NetSim®

Accelerate Network R & D

Legacy Networks

A Network Simulation & Emulation Software

By

TETCOS
LLP

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1 Introduction

A legacy network is an old network which is rarely used today and not part of the TCP/IP protocol suite. With the advent of TCP/IP as a common networking platform in the mid-1970s, most legacy networks are no longer used.

With NetSim, you can simulate and analyze Pure ALOHA (the original version) and Slotted ALOHA (improvised version of pure ALOHA designed to reduce the chances of collisions when sending data between the sender and the receiver).

2 Simulation GUI

In the Main menu select →**New Simulation** → **Legacy Network** →**Pure Aloha/ Slotted Aloha** as shown Figure 2-1.
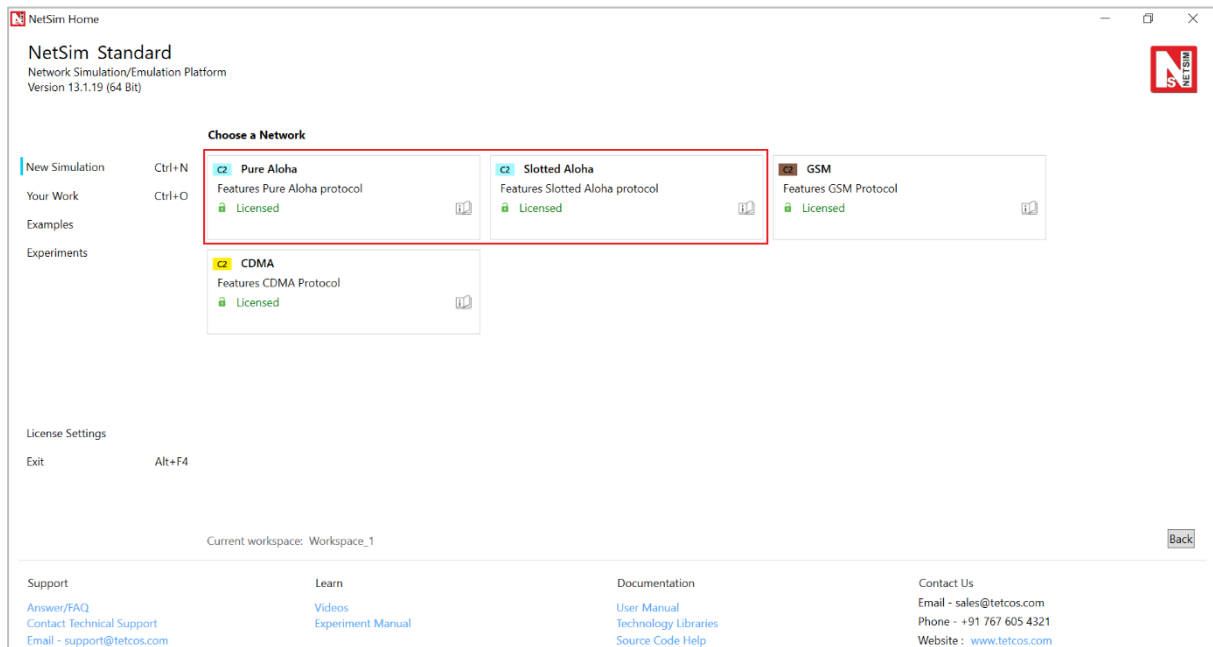

Figure 2-1: NetSim Home Screen

2.1 Create Scenario

Legacy networks come with a palette of various devices like wireless node,

2.1.1 Click and drop into environment

- **Click** on the **Node** icon in the tool bar and click and drop inside the grid. (*Note*: This is applicable for Pure Aloha and Slotted Aloha)
- Similarly drop **Adhoc link** and connect **Wireless Nodes** to **Adhoc links** using **Adhoc links**. (Note: A Node cannot be placed on another Node. A Node cannot float outside of the grid).
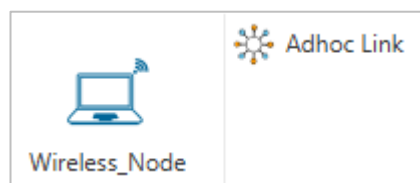

Figure 2-2: Pure and Slotted Aloha Device Palette in GUI

2.2 Set Node, Link and Application Properties

Set Node Properties: Right Click on the appropriate node and select Properties.

Set the Properties for the devices and links: Right click over the devices and then select Properties to set the properties of the links and the devices.

Configure an application as follows:

- o Click the application icon on the top ribbon/toolbar.
- o Specify the source and destination devices.
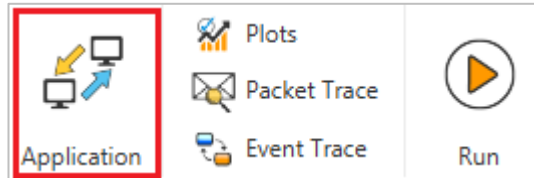- o Specify other application parameters per your model.

Figure 2-3: Application icon on the top tool bar

2.3 Enable Packet Trace (Optional)

Click Packet Trace / Event Trace icon in the tool bar and click OK. To get detailed help, *Refer section 8.4 and 8.5 in User Manual.* Select Plots icon for enabling Plots and click on OK.
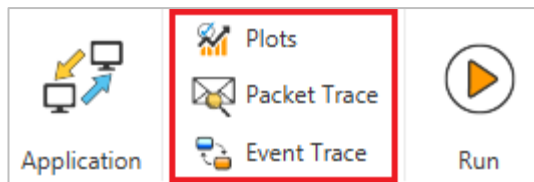

Figure 2-4: Enable Plots / Packet Trace / Event Trace icon on the top tool bar

2.4 Run Simulation

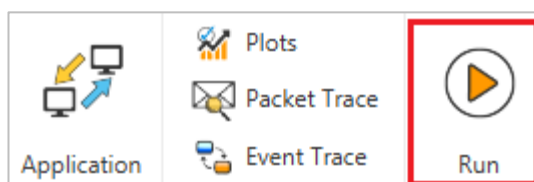Click on **Run Simulation** icon on the top toolbar.

Figure 2-5: Run Simulation icon on the top toolbar

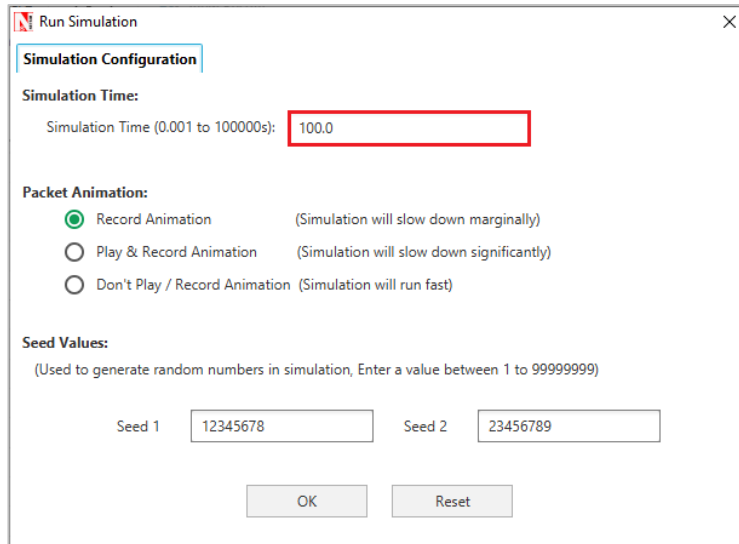Set the Simulation Time and click on OK

Figure 2-6: Run Simulation window

3 Legacy Networks Experiments in NetSim

Apart from this, in-built *experiments* are also available in NetSim. Examples help the user understand the working of features in NetSim. Experiments are designed to help the user (usually students) learn networking concepts through simulation. The experiments contain objective, theory, set-up, results, and inference. The following experiments are available in the *Experiments manual* (pdf file).

1. Plot the characteristic curve of throughput versus offered traffic for a Pure and Slotted ALOHA system

4 Note: Release on Unsupported Basis

- No further development activity such as building of new features is expected for the legacy protocol libraries.
- Source codes are provided on an unsupported basis.
- Legacy Networks is non-IP based protocols and runs stand alone. This means that legacy networks cannot be connected to Internetworks.

5 Latest FAQs

Up to date FAQs on NetSim's Legacy Networks library is available at

https://support.tetcos.com/support/solutions/folders/14000116739