WELCOME

Cisco Certified Networking Associate(CCNA)

200-301

(5th Class)

MD.NAZAM UDDIN (SOHEL)

MSC IN CSE

BSC in CSE.

DIPLOMA IN CMT.

CCNA(R/S).CCNP(Enterprise) MTCNA , MTCRE ,MCP, MCSA,
MCSE-2016 ,Az-104 , MCT, CSCUV2,CEH,CEHioT.

Senior Technical Instructor (Cisco, MikroTik, Windows server 2016.)

Cell : +8801835522503

E-mail : nazamsohel@gmail.com
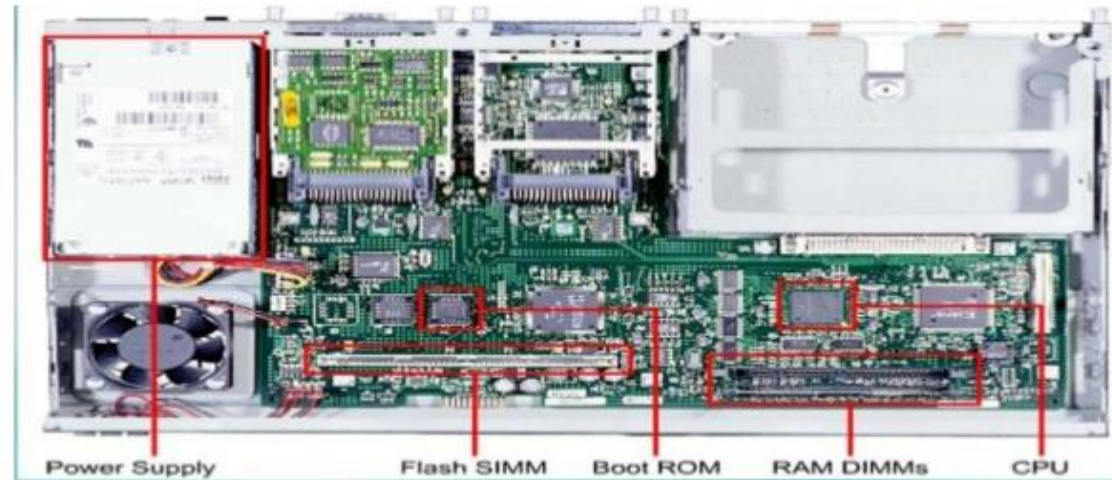
IP Review Class

Cisco Router :

Cisco Router internal components:

Cisco Router :

Branch Routers Model :

Branch Routers

Overview: Branch Routers

Cisco 4000 Series Integrated Services Routers

Cisco 3900 Series Integrated Services Routers

Cisco 3800 Series Integrated Services Routers

Cisco 2900 Series Integrated Services Routers

Cisco 2800 Series Integrated Services Routers

Cisco 1900 Series Integrated Services Routers

Cisco 1800 Series Integrated Services Routers

Cisco 800 Series Routers

Service Provider Routers :

Service Provider Edge Routers

Cisco 12000 Series Routers

Cisco 7300 Series Routers

Cisco ASR 9000 Series Aggregation Services Routers

Cisco ASR 1000 Series Aggregation Services Routers

Cisco ASR 920 Series Aggregation Services Router

Cisco ASR 901 Series Aggregation Services Routers

Cisco ASR 901S Series Aggregation Services Routers

Cisco ASR 900 Series Aggregation Services Routers

Cisco XR 12000 Series Router

Small Business Routers :

Small Business Routers

Cisco 2900 Series Integrated Services Routers

Cisco 800 Series Routers

Cisco 1900 Series Integrated Services Routers

Cisco Small Business RV Series Routers

Industrial & Data Center :

Data Center Interconnect Platforms

Cisco ASR 1000 Series Aggregation Services Routers

Cisco Catalyst 6500 Series Switches

Cisco Carrier Routing System

Cisco Nexus 7000 Series Switches

Industrial Routers

Cisco 2000 Series Connected Grid Routers

Cisco 800 Series Industrial Integrated Services Routers

Cisco 1000 Series Connected Grid Routers

Cisco 500 Series WPAN Industrial Routers
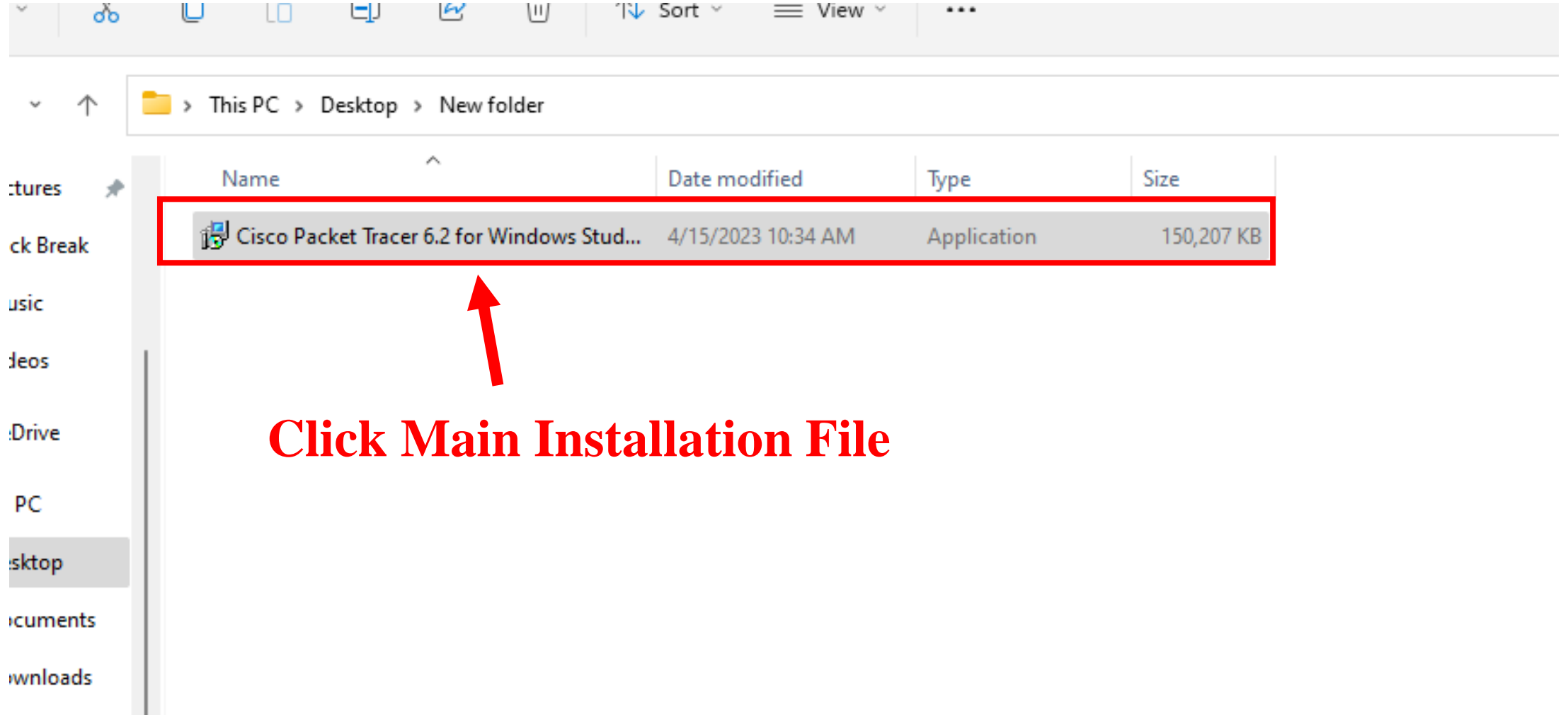
Cisco 900 Series Industrial Routers

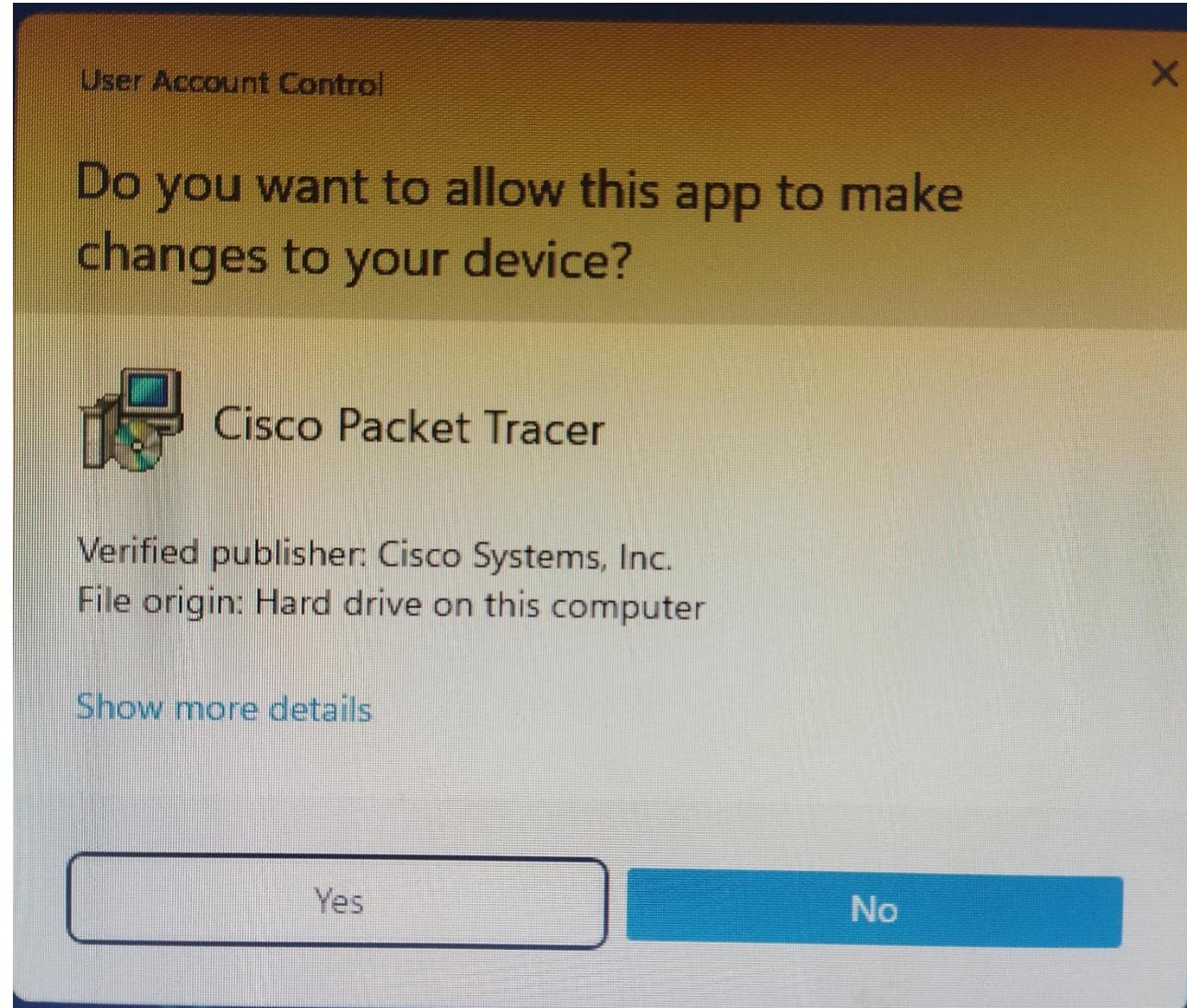Cisco Interface Module for LoRaWAN

Cisco Packet Tracer Installation
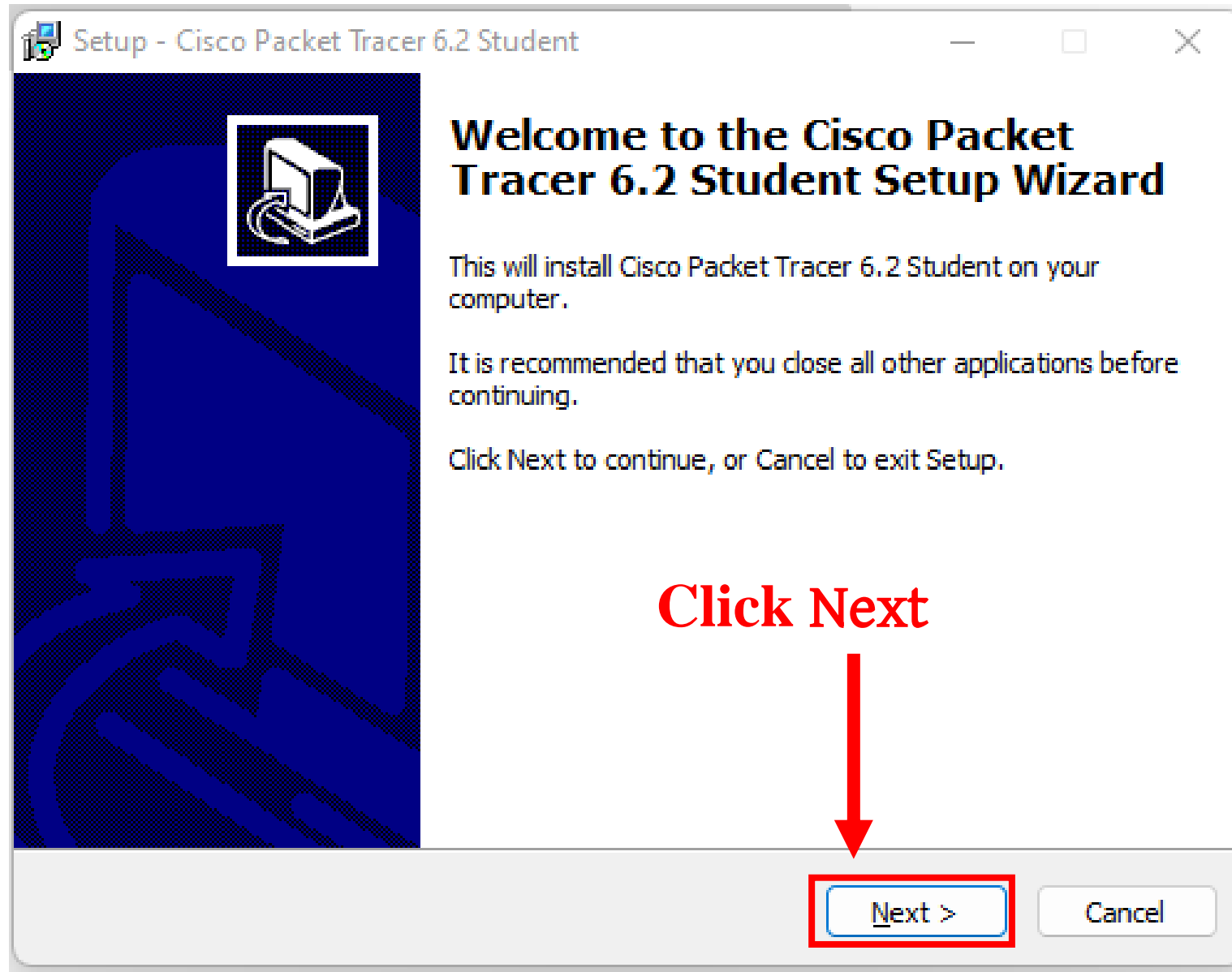
❑সবার প্রথমে Installation Folder টি সংগ্রহ করে নিতে হবে।
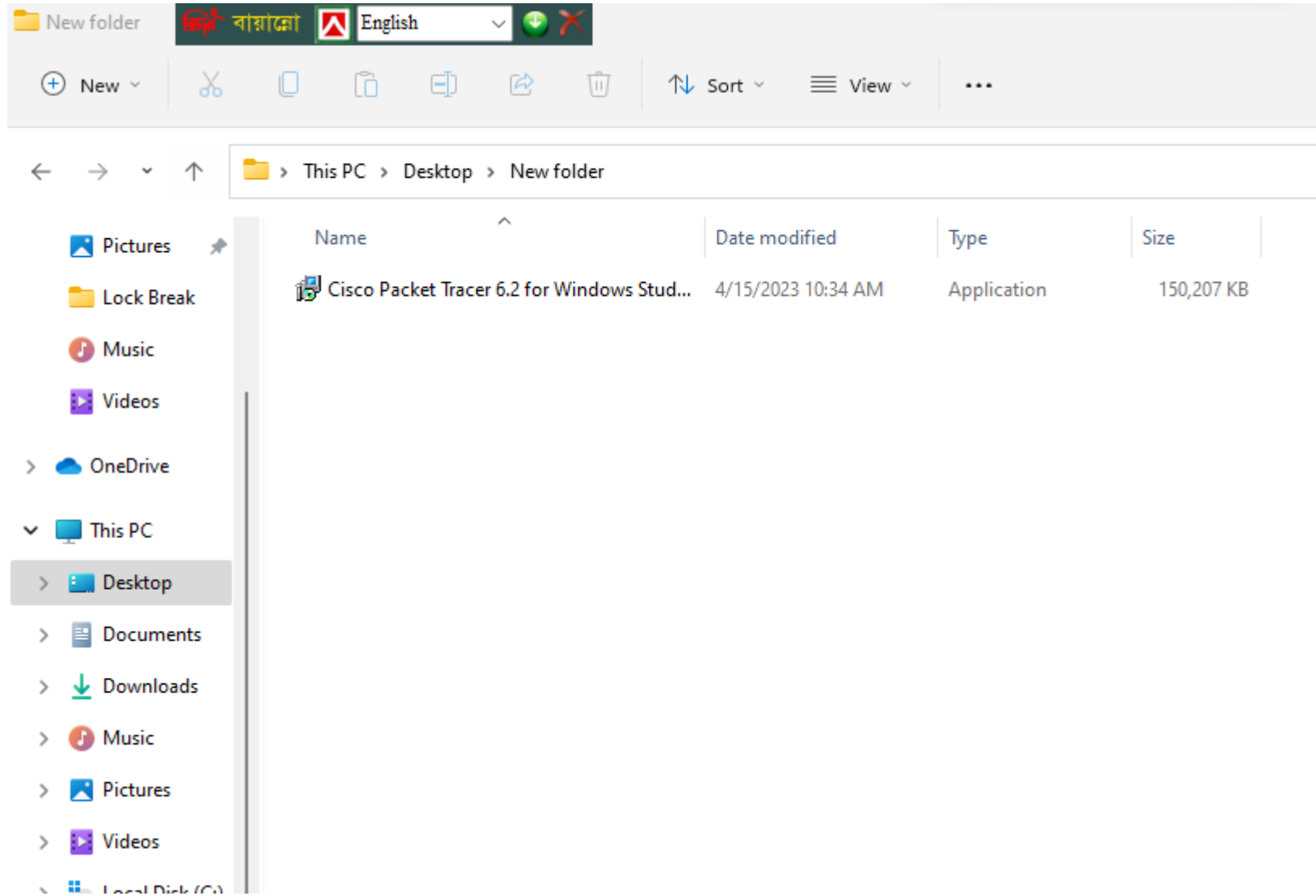
☐ পরবর্তীতে Main Installation File এ Click দিতে হবে।
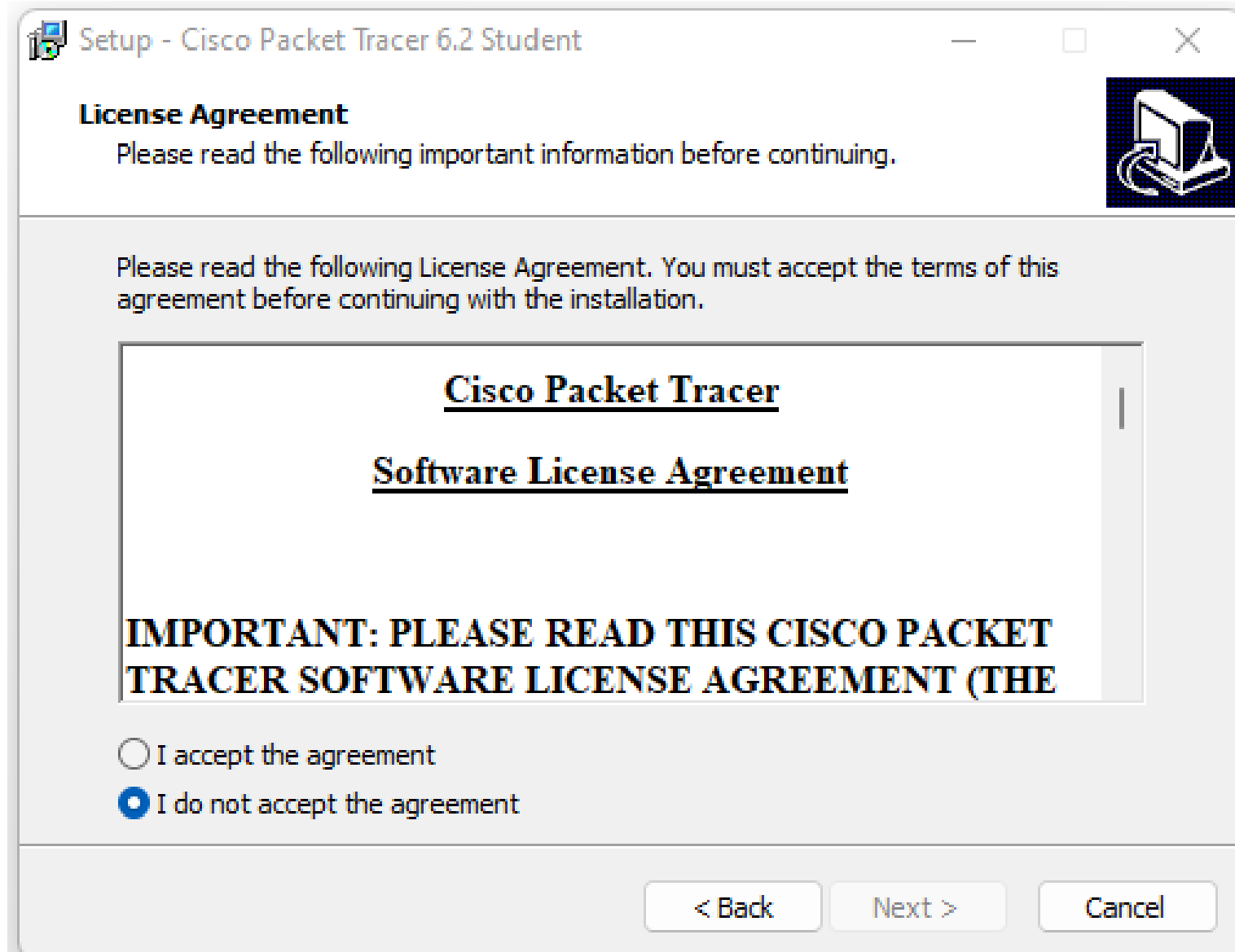

Click Main Installation File

❑ পরবর্তীতে Installation File টিতে Click দিতে হবে। তারপর Permission চাইবে যেখানে Yes এ Click দিতে হবে।

❑ এরপর নিচের Interface আসবে। পরবর্তীতে Next এ Click দিতে হবে।

❑ এরপর নিচের Interface আসবে।


Setup - Cisco Packet Tracer 6.2 Student

License Agreement
Please read the following important information before continuing.

Please read the following License Agreement. You must accept the terms of this agreement before continuing with the installation.

Cisco Packet Tracer

Software License Agreement

IMPORTANT: PLEASE READ THIS CISCO PACKET TRACER SOFTWARE LICENSE AGREEMENT (THE

○ I accept the agreement
● I do not accept the agreement

< Back   Next >   Cancel

❑ পরবর্তীতে I Accept the license agreement এ Click দিতে হবে। পরবর্তীতে Next এ Click দিতে হবে।

❑ এরপর নিচের Interface আসবে। পরবর্তীতে Next এ Click দিতে হবে।
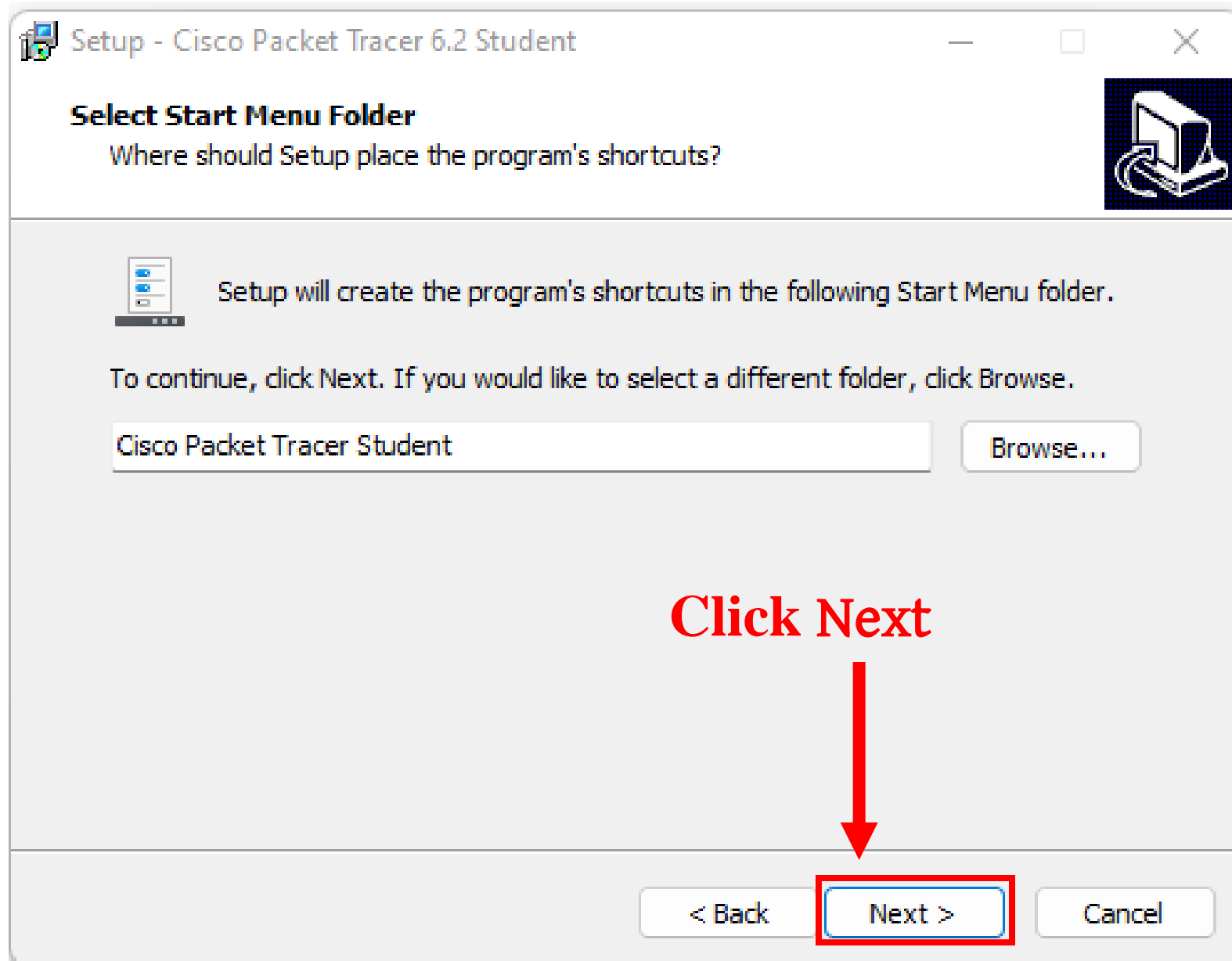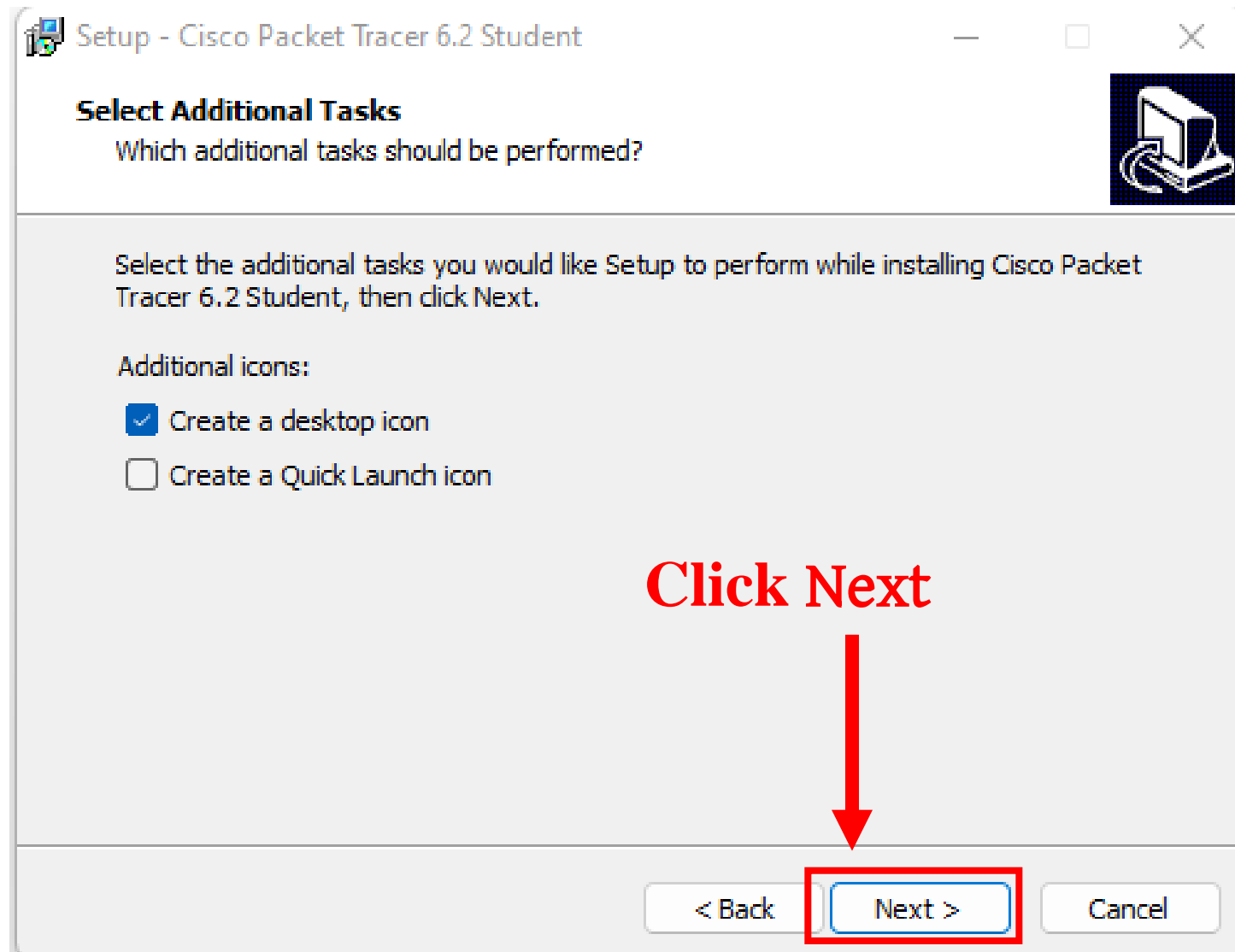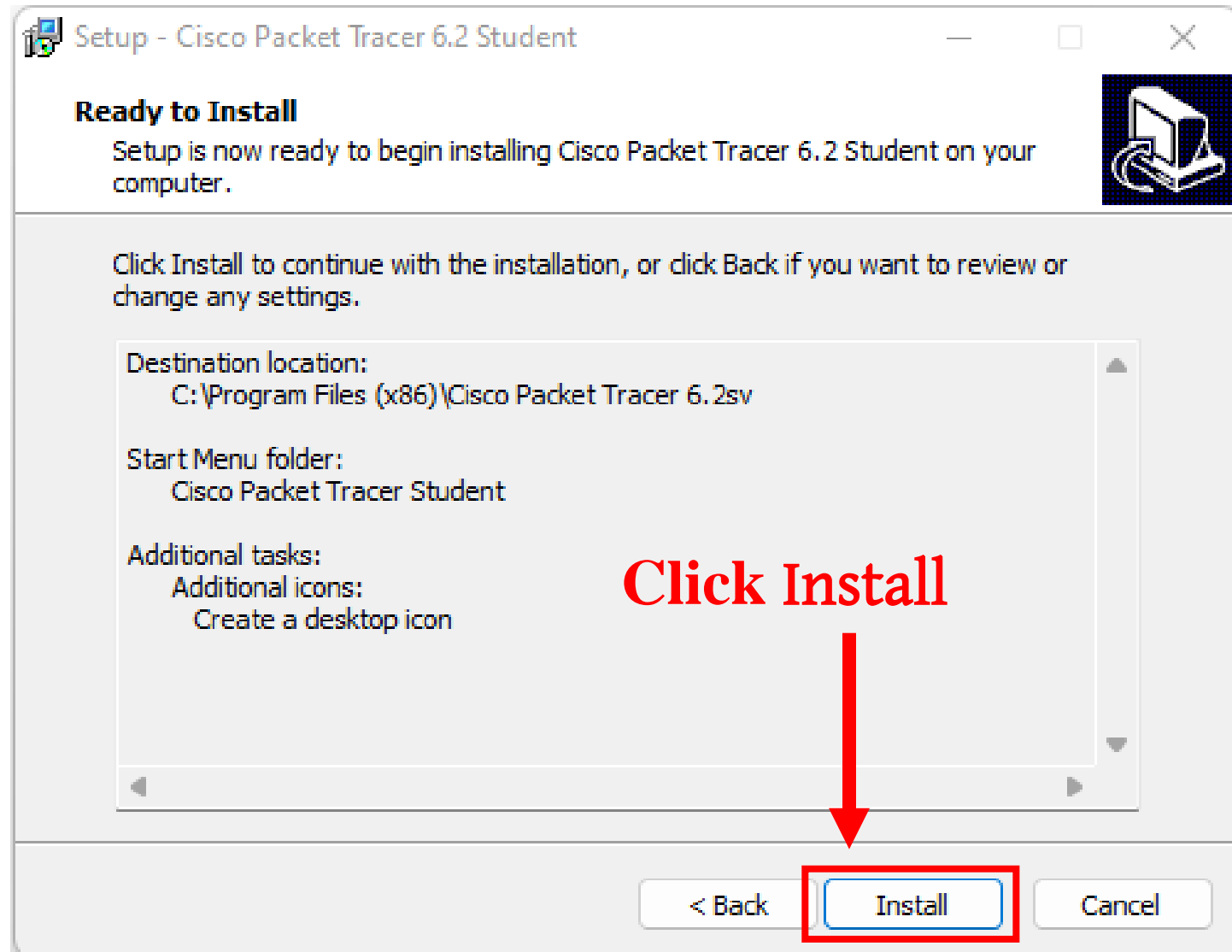
❑ এরপর নিচের Interface আসবে। পরবর্তীতে Next এ Click দিতে হবে।
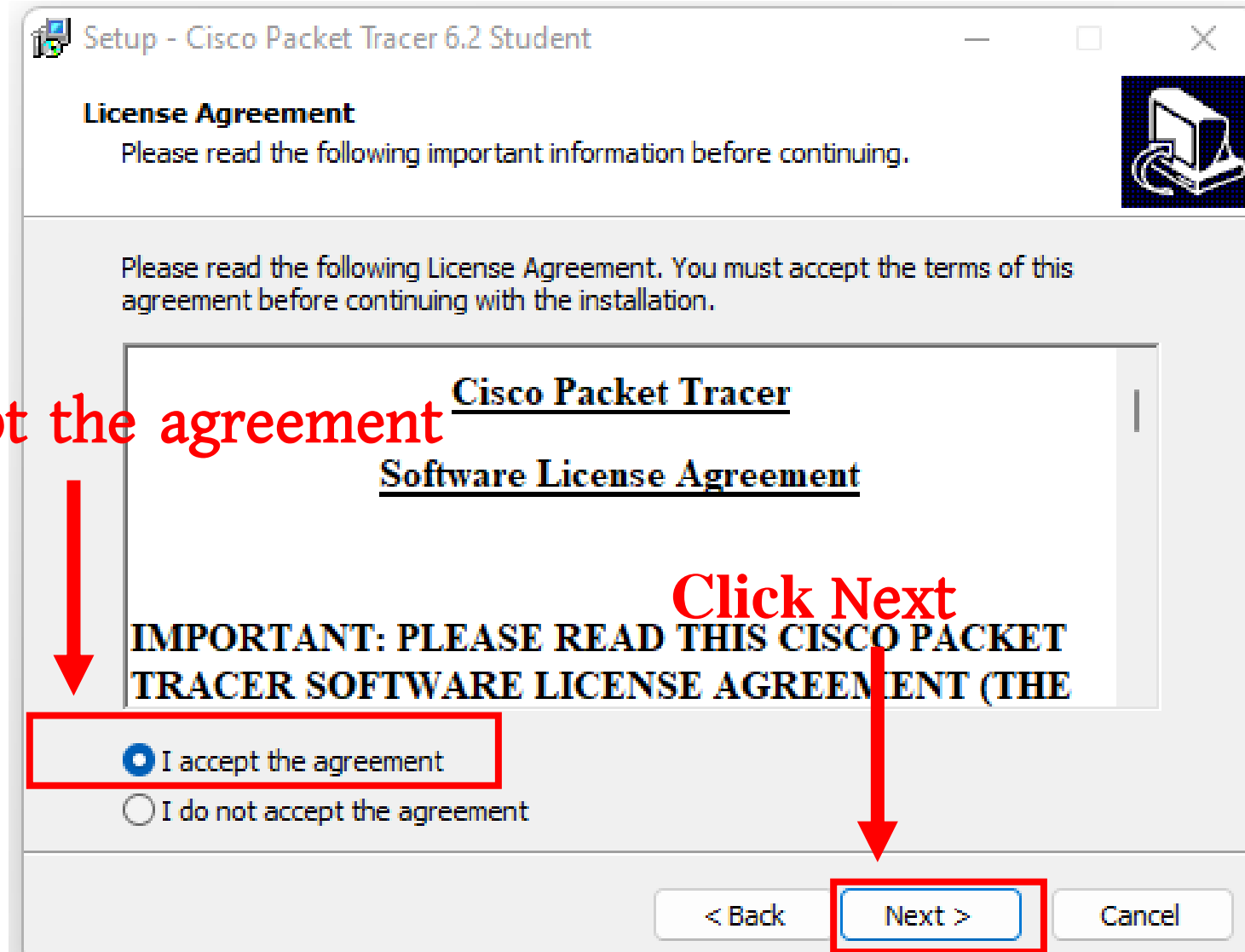
Click Next

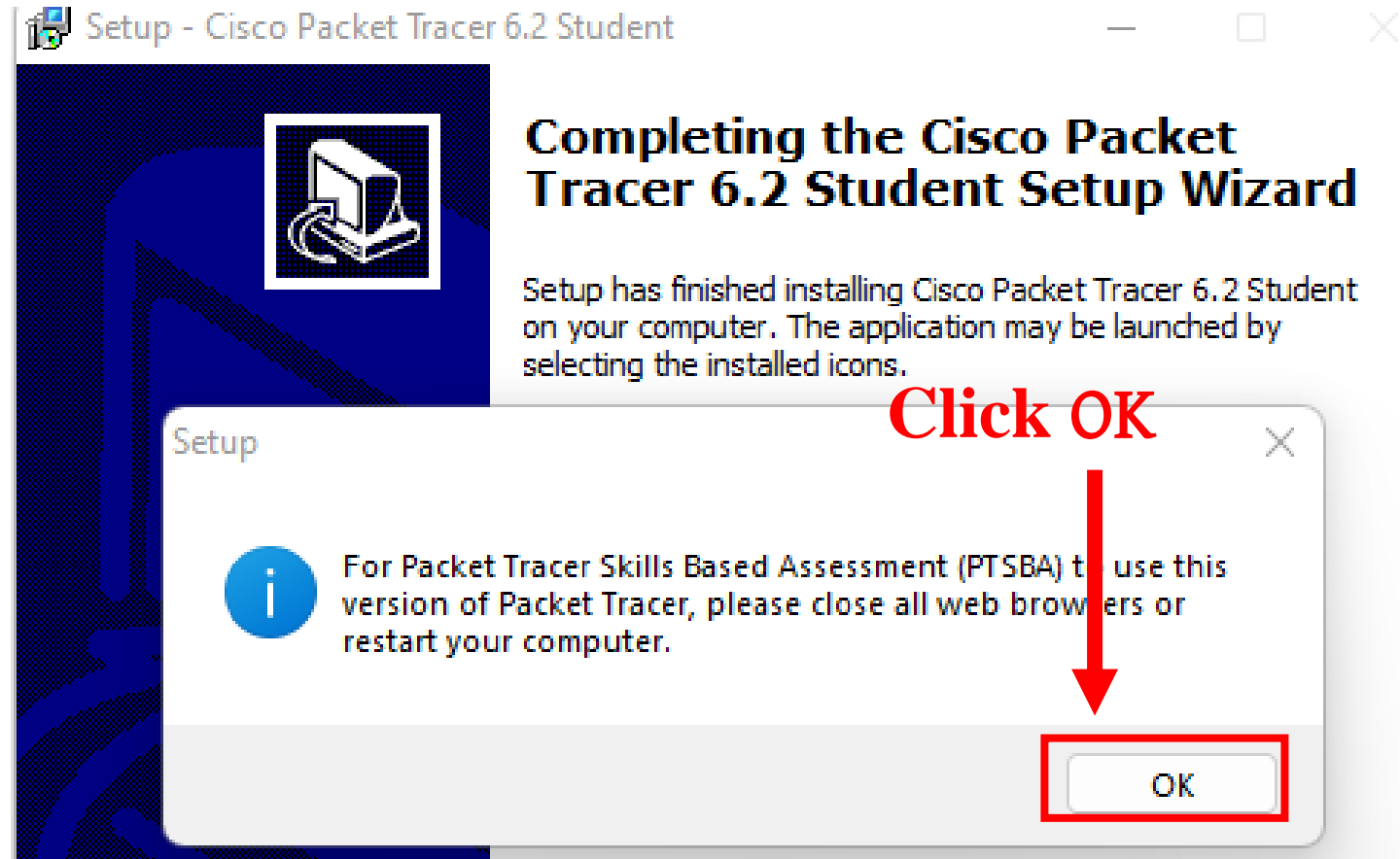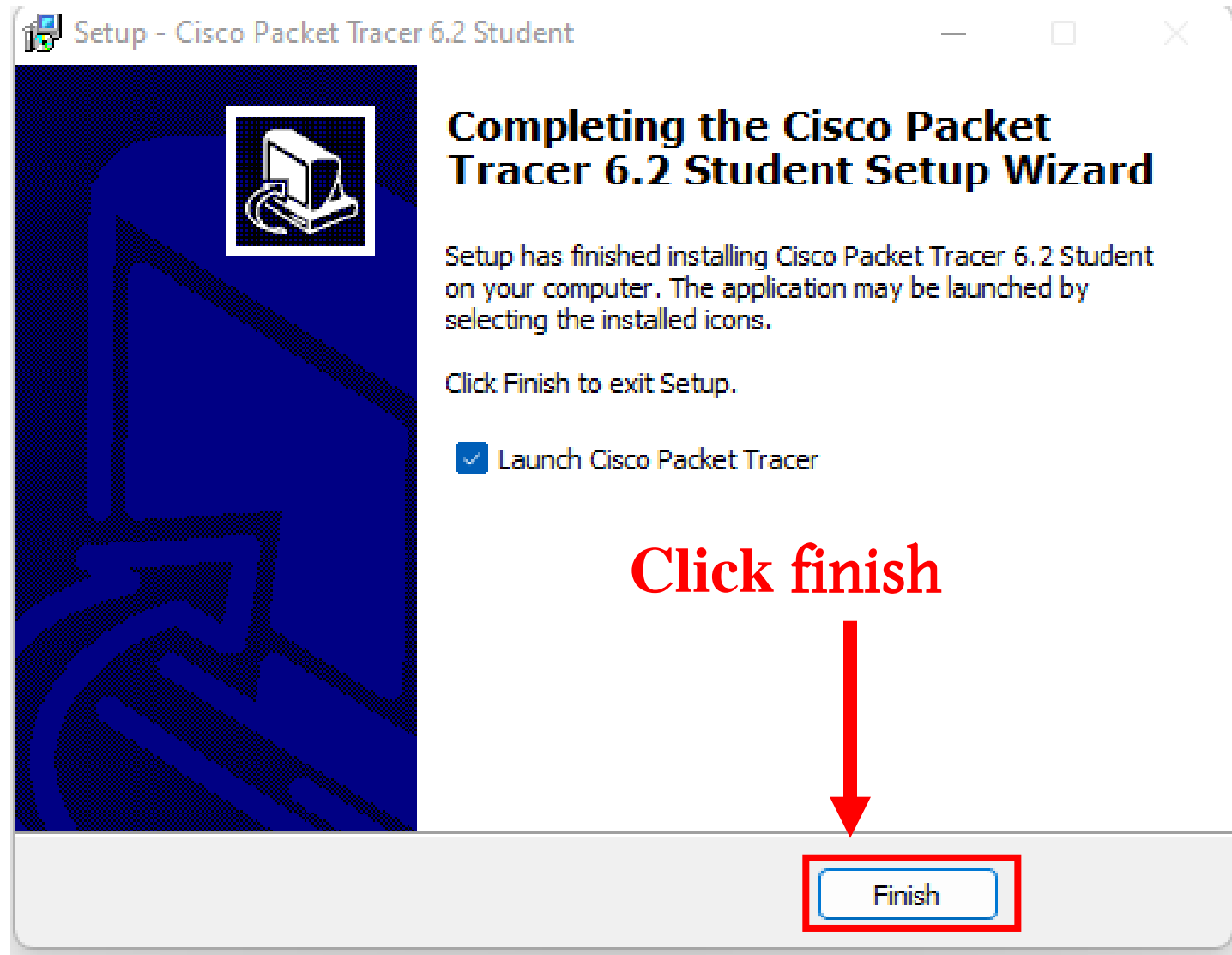❑ এরপর নিচের Interface আসবে। পরবর্তীতে Next এ Click দিতে হবে।
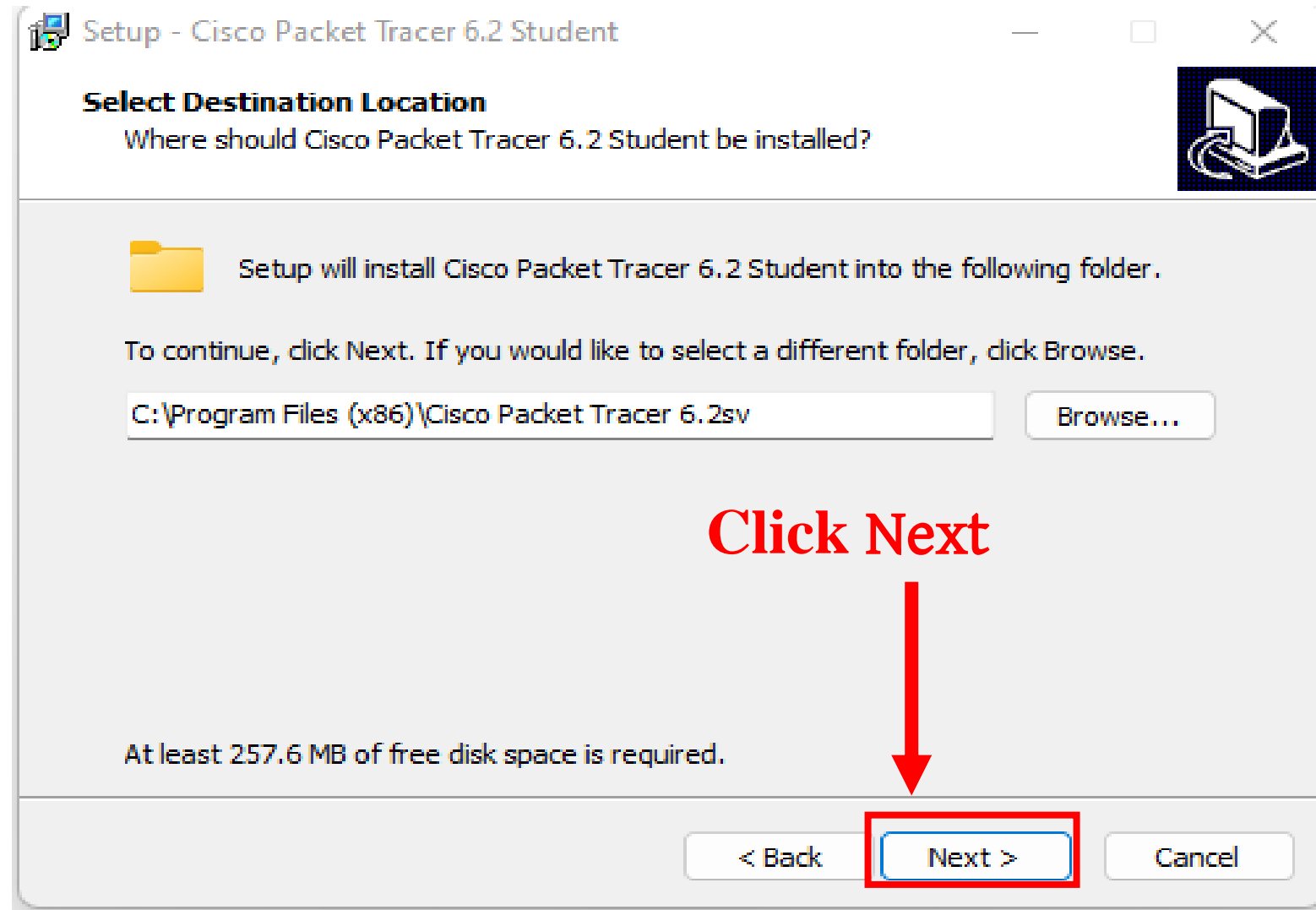
❑ এরপর নিচের Interface আসবে। পরবর্তীতে Install এ Click দিতে হবে।
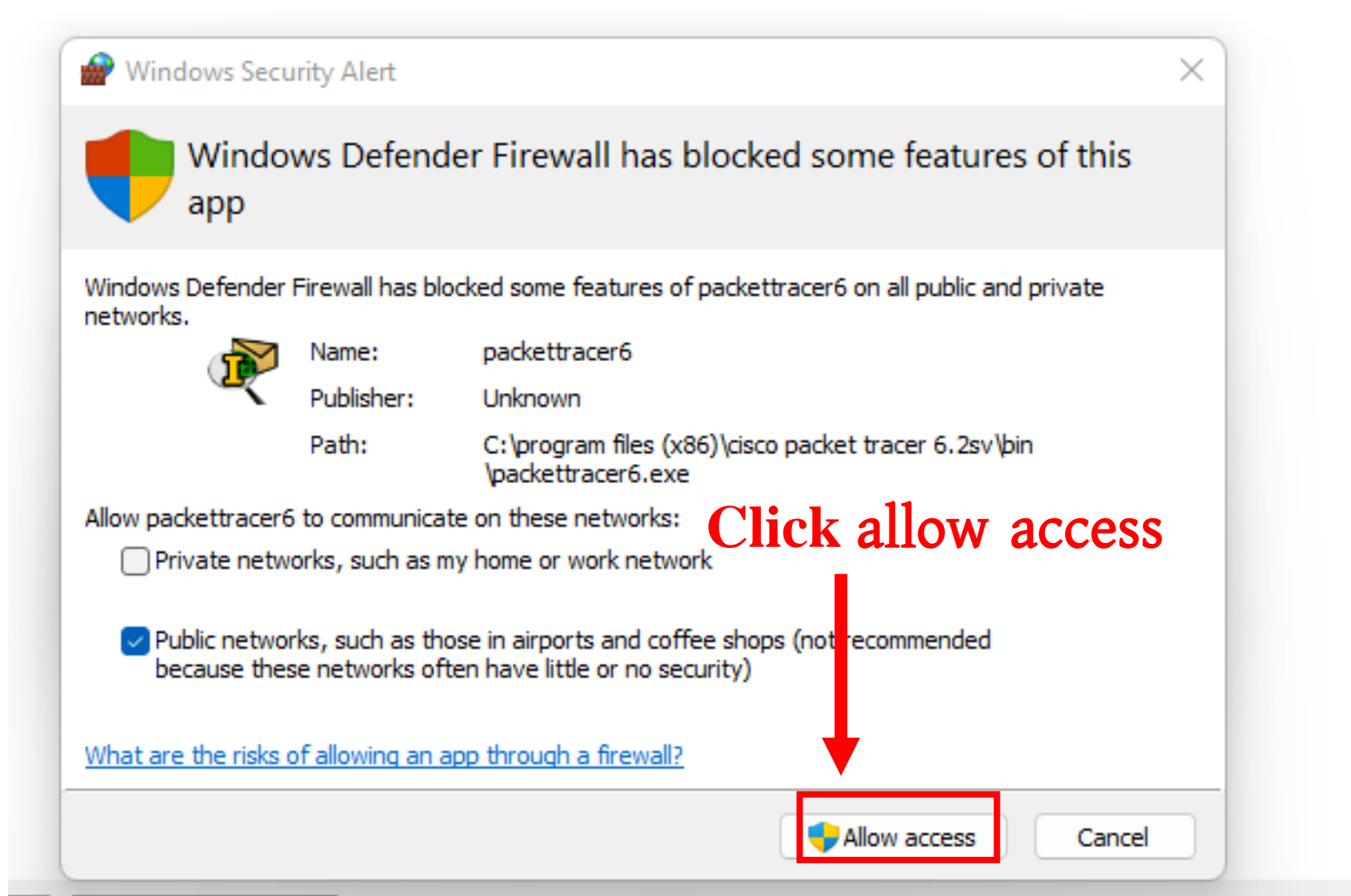
❑ এরপর নিচের Interface আসবে। পরবর্তীতে Ok এ Click দিতে হবে।

❑ এরপর নিচের Interface আসবে। পরবর্তীতে finish এ Click দিতে হবে।

❑ পরবর্তীতে Software Open করলে নিচের Interface আসবে। পরবর্তীতে Allow Access এ Click দিতে হবে।

Cisco Packet Tracer Interface Introduce

Cisco Packet Tracer Interface

Tab Bar

Open, Save, Print Option
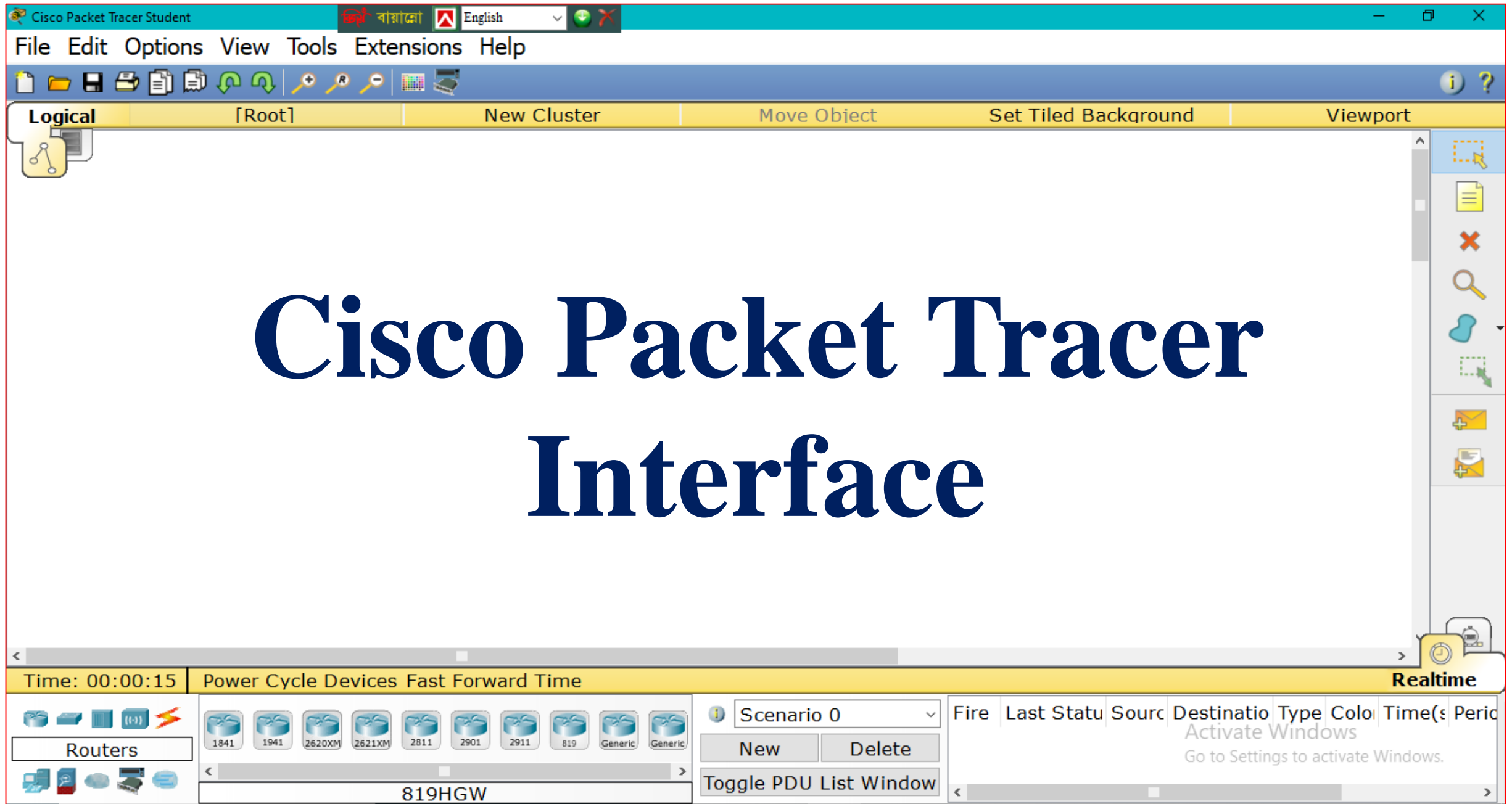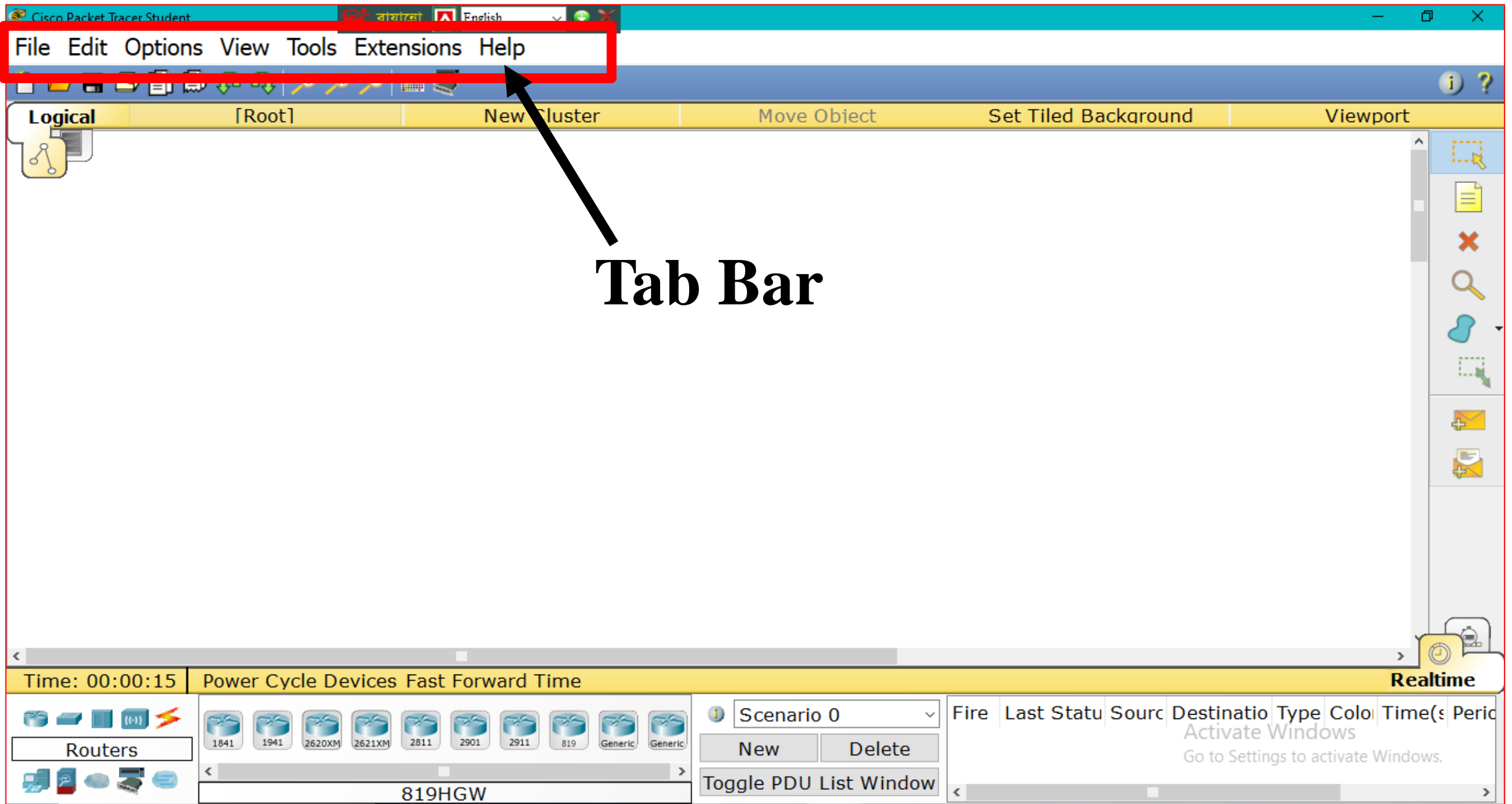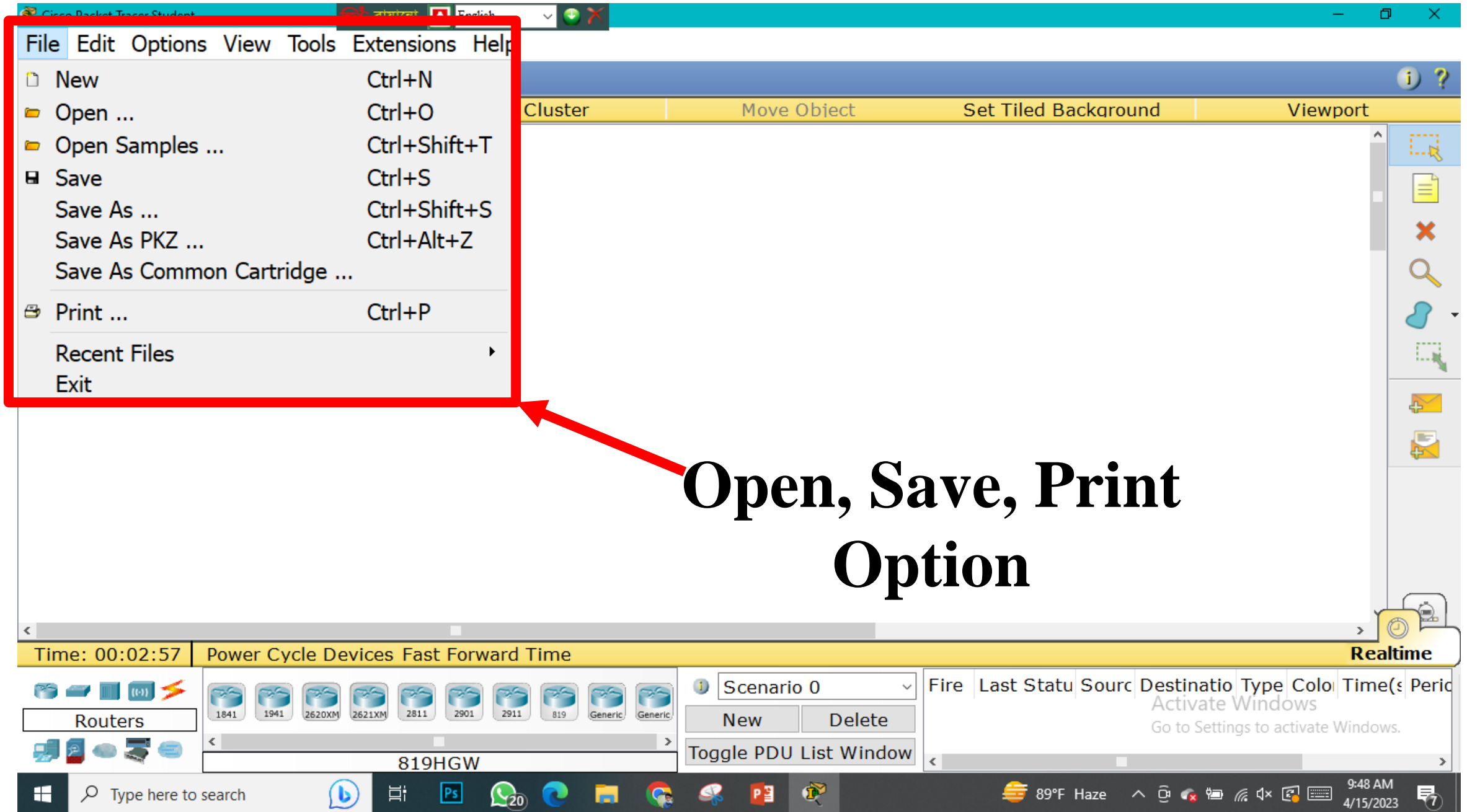
How to increase font size, icon size & ISO command size

Go to tab bar => Click Option => Click Preferences => Then go Font Option => Then increase all font size.

How to show device name & device model.

Go to tab bar => Click Option => Click Preferences => Then go Interface Option => Then enable show device name label & show device model label.

All requirement router

All router model

Time: 00:21:13 | Power Cycle Devices Fast Forward Time

Routers

1841 1941 2620XM 2621XM 2811 2901 2911 819 Generic Generic

2901

Scenario 0

New   Delete

Toggle PDU List Window

All requirement switch

All switch model

Time: 00:25:21 | Power Cycle Devices Fast Forward Time

Switches

2950-24   2950T   2960   Generic   Generic   3560 24PS   Generic

819HGW

Scenario 0

New   Delete

Toggle PDU List Wind

All requirement end device (desktop, laptop, server icon etc.)

All requirement cable

All cable model

Time: 00:35:18 | Power Cycle Devices Fast Forward Time

Connections

Automatically Choose Connection Type

Scenario 0

New   Delete

Toggle PDU List Window

English

New Cluster   Move Object   Set Tiled Background   Viewport

For delete

For design

Send packet
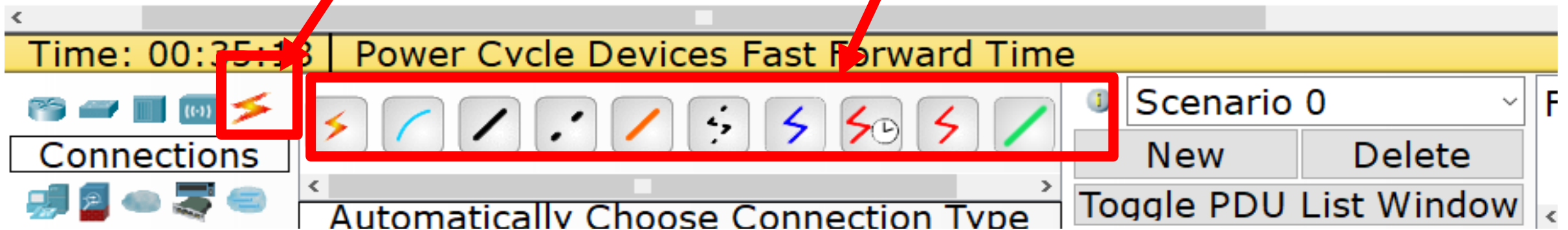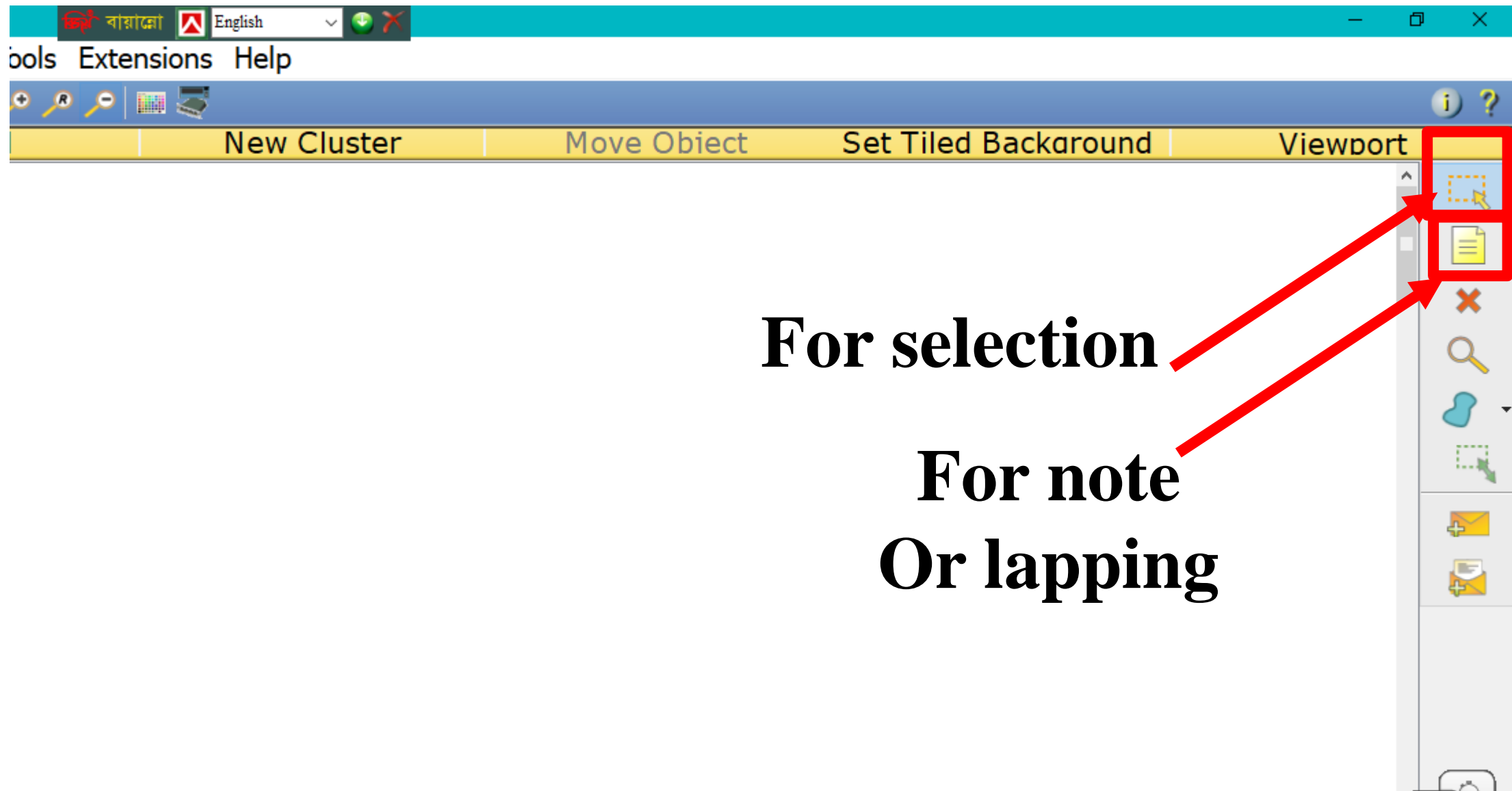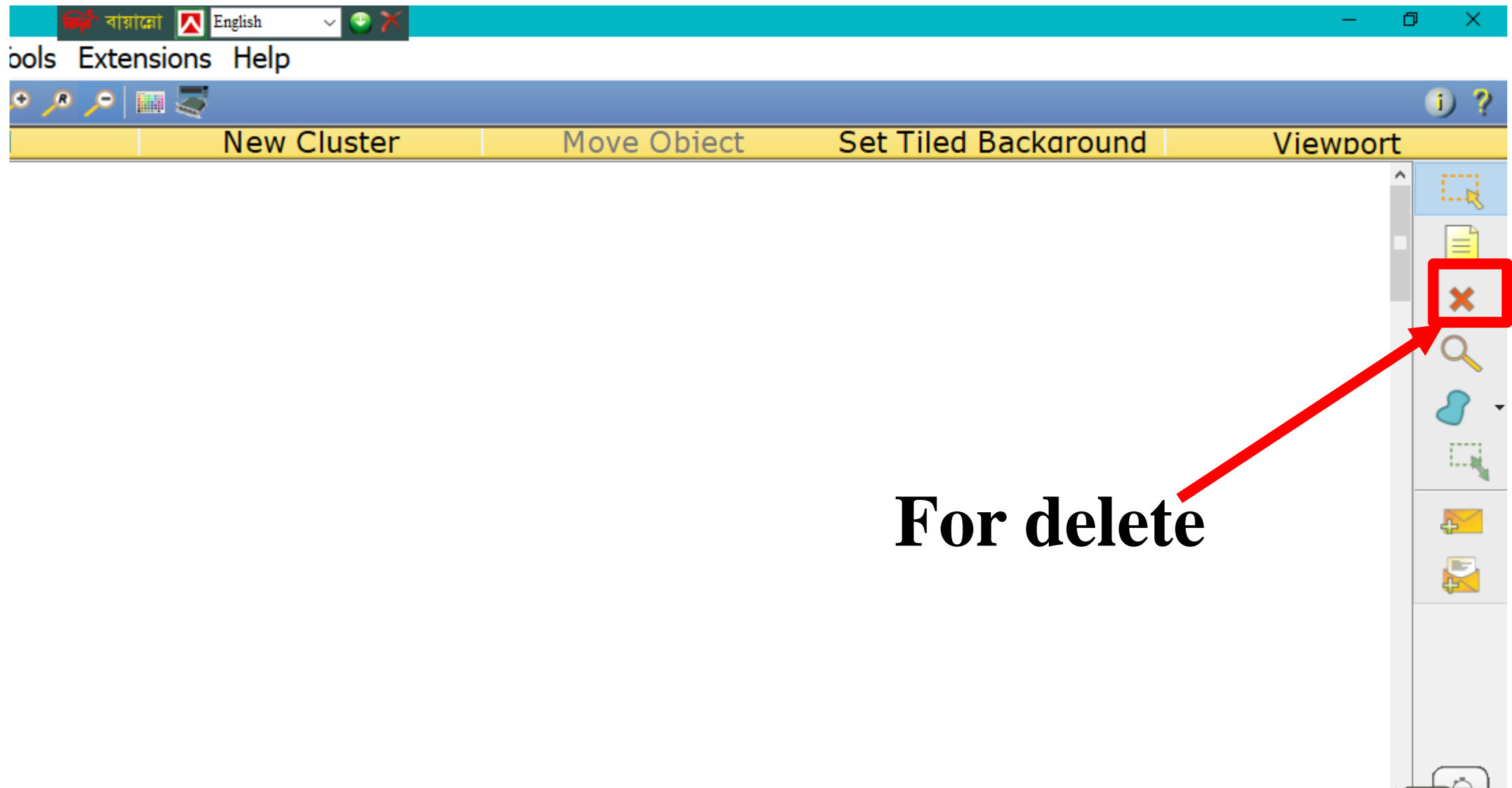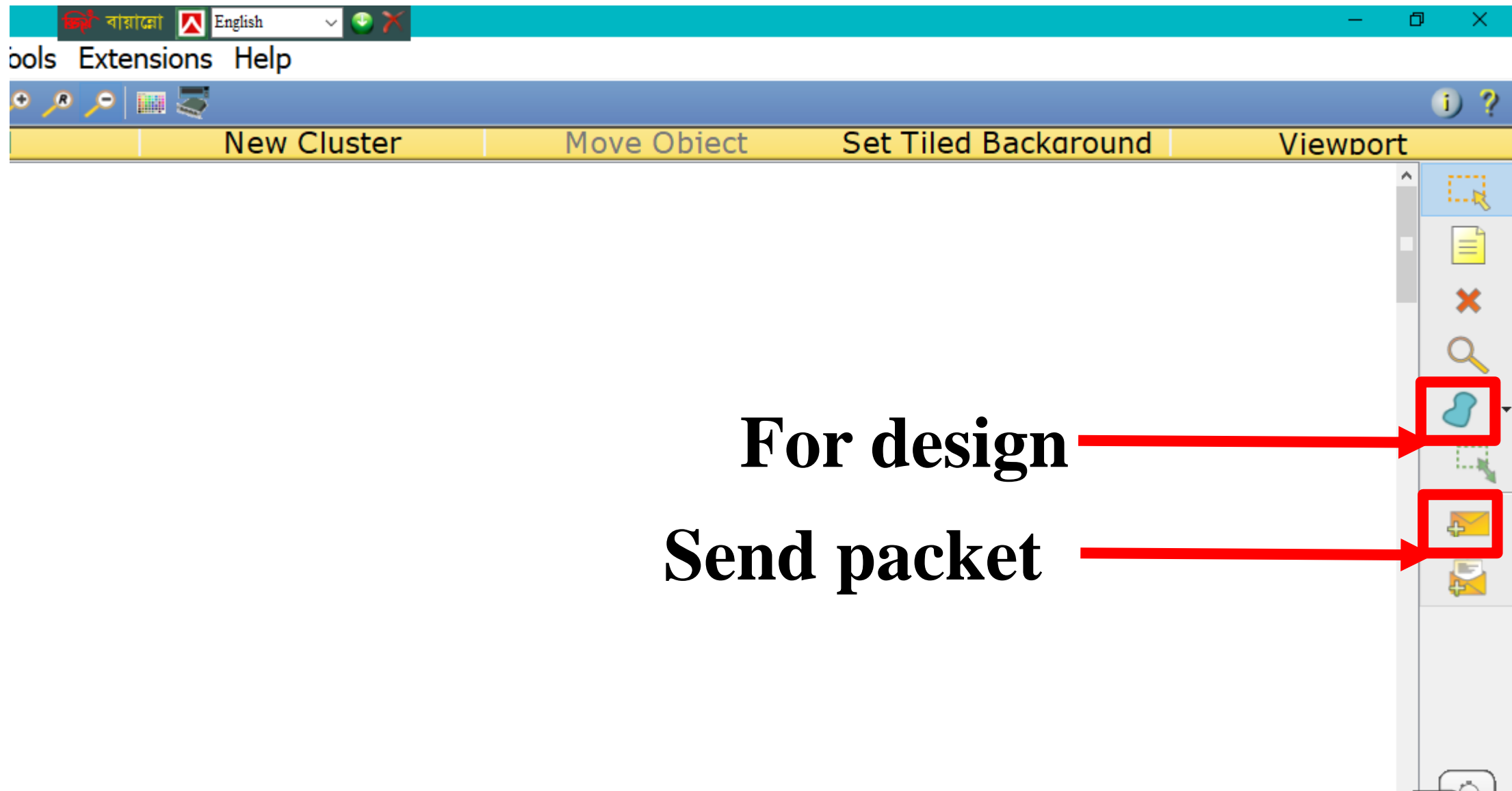
IOS Mode Hierarchical Structure

User EXEC Commands – Router>
ping
show (limited)
enable
etc...

Privileged EXEC Commands – Router#
all User EXEC commands
debug commands
reload
configure
etc...

Global Configuration Commands – Router(config)#
hostname
enable secret
ip route

interface   ethernet   **Interface Commands – Router(config-if)#**
             serial   ip address
             bri   ipx address
             etc...   encapsulation
                             shutdown / no shutdown
                             etc...

router   rip   **Routing Engine Commands – Router(config-router)#**
             ospf   network
             igrp   version
             etc...   auto-summary
                             etc.

line   vty   **Line Commands – Router(config-line)#**
             console   password
             etc...   login
                             modem commands
                             etc...

Modes on Cisco Routers

Setup Mode :-
- If NVRAM is Blank

User Mode:-
- Only some basic monitoring

Privileged Mode:-
- monitoring and some troubleshooting

Global Configuration mode:-
- All Configurations that effect the router globally

Interface mode:-
- Configurations done on the specific interface

Rommon Mode:-
- Reverting Password

Setup Mode

- If NVRAM is blank (router without configurations)
- new router or erase startup-configurations
- Skip setup mode using No option

```
Cisco 1841 (revision 5.0) with 114688K/16384K bytes of memory.
Processor board ID FTX0947218E
M860 processor: part number 0, mask 49
2 FastEthernet/IEEE 002.3 interface(s)
191K bytes of NVRAM.
63488K bytes of ATA CompactFlash (Read/Write)
Cisco IOS Software, 1841 Software (C1841-ADVIPSERVICESK9-M), Ver:
 RELEASE SOFTWARE (fc2)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2007 by Cisco Systems, Inc.
Compiled Wed 18-Jul-07 04:52 by pt_team



        --- System Configuration Dialog ---

Continue with configuration dialog? [yes/no]:
% Please answer 'yes' or 'no'.
Continue with configuration dialog? [yes/no]:
```

User Mode: Only some basic monitoring

Router>show flash

System flash directory:

File Length   Name/status

  3   5571584 c2600-i-mz.122-28.bin

  [5827403 bytes used, 58188981 available, 64016384 total]

63488K bytes of processor board System flash (Read/Write)

Router>sh ip interface brief

Interface	IP-Address	OK?	Method	Status	Protocol
FastEthernet0/0	unassigned	YES	unset	administratively down	down
FastEthernet0/1	unassigned	YES	unset	administratively down	down'

Router>show version

Cisco Internetwork Operating System Software
IOS (tm) C2600 Software (C2600-I-M), Version 12.2(28), RELEASE SOFTWARE (fc5)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2005 by cisco Systems, Inc.
Compiled Wed 27-Apr-04 19:01 by miwang
Image text-base: 0x8000808C, data-base: 0x80A1FECC

ROM: System Bootstrap, Version 12.1(3r)T2, RELEASE SOFTWARE (fc1)
Copyright (c) 2000 by cisco Systems, Inc.
ROM: C2600 Software (C2600-I-M), Version 12.2(28), RELEASE SOFTWARE (fc5)

System returned to ROM by reload
System image file is "flash:c2600-i-mz.122-28.bin"

cisco 2621 (MPC860) processor (revision 0x200) with 60416K/5120K bytes of memory
.
Processor board ID JAD05190MTZ (4292891495)
M860 processor: part number 0, mask 49
Bridging software.
X.25 software, Version 3.0.0.
2 FastEthernet/IEEE 802.3 interface(s)
32K bytes of non-volatile configuration memory.
63488K bytes of ATA CompactFlash (Read/Write)
Configuration register is 0x2102

Router>ping 1.1.1.1

Type escape sequence to abort.

Sending 5, 100-byte ICMP Echos to 1.1.1.1, timeout is 2 seconds:

.....

Success rate is 0 percent (0/3)

Router>traceroute 1.1.1.1

Type escape sequence to abort.

Tracing the route to 1.1.1.1

Privilege Mode

- Complete monitoring
- All show commands, Copy , erase commands

  Router> **enable**

  Router #

  Router # show flash

  Router # show version

  Router #show ip interface brief

  Router# ping 1.1.1.1

  Router # traceroute 50.1.1.1

  Router # show running-config   (configs in RAM)

  Router # show startup-config   (configs in NVRAM)

  Router # Copy   (save configurations)

  Router # erase   (erase configurations)

Global configuration mode

Router #

Router # configure terminal

Router (config) #

Router
Interface UP

Dhanmondi Router

2811
Router0

Bonani Router

2811
Router1

Gulshan Router

2811
Router2

2950-24
Switch0

2950-24
Switch1

2950-24
Switch2

PC-PT
PC0

PC-PT
PC1

PC-PT
PC2
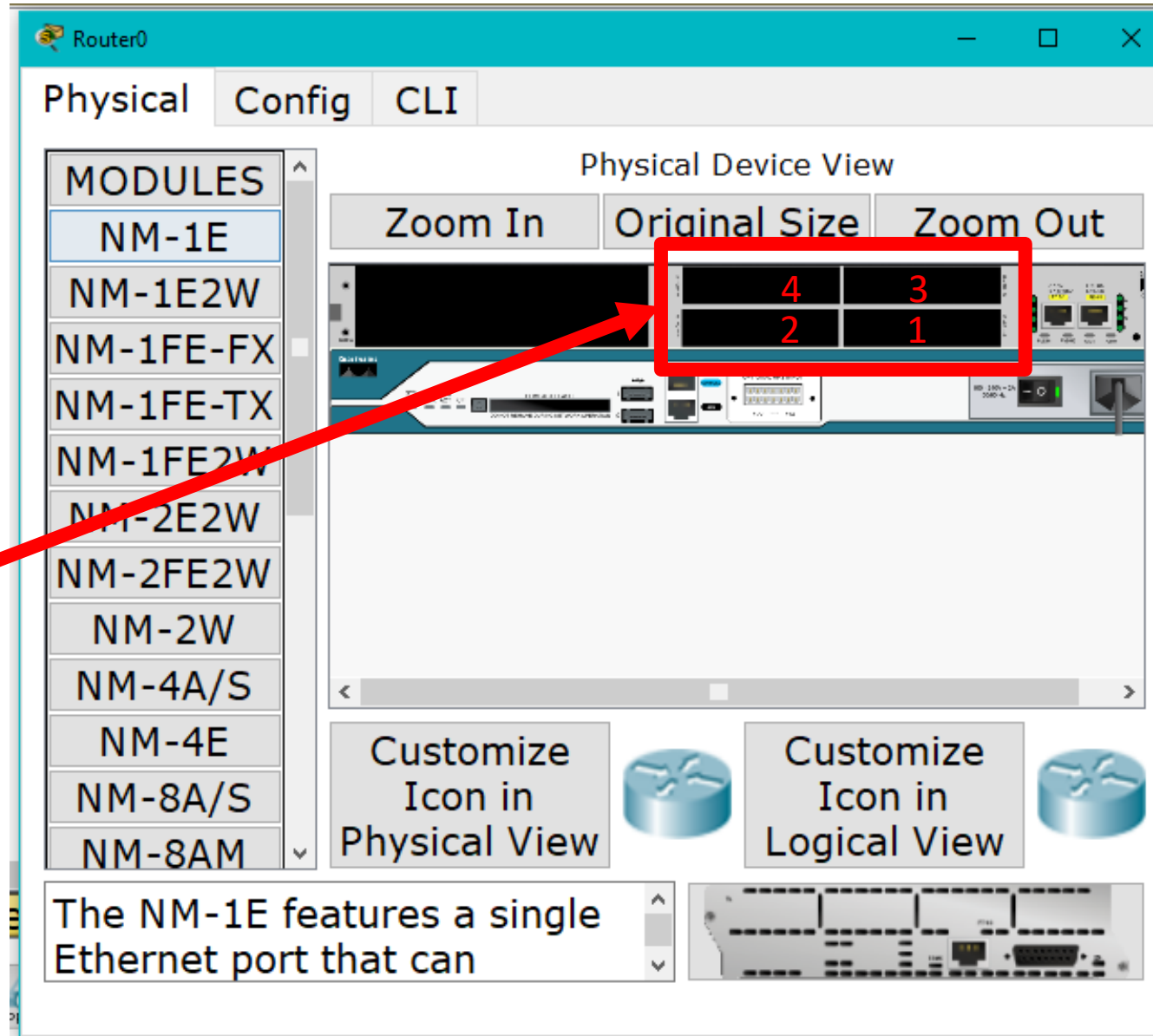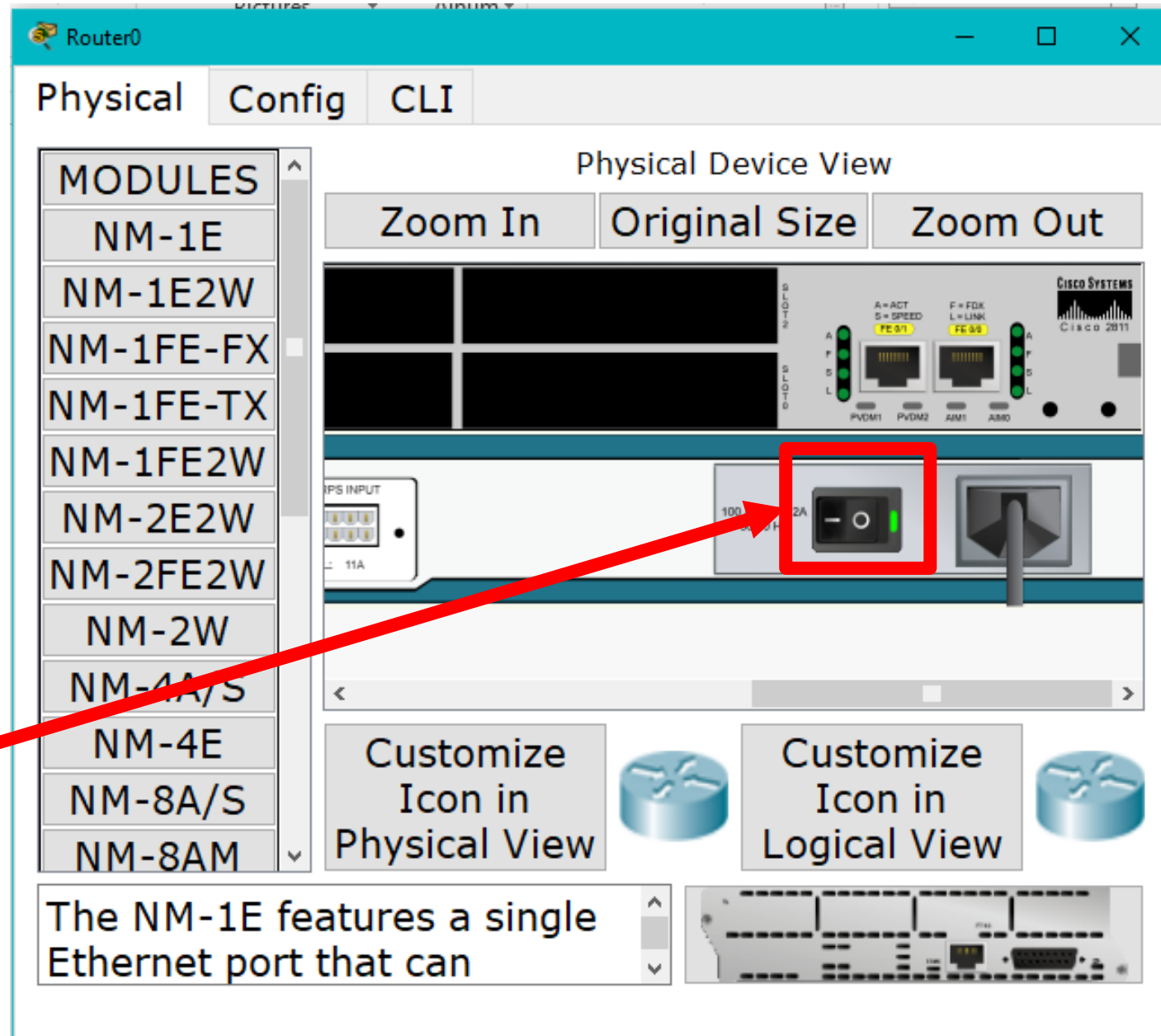
Modular

Click & off router

Scroll Down

❖ পরবর্তীতে আমাদের **WIC-2T** Click করে ধরে নিয়ে গিয়ে **Modular 1** নিয়ে যেতে হবে।

Click & On router

1. Dhanmondi router

Continue with configuration dialog? [yes/no]: no **(press enter 2 times)**

Router>

Router>en **(press tab)**

Router>enable **(press enter)**

Router#

Router#conf **(press tab)**

Router#configure t **(press tab)**

Router#configure terminal **(press enter)**

Router(config)#

Router(config)#int **(press tab)**

Router(config)#interface f **(press tab)**

Router(config)#interface fastEthernet 0/0 **(press enter)**

1. **Dhanmondi router**

Router(config-if)#

Router(config-if)#ip add **(press tab)**

Router(config-if)#ip address 192.168.1.100 255.255.255.0 **(press enter)**

[ip address<space>ip<space>subnet mask]

Router(config-if)#

Router(config-if)# no sh **(press tab)**

Router(config-if)#no shutdown **(press enter)**

Router(config-if)#

Router(config-if)#exit **(এক Mode থেকে অন্য Mode আসতে হলে exit দিতে হবে।)**

(press enter 2 times)

Router(config)#

Router(config)#int **(press tab)**

Router(config)#interface s **(press tab)**

Router(config)#interface serial 0/0/0 **(press enter)**

1. Dhanmondi router

Router(config-if)#

Router(config-if)#ip add **(press tab)**

Router(config-if)#ip address 10.0.0.1 255.0.0.0 **(press enter)**

Router(config-if)#

Router(config-if)# no sh **(press tab)**

Router(config-if)#no shutdown **(press enter)**

Router(config-if)#

Router(config-if)#exit **(এক Mode থেকে অন্য Mode আসতে হলে exit দিতে হবে।)**

(press enter 2 times)

Router(config)#

Router(config)#^Z **(press ctrl + z) (then press enter)**

Router#write **(command save করার জন্য আমরা এই command ব্যবহার করি।)**

Step-2: পরবর্তীতে Bonani Router এ প্রবেশ করতে হবে। তারপর CLI এ যেতে হবে।

2.Bonani Router

Continue with configuration dialog? [yes/no]: no **(press enter 2 times)**

Router>

Router>en **(press tab)**

Router>enable **(press enter)**

Router#

Router#conf **(press tab)**

Router#configure t **(press tab)**

Router#configure terminal **(press enter)**

Router(config)#

Router(config)#int **(press tab)**

Router(config)#interface s **(press tab)**

Router(config)#interface serial 0/0/0 **(press enter)**

2.Bonani Router

Router(config-if)#

Router(config-if)#ip add **(press tab)**

Router(config-if)#ip address 10.0.0.2 255.0.0.0 **(press enter)**

Router(config-if)#

Router(config-if)# no sh **(press tab)**

Router(config-if)#no shutdown **(press enter)**

Router(config-if)#

Router(config-if)#exit **(এক Mode থেকে অন্য Mode আসতে হলে exit দিতে হবে।)**

(press enter 2 times)

Router(config)#

Router(config)#int **(press tab)**

Router(config)#interface f **(press tab)**

Router(config)#interface fastEthernet 0/0 **(press enter)**

2.Bonani Router

Router(config-if)#

Router(config-if)#ip add **(press tab)**

Router(config-if)#ip address 192.168.2.100 255.255.255.0 **(press enter)**

Router(config-if)#

Router(config-if)# no sh **(press tab)**

Router(config-if)#no shutdown **(press enter)**

Router(config-if)#

Router(config-if)#exit **(এক Mode থেকে অন্য Mode আসতে হলে exit দিতে হবে।)**

(press enter 2 times)

Router(config)#

Router(config)#int **(press tab)**

Router(config)#interface s **(press tab)**

Router(config)#interface serial 0/0/1 **(press enter)**

2.Bonani Router

Router(config-if)#

Router(config-if)#ip add **(press tab)**

Router(config-if)#ip address 11.0.0.1 255.0.0.0 **(press enter)**

Router(config-if)#

Router(config-if)# no sh **(press tab)**

Router(config-if)#no shutdown **(press enter)**

Router(config-if)#

Router(config)#^Z **(press ctrl + z) (then press enter)**

Router#write **(command save করার জন্য আমরা এই command ব্যবহার করি।)**

Step-3: পরবর্তীতে Gulshan Router এ প্রবেশ করতে হবে। তারপর CLI এ যেতে হবে।

3.Gulshan Router

Continue with configuration dialog? [yes/no]: no **(press enter 2 times)**

Router>

Router>en **(press tab)**

Router>enable **(press enter)**

Router#

Router#conf **(press tab)**

Router#configure t **(press tab)**

Router#configure terminal **(press enter)**

Router(config)#

Router(config)#int **(press tab)**

Router(config)#interface s **(press tab)**

Router(config)#interface serial 0/0/0 **(press enter)**

3.Gulshan Router

Router(config-if)#

Router(config-if)#ip add **(press tab)**

Router(config-if)#ip address 11.0.0.2 255.0.0.0 **(press enter)**

Router(config-if)#

Router(config-if)# no sh **(press tab)**

Router(config-if)#no shutdown **(press enter)**

Router(config-if)#

Router(config-if)#exit **(এক Mode থেকে অন্য Mode আসতে হলে exit দিতে হবে।)**

(press enter 2 times)

Router(config)#

Router(config)#int **(press tab)**

Router(config)#interface f **(press tab)**

Router(config)#interface fastEthernet 0/0 **(press enter)**

3.Gulshan Router

Router(config-if)#

Router(config-if)#ip add **(press tab)**

Router(config-if)#ip address 192.168.3.100 255.255.255.0 **(press enter)**

Router(config-if)#

Router(config-if)# no sh **(press tab)**

Router(config-if)#no shutdown **(press enter)**

Router(config-if)#

Router(config)#^Z **(press ctrl + z) (then press enter)**

Router#write **(command save করার জন্য আমরা এই command ব্যবহার করি।)**

Step-4: সর্বশেষে আমরা Interface IP check করে নিবো যে প্রত্যেক Interface এ IP বসেছে কীনা, যদি না বসে পুনরায় IP Interface IP বসিয়ে দিতে হবে। সবার প্রথমে Dhanmondi Router এ প্রবেশ করতে হবে। তারপর CLI এ যেতে হবে।

1. **Dhanmondi router**

Router>enable **(press enter)**

Router#

Router#show ip int brief

Interface	IP-Address	OK?	Method	Status	Protocol
FastEthernet0/0	**192.168.1.100**	YES	manual	up	up
FastEthernet0/1	unassigned	YES	unset	administratively down	down
Serial0/0/0	**10.0.0.1**	YES	manual	up	up
Serial0/0/1	unassigned	YES	unset	administratively down	down

Step-5: পরবর্তীতে Bonani Router এ প্রবেশ করতে হবে। তারপর CLI এ যেতে হবে।

2. Bonani router

Router>enable **(press enter)**

Router#

Router#show ip int brief

Interface	IP-Address	OK?	Method	Status	Protocol
FastEthernet0/0	**192.168.2.100**	YES	manual	up	up
FastEthernet0/1	unassigned	YES	unset	administratively down	down
Serial0/0/0	**10.0.0.2**	YES	manual	up	up
Serial0/0/1	**11.0.0.2**	YES	manual	up	up

3. Gulshan router

Router>enable **(press enter)**

Router#

Router#show ip int brief

Interface	IP-Address	OK?	Method	Status	Protocol
FastEthernet0/0	**192.168.3.100**	YES	manual	up	up
FastEthernet0/1	unassigned	YES	unset	administratively down	down
Serial0/0/0	**11.0.0.2**	YES	manual	up	up
Serial0/0/1	unassigned	YES	unset	administratively down	down

Thank You