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4C7

Aim

Write a program in NS3 to connect 2 nodes.

Experiment - 4

Computer Networks Lab

# **EXPERIMENT – 4**

## **Aim:**

Write a program in NS3 to connect 2 nodes.

## **Source Code:**

#include "ns3/core-module.h"

#include "ns3/network-module.h"

#include "ns3/internet-module.h"

#include "ns3/point-to-point-module.h"

#include "ns3/applications-module.h"

// Default Network Topology

//

//       10.1.1.0

// n0 -------------- n1

//    point-to-point

//

using namespace ns3;

NS\_LOG\_COMPONENT\_DEFINE ("FirstScriptExample");

int

main (int argc, char \*argv[])

{

  CommandLine cmd (\_\_FILE\_\_);

  cmd.Parse (argc, argv);

  Time::SetResolution (Time::NS);

  LogComponentEnable ("UdpEchoClientApplication", LOG\_LEVEL\_INFO);

  LogComponentEnable ("UdpEchoServerApplication", LOG\_LEVEL\_INFO);

  NodeContainer nodes;

  nodes.Create (2);

  PointToPointHelper pointToPoint;

  pointToPoint.SetDeviceAttribute ("DataRate", StringValue ("5Mbps"));

  pointToPoint.SetChannelAttribute ("Delay", StringValue ("2ms"));

  NetDeviceContainer devices;

  devices = pointToPoint.Install (nodes);

  InternetStackHelper stack;

  stack.Install (nodes);

  Ipv4AddressHelper address;

  address.SetBase ("10.1.1.0", "255.255.255.0");

  Ipv4InterfaceContainer interfaces = address.Assign (devices);

  UdpEchoServerHelper echoServer (5);

  ApplicationContainer serverApps = echoServer.Install (nodes.Get (1));

  serverApps.Start (Seconds (1.0));

  serverApps.Stop (Seconds (10.0));

  UdpEchoClientHelper echoClient (interfaces.GetAddress (1), 5);

  echoClient.SetAttribute ("MaxPackets", UintegerValue (1));

  echoClient.SetAttribute ("Interval", TimeValue (Seconds (1.0)));

  echoClient.SetAttribute ("PacketSize", UintegerValue (1024));

  ApplicationContainer clientApps = echoClient.Install (nodes.Get (0));

  clientApps.Start (Seconds (2.0));

  clientApps.Stop (Seconds (10.0));

  Simulator::Run ();

  Simulator::Destroy ();

  return 0;

}

## **Output:**

