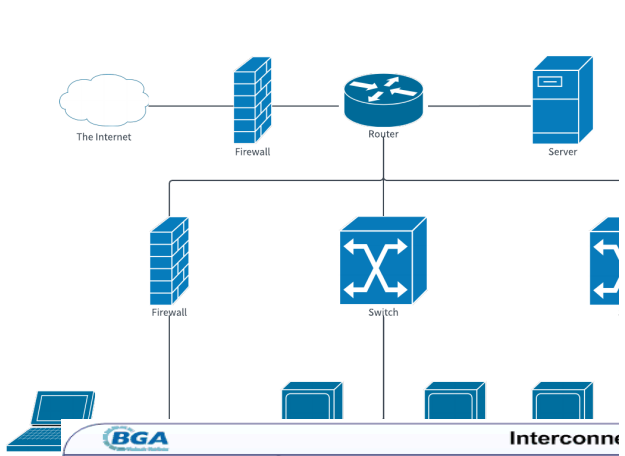
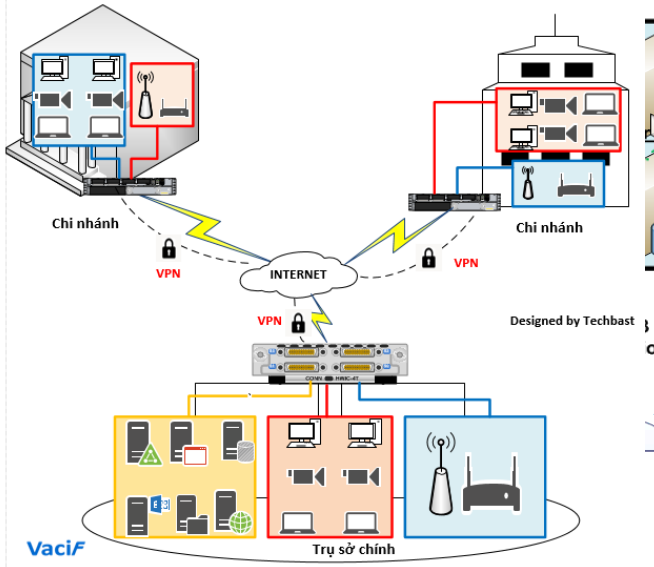
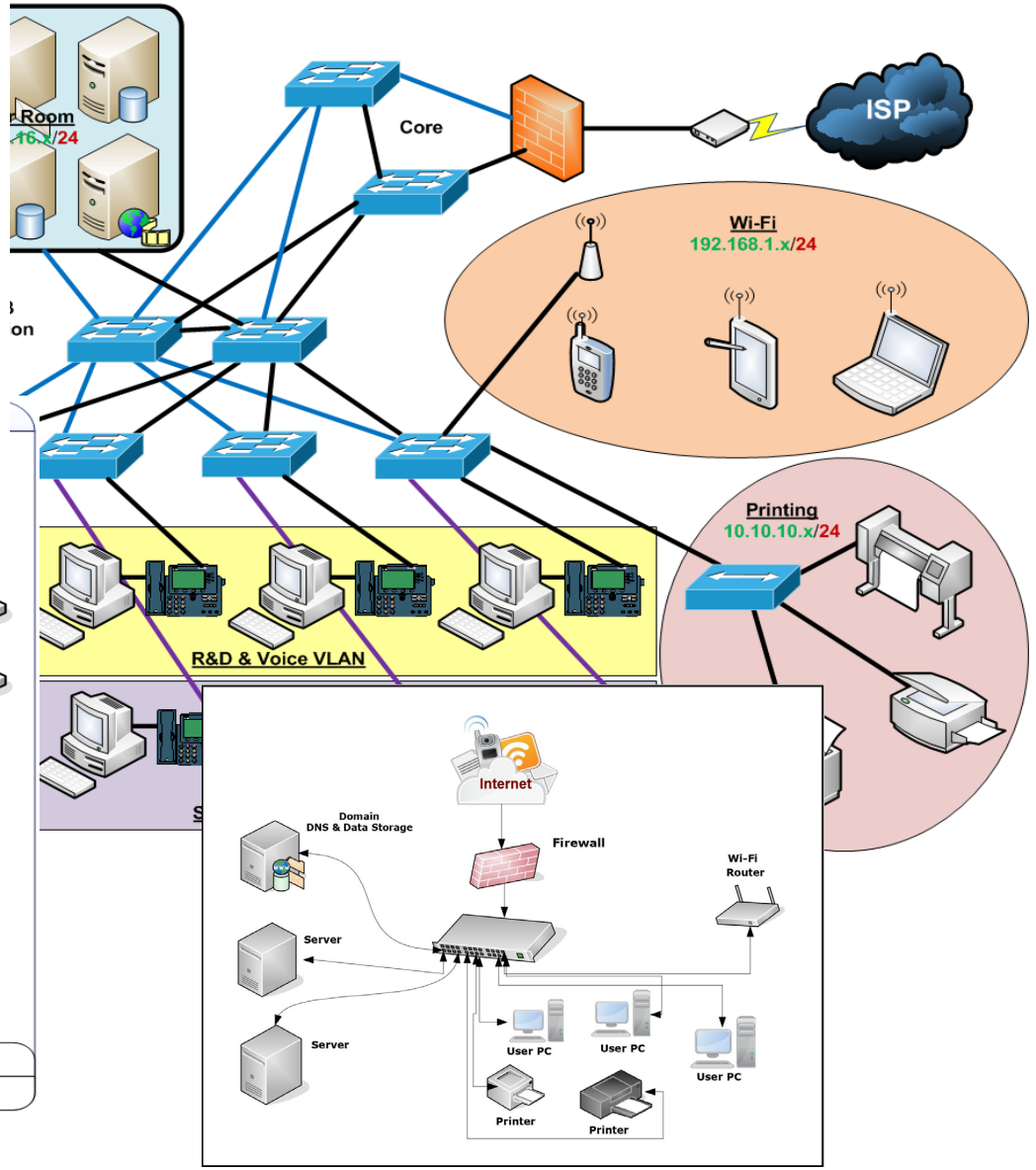
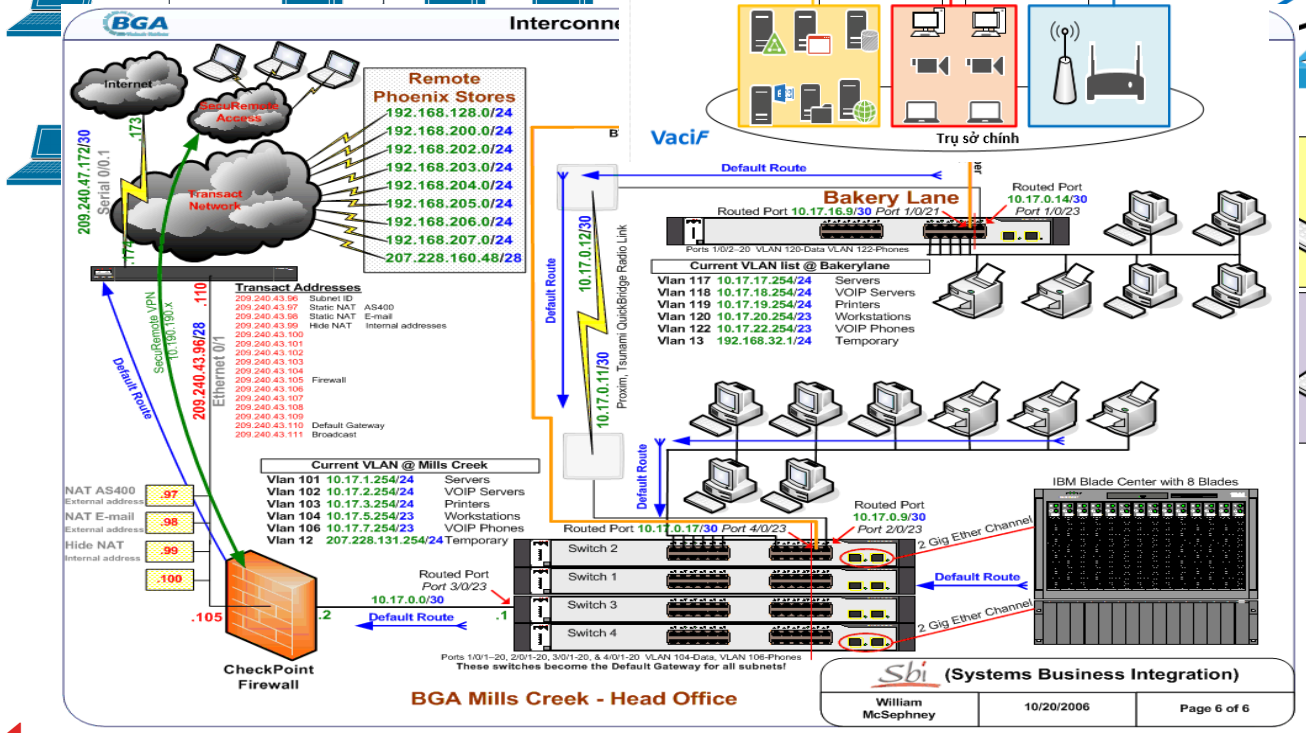
# Pre-Introduction - 00



# Summery – Introduction

- Welcome
- Professor
- Quizzes and Test
- Course Description
- Course Objectives
- Course Format
- Evaluations
- Cisco Networking Academy
  - Packet Tracer
- Resources

# Welcome

- Welcome to Fanshawe's INFO-6047 course.
- For many of you this is your first experience of post-school education (Not primary or secondar schooling), I assure you this is all together a different experience.
- For some of you, you left school a fair few years ago, and your wishing to make a change in your life.
- The rewards are great if you do the work, failure should never be an option.
- The work here at Fanshawe maybe distance learning, or in the classroom. There are weekly lectures and maybe some tutor meetings. Please attend these as they are vital to your coursework." Besides in classroom lectures, depending on circumstances there could be on-line lectures using one or more of theses tools (Bongo, **WebEx**, TeamEx, Zoom, TeamViwer, (there are others)) the one I use is Ciscos's WebEx

# Professor

Aaron Burns

Contact: a_burns2@fanshaweonline.ca

Jacob Mattinson

Contact: j_mattinson2@fanshaweonline.ca

Contacting the professor:

- E-mails must come from the students fanshaweonline account.
- E-mails must have a subject that incudes
  - Subject: “INFO-6047-**xx** <then your subject>”
  - Where **xx** is your **section number**

# Quizzes and Test

- **Quizzes/Tests**
  - All test and quizzes are made up of questions worth 1, 2, 3, or 4 points.
  - You will be allowed 1 minute per **point** to answer the questions.
  - So, a 4 point question you have 4 minutes to answer the question.
  - Each lab quiz is 10 **points** of questions (10 minute quiz) and 3% of your final grade. (12 labs x 3% = 36% of Final grade)
  - Lab quizzes they are time limited to 10 minutes **once you start.**
    - Labs and Lab quizzes should be available at the end of the Lecture time.
      - On-line, to be completed by a given time (See Lecture -01)
      - In classroom, quizzes are to be completed by the end of the Lab for that week
  - **Missed Quizzes or test**, you lose the grade points for that event! **There are no makeup for missed quizzes or test!**
  - There are no "Bonus" quizzes or test.
  - **30 minutes late starting an exam/test** (mid-term and the final week) you get "0" (zero)

# Quizzes and Test (continued)

## Quizzes/Tests (continued)

- All test and quizzes are "**Open Book**".
- Open Book
  - You can do any google search you like
  - You can go and search the FOL site, look through you lectures and labs
  - You can have any books or notes you have made, open and available

- If you do not study (try to search for all the answers) you will fail!

- This course (INFO-6047) is easy to pass
  - Do the reading of the book
  - Try (Keep trying) the books chapter quizzes until you get mid 70s to mid 80s (if you do this you should ACE this course)
  - Try and complete the labs (ask question if your having problems).
  - Do the Lab Quizzes

# Quizzes and Test (continued)

Please remember

**The only dumb question is the one not asked!**

# Course Description

- This course focuses on the basic operation and analysis of the roles of routers and switches in an enterprise networks.
- Topics covered include basics in switching, VLANs, basic routing, inter-VLAN routing, and protocols, both IPv4 & **IPv6**.
- The course covers the Routing & Switching Essentials.

# Course Objectives

- Explain the features of switches and routers and how they operate in networks and make packet forwarding decisions
- Explain the purpose and operation of VLANs and the VLAN trunking protocol and how they are implemented in a network
- Explain the methods to route between VLANs, including multiple interfaces, and single interfaces on a router such as on a stick and routing on a layer 3 switch.
- Describe the features of the IP network layer addressing protocol and perform calculations to implement IP addressing with IPv4 and IPv6 (VLSM, Variable Length Subnet Masks)
- Explain the concepts of static and default routes and their use in network operations

# Course Objectives (continued)

- Describe the functions, characteristics and operations of dynamic routing protocols such as RIP and OSPF
- Configure, verify and troubleshoot network operations of routing protocols RIP & OSPF, switching protocols and the processes of VLANs, Inter-VLAN routing, static and default routes
- Explain the features of standard and extended access control lists and how they are implemented to control network traffic to control network traffic
- Explain, configure and troubleshoot layer 3 protocols such as DHCP and NAT

# Course Format

- The course is assigned 5 hours per week
  - 2 hours of lecture time
  - 3 hours of lab time
- There will be weekly labs to be completed during class time
  - 12 of the labs will be worth 3% each of your final grade (36% total of your final grade)
- The labs will develop essential skills and reinforce the lecture concepts

# Evaluations

- Mid-Term (test 1) — 32 %
  - Mid-Term will be during normal class time

(See detailed **Weekly Content** PDF for time and date)

- Finale Exam (test 2) — Last week — 32 %
  - Final exam will be during normal class time

(Sometimes Fanshawe will come up with a different schedule for the final exam)

  - Labs 12 marked @ 3% each — 36 %

INFO-6047 course — 100%

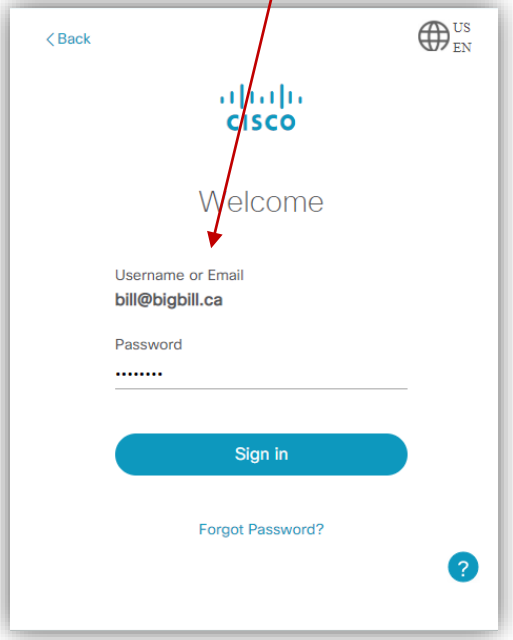
# Cisco Networking Academy

- The course will cover the Some of Cisco CCNA Routing & Switching Essentials curriculum
- This course is not part of the Cisco Networking Academy program
- The Cisco academy can be accessed at www.netacad.com
- We will be using some of the Academe's recourses
  - You will be required to create a login to the Cisco Networking Academy's web site (NetAcad)
    - If you do not already have a NetAcad account please create one
      - If you need to create a NetAcad account Please use your **fanshaweonline e-mail** address for the login
        (This is not important for this class, but if any other professor is using the NetAcad resources and creates and account for you, they will use your fanshaweonline e-mail to create an account for their class, and you may end up with two accounts on the site… if you don't use the fanshaweonline e-mail to create your account)
    - Once you have created an account on the NetAcad site, you need to do two things:
      1) Sing up for the 10 hour Packet Tracer (also known as PT) course
         (you do not need to do the PT course but it will keep you NetAcad account active for more that 30 days)
      2) Download and install the Packet Tracer program
         (we will be using this to do our labs for the on-line courses, for when we don't have access to the real equipment at Fanshawe)
  - Please go to the NetAcad web site listed above

# Cisco Networking Academy (continued)

- When you revisit the NetAcad site:

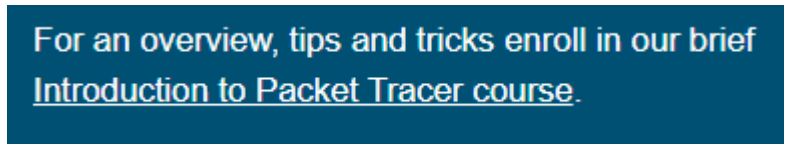

www.netacad.com

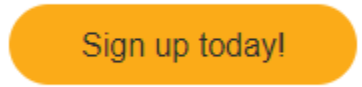



- Your Cisco, “My NetAcad” log in:
  username - -> is you FOL e-mail address
  <your_e-mail_mane>@fanshaweonline.ca
  and the password will be your creation from the E-mail you received from Cisco and followed the instructions to complete the singe up process.
- You will also need this login and password to start using Packet Tracer!
- I can not reset you password, so don’t forget or miss-spell the login of password.

# Cisco Networking Academy (continued)

- Find the link at the bottom of the first viewable page that looks like:
- You should find a link like:
- Follow this link
- Scroll down looking for

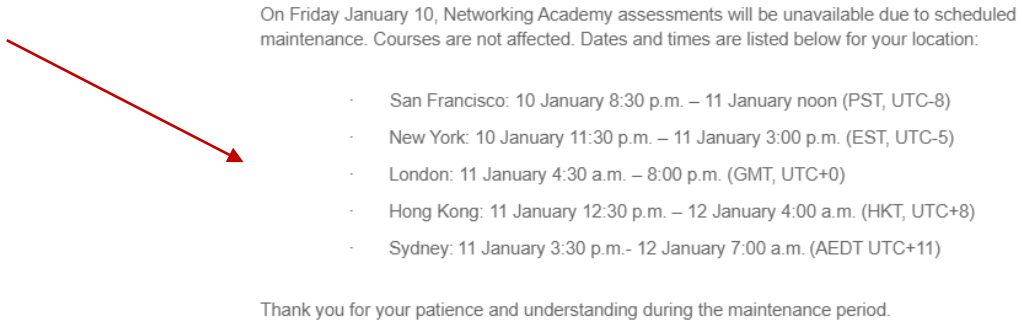




- This should lead you through singeing up for a free 10 hour PT course
  - Again please use your <YourName>@fanshaweonline.ca e-mail address as a login for your account
- Download and install the PT software.

# Cisco Networking Academy (continued)

- You may get message from NetAcad like



On Friday January 10, Networking Academy assessments will be unavailable due to scheduled maintenance. Courses are not affected. Dates and times are listed below for your location:

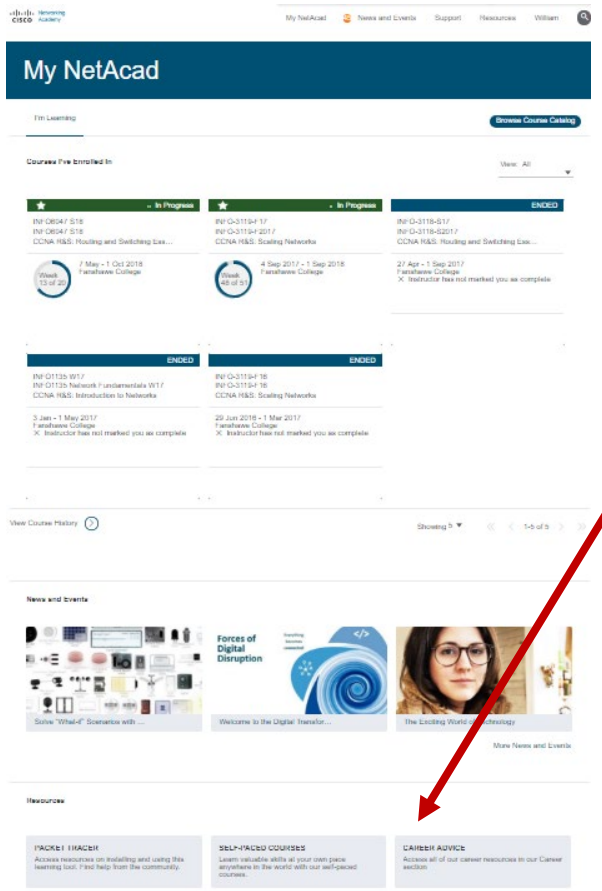
- San Francisco: 10 January 8:30 p.m. – 11 January noon (PST, UTC-8)
- New York: 10 January 11:30 p.m. – 11 January 3:00 p.m. (EST, UTC-5)
- London: 11 January 4:30 a.m. – 8:00 p.m. (GMT, UTC+0)
- Hong Kong: 11 January 12:30 p.m. – 12 January 4:00 a.m. (HKT, UTC+8)
- Sydney: 11 January 3:30 p.m.- 12 January 7:00 a.m. (AEDT UTC+11)

Thank you for your patience and understanding during the maintenance period.

- Remember because PT logs into your NetAcad account you may not be able to get PT running at these times…
  - So please plan your time accordingly for doing your labs.

# Packet Tracer

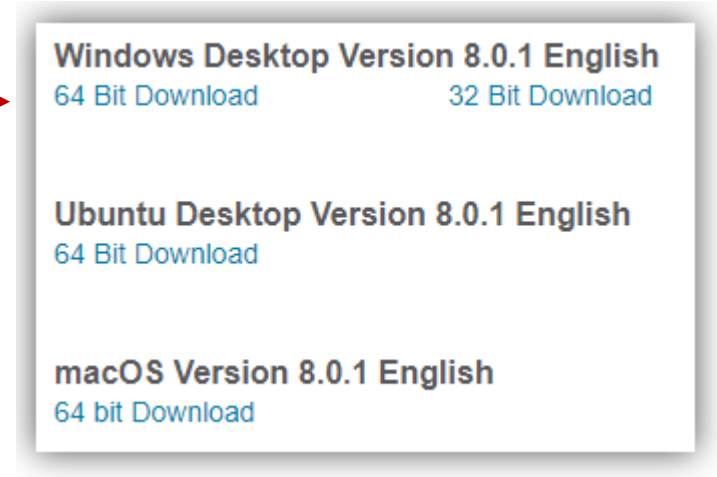
- If for some reason you do not get directed to the PT download page when you singe up for the course…
- Go and log in to the NetAcad site, and scroll to the bottom of the page



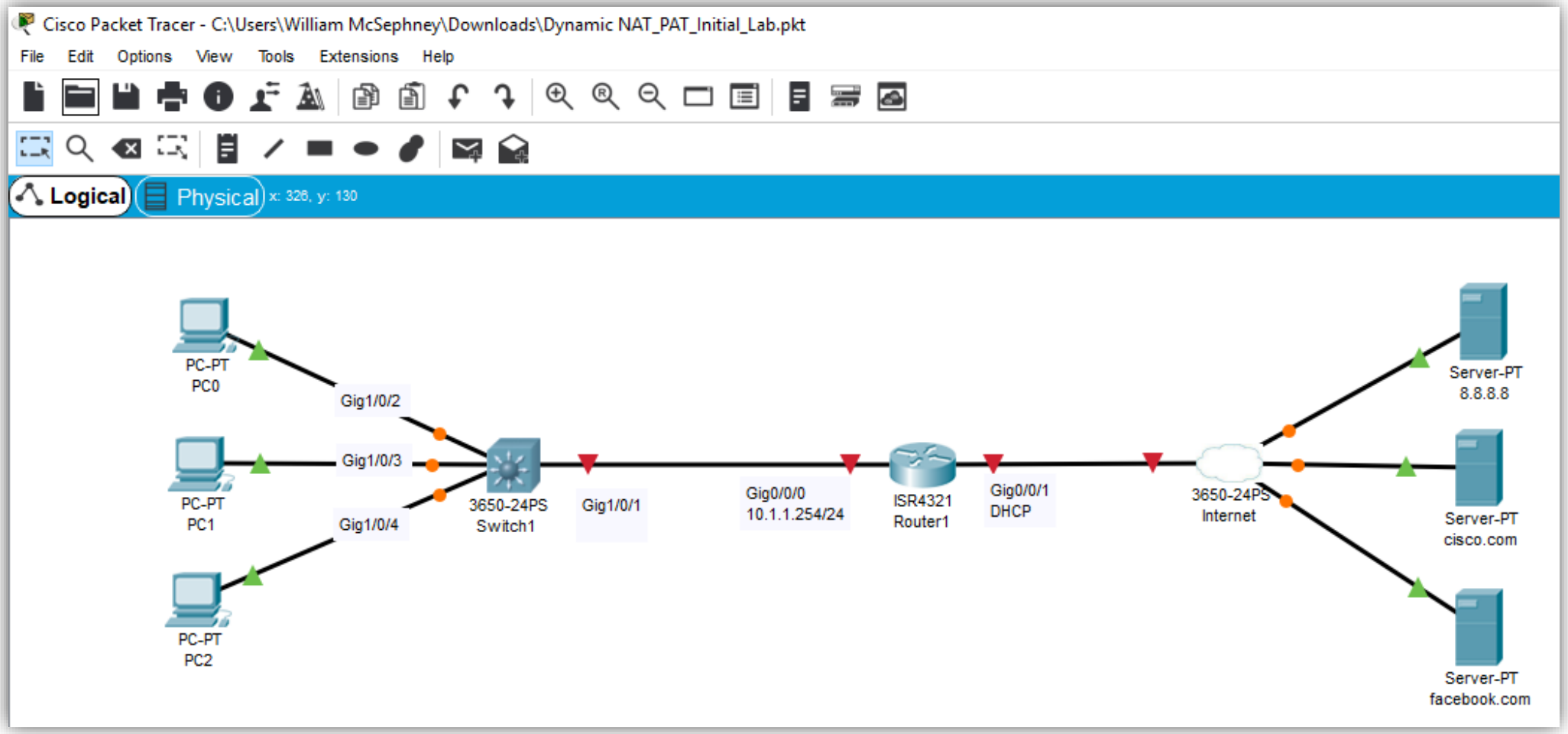

**PACKET TRACER**

Access resources on installing and using this learning tool. Find help from the community.

Click on this
Scroll down and Download Packet Tracer
It's free and you will need it from time to time, or each week.
Please get the appropriate version for your system (32 or 64 bit)

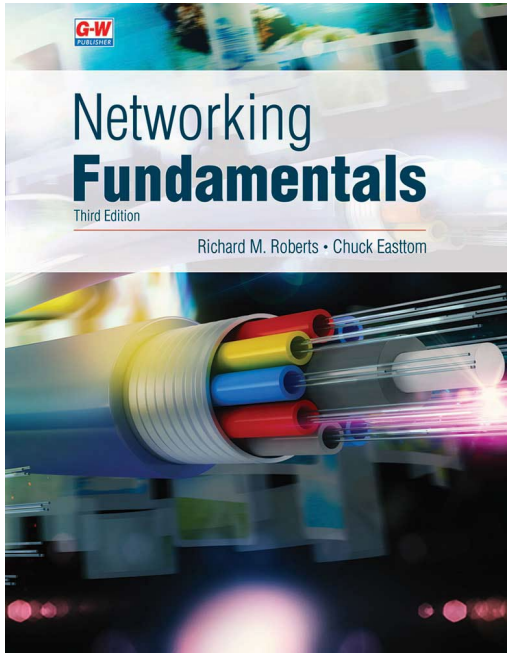


# Packet Tracer (continued)



# Resources

- Electronic version of the G-W Networking Fundamentals (Third Edition) (www.g-w.com/networking-fundamentals-2020)
- Optional: available on Amazon and other places is the paper / hard cove book, search for ISBN 978-1-63563-443-3
- Readings, labs, research
- Cable kit ((**optional**))
  **Needed for in-house lab days**
- Laptop




You will be required to have a cabling kit. This kit contains:

- 2 cross-over Ethernet cables
- 4 regular Ethernet cables
- A blue console cable (rollover cable)
- USB to Serial interface cable

ISM - Information Security Management

- **Processor:** 64 bit Multicore Intel® w/ Intel-VT or 64 bit Multicore AMD with AMD-V support
- **Memory:** 16GB Minimum
- **Optical Drive:** DVD Multi Dual Layer or external USB Optical Drive (Optional)
- **Operating System:**Microsoft Windows 10 Enterprise, Pro, or Education
- **Hard Disk Drive:** 256GB SSD or greater HDD with external USB Storage Drive
- **Display:** 14" XGA (1024x768), DirectX11 and OpenGL 4.0 (or higher) compatible or better
- **Communication devices:**
  - Wireless (802.11a/b/g/n compliant)
  - Ethernet 10/100/1000 Mbps with standard RJ45 jack
- **USB Ports:** 2 x USB 3.0 ports (additional USB 2.0 ports optional)