Creating an Ad-hoc wireless network

Spoken Tutorial Project
https://spoken-tutorial.org
National Mission on Education through ICT
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VIT Chennai
29 November 2023

In this tutorial, we will learn to

Learning Objectives

In this tutorial, we will learn to
- **Create an Ad-hoc wireless network**

Learning Objectives

In this tutorial, we will learn to

- ▶ **Create an Ad-hoc wireless network**
- ▶ **Create three UDP flows in the channels**

Learning Objectives

▶ **Analyze the flow using a flow monitor**

Learning Objectives

▶ **Analyze the flow using a flow monitor**

▶ **Visualize the network using NetAnim**

System Requirements

To record this tutorial, I am using

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- **Ubuntu Linux OS version 22.04**

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- ▶ **Ubuntu Linux OS version 22.04**
- ▶ **ns-3 version 3.38**

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- ▶ **Ubuntu Linux OS version 22.04**
- ▶ **ns-3 version 3.38**
- ▶ **NetAnim visualizer tool**

To follow this tutorial,

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- ▶ **The learner must have basic knowledge of ns-3 software**

Pre-requisites

To follow this tutorial,

- ▶ **The learner must have basic knowledge of ns-3 software**

- ▶ **For pre-requisite ns-3 tutorials, please visit this website https://spoken-tutorial.org**

Code Files

► **The files used in this tutorial are provided in the Code Files link**

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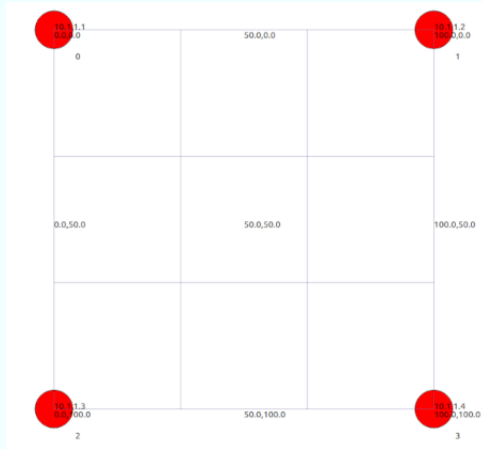
▶ **Please download and extract the files**

Code Files

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▶ **Make a copy and then use them while practicing**

Ad-hoc Wireless Network

Summary

In this tutorial, we have

▶ **Created an Ad-hoc wireless network**

▶ **Created three UDP flows in the channels**

Summary

▶ **Analyzed the flow using a flow monitor**

▶ **Visualized the network using NetAnim**

Assignment

As an assignment, please do the following

- ▶ **Create a three cross three grid**
- ▶ **Create six UDP flows**
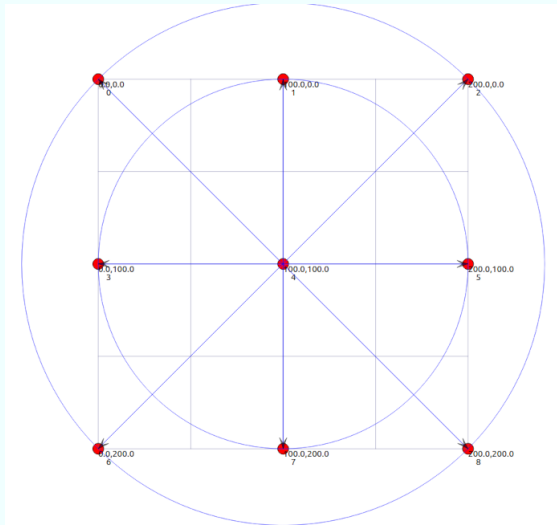- ▶ **The simulation should run for 200 seconds**

Assignment

► **Analyze the flow using a flow monitor**

► **Visualize the network using NetAnim**

Assignment-Observation

About the Spoken Tutorial Project

- ▶ **Watch the video available at http://spoken-tutorial.org /What_is_a_Spoken_Tutorial**

- ▶ **It summarises the Spoken Tutorial project**

- ▶ **If you do not have good bandwidth, you can download and watch it**

Spoken Tutorial Workshops

The Spoken Tutorial Project Team

▶ **Conducts workshops using spoken tutorials**

▶ **Gives certificates to those who pass an online test**

▶ **For more details, please write to contact@spoken-tutorial.org**

Answers for THIS spoken tutorial

- ▶ **Questions in THIS Spoken Tutorial**
- ▶ **Visit https://forums.spoken-tutorial.org**
- ▶ **Choose the minute and second where you have the question**
- ▶ **Explain your question briefly**
- ▶ **The Spoken Tutorial project will ensure an answer**
- ▶ **You will have to register to ask questions**

FOSSEE Forum

▶ **For any general or technical questions on ns-3, visit the FOSSEE forum and post your question**
https://forums.fossee.in/

Acknowledgement

▶ **The Spoken Tutorial project was established by Ministry of Education, Govt. of India**

Acknowledgement

▶ **We thank Dr.Moyukh Laha from IIT Kharagpur for his domain support**

▶ **We would also like to thank Dr. R. Radha, Dr. X. Anita, and Dr. T. Subbulakshmi from VIT Chennai for their support**

Thank you

▶ **This is Arun Santhosh, a FOSSEE Summer Fellow 2023, IIT Bombay signing off**