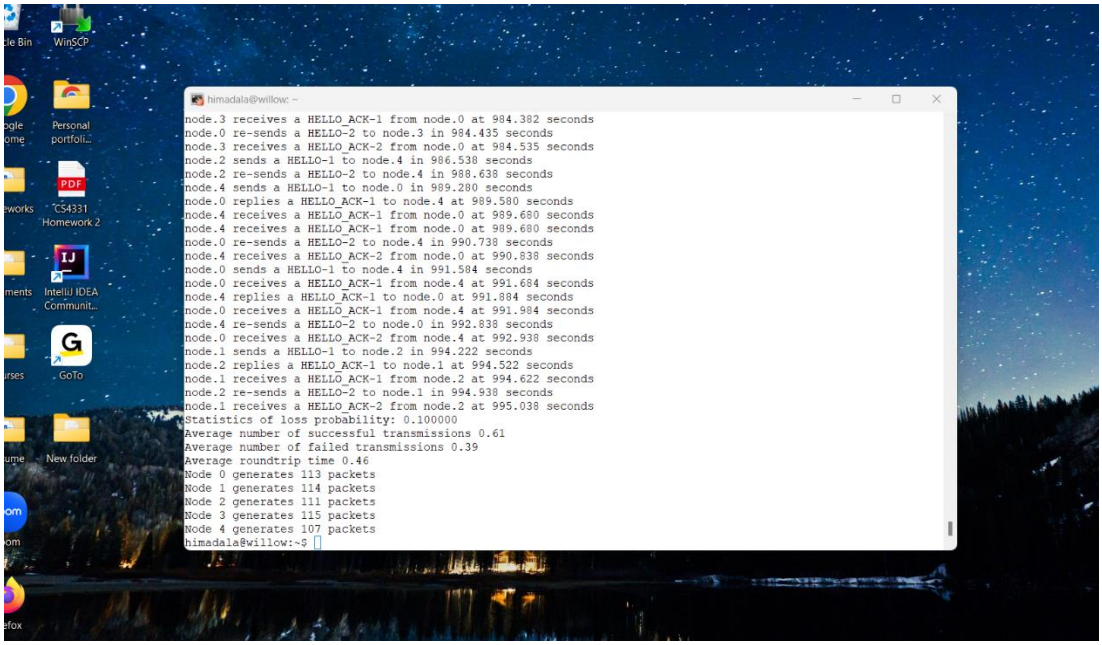


According to the project, we considered the packet loss probabilities 0.1, 0.2, 0.3, 0.4 and 0.5

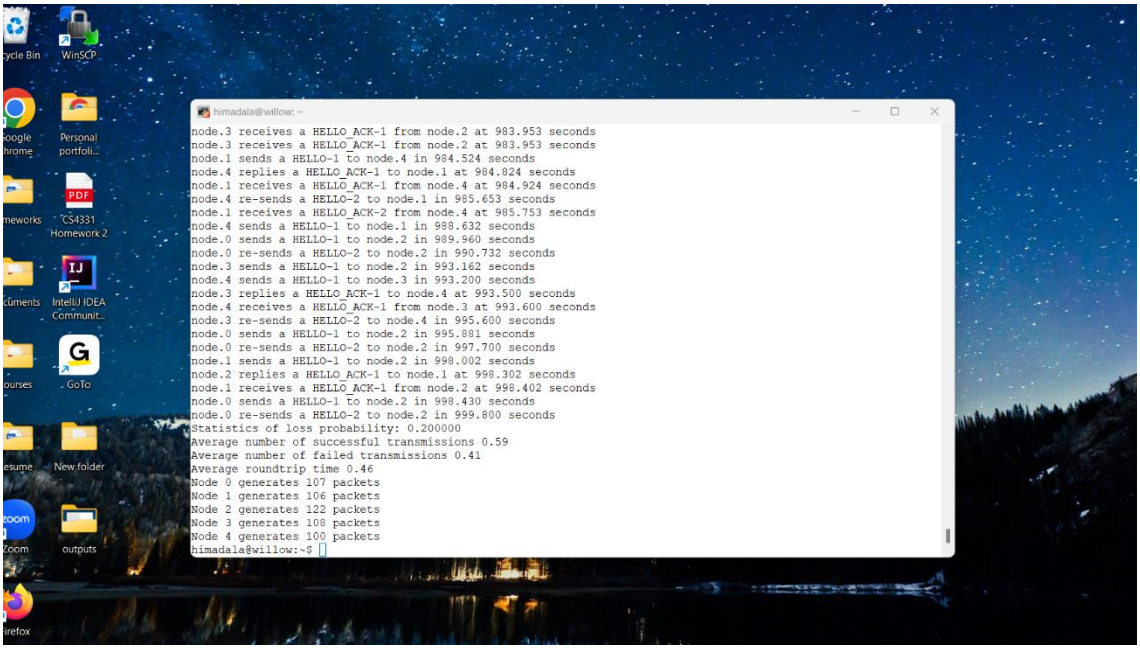
So, we should execute the command "**./project2**" and enter the above probabilities to get average number of successful transmissions and average number of failed transmissions.

The following are the outputs for the aboove packet lossprobability.

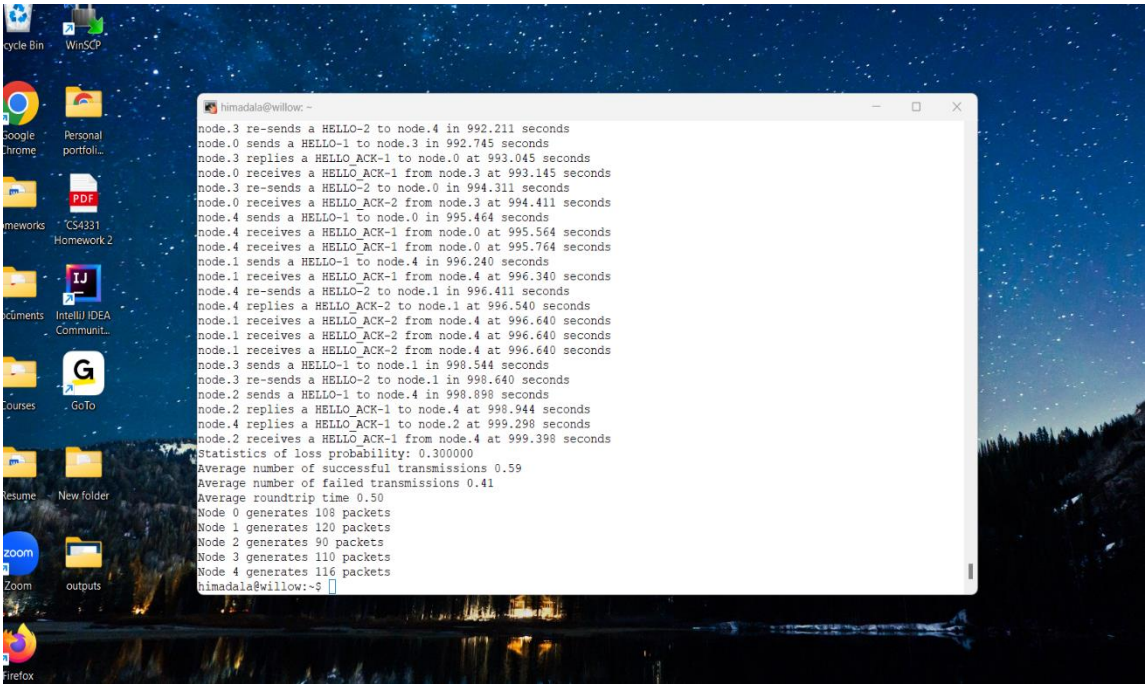
For loss probability threshold being 0.1,



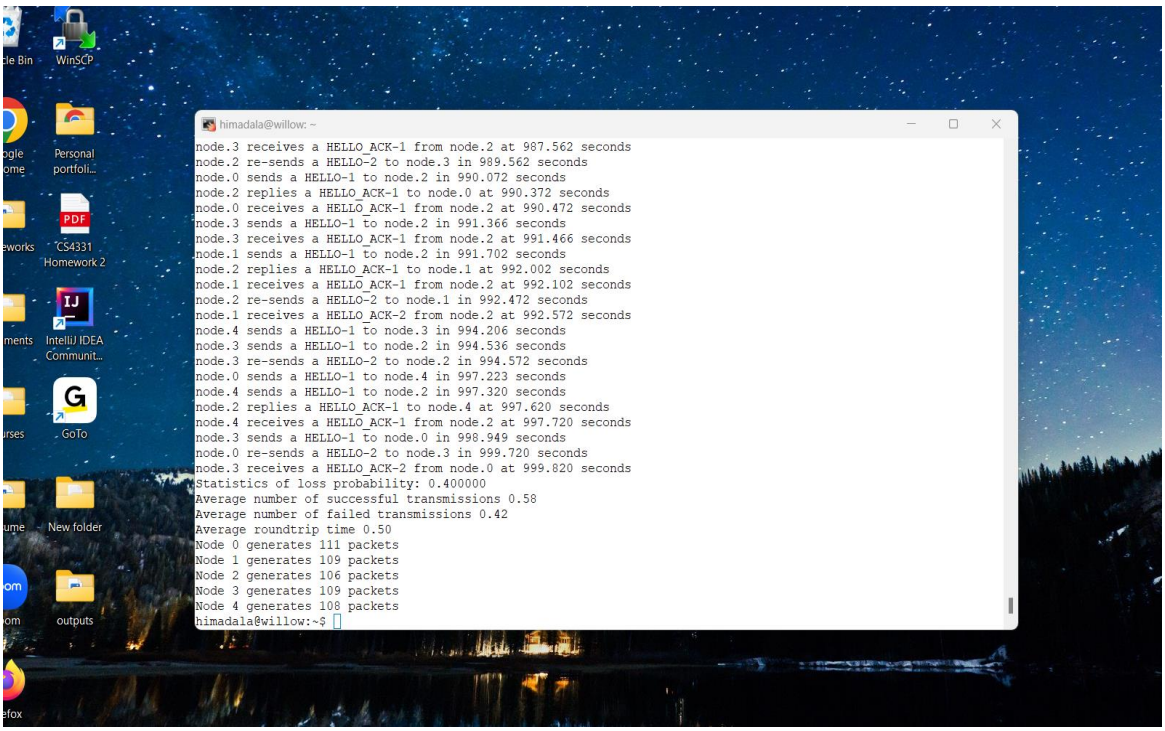
For loss probability threshold being 0.2,



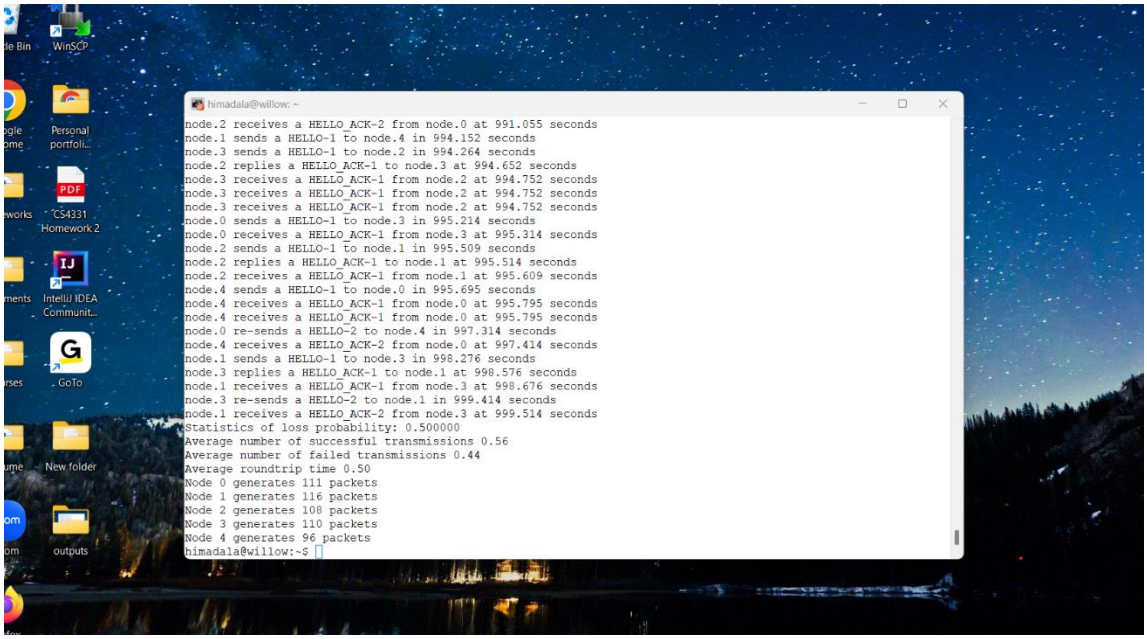
For loss probability threshold being 0.3,



For loss probability threshold being 0.4,



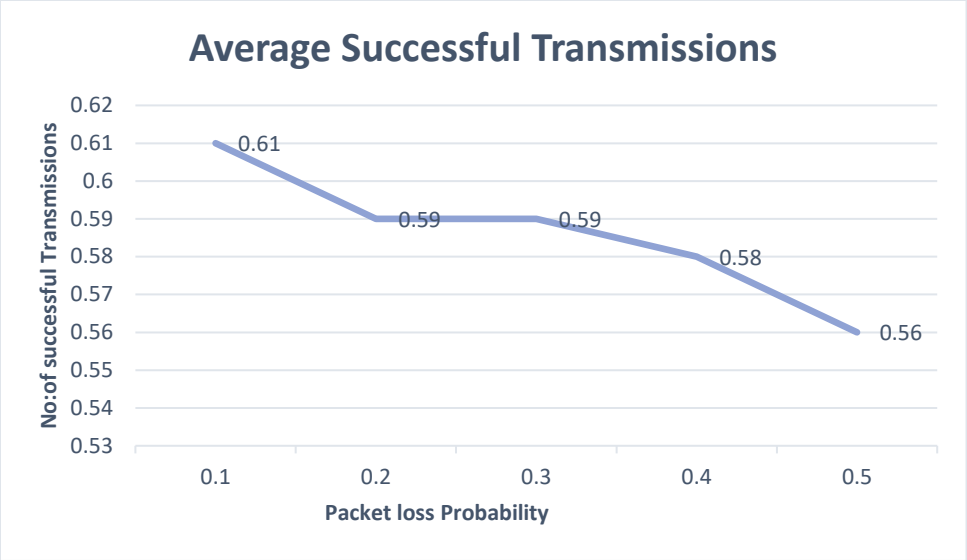
For loss probability threshold being 0.5,

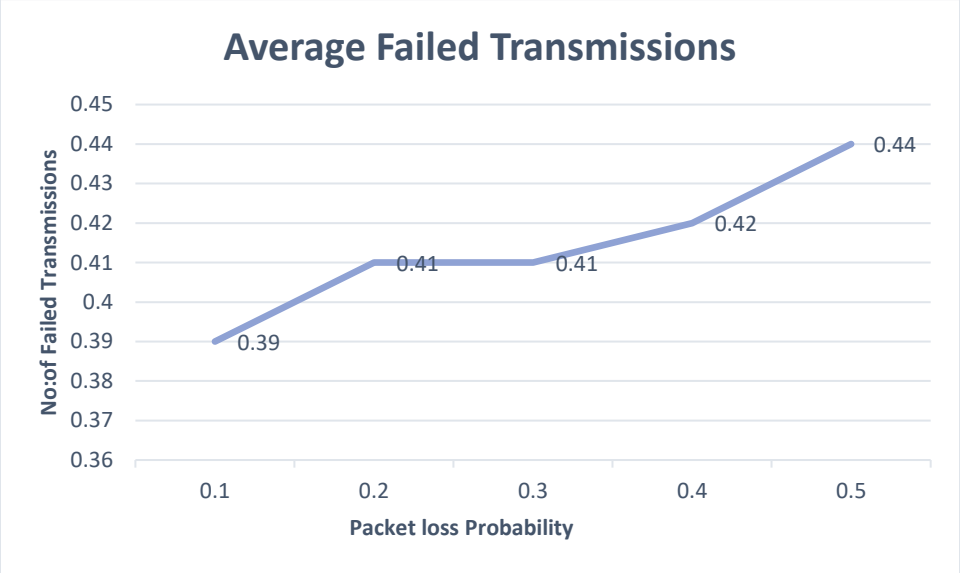


The following are the average number of successful and failed transmissions:

Packet loss Probability	No:of successful transmissions	No:of failed transmissions
0.1	0.61	0.39
0.2	0.59	0.41
0.3	0.59	0.41
0.3	0.58	0.42
0.4	0.56	0.44

The graphs for the above successful and failed transmissions are below:


Average Successful Transmissions
No:of successful Transmissions
0.62
0.61
0.6
0.59
0.58
0.57
0.56
0.55
0.54
0.53
0.61
0.59
0.59
0.58
0.56
0.1
0.2
0.3
0.4
0.5
Packet loss Probability


Average Failed Transmissions
No:of Failed Transmissions
0.45
0.44
0.43
0.42
0.41
0.4
0.39
0.38
0.37
0.36
0.39
0.41
0.41
0.42
0.44
0.1
0.2
0.3
0.4
0.5
Packet loss Probability