

# Welcome!

## NET3012 – IP Architectures and Solutions (Nokia NRS II)

Course Professor: Michael Anderson

Lectures: Mon 2 – 4pm T327 (1<sup>st</sup> wk in Carleton AP136)  
Wed 4 – 5pm T327 (1<sup>st</sup> wk in Carleton AP136)

Labs: A1 Mon 10 – noon T108 (1<sup>st</sup> wk at Carleton, AP136; bring laptop)  
A2 Fri 8 – 10am T108 (1<sup>st</sup> wk at Carleton, AP 136; bring laptop)

### My Contact Info:

Office: T313

Office hours: As per schedule posted on course web site  
... and at other times by appointment or email

Email: [Michael.Anderson@AlgonquinCollege.com](mailto:Michael.Anderson@AlgonquinCollege.com)

Phone: 613-727-4723 ext 6217

... **Your contact info???** Remind.com – @18WNET3012

<http://michaelanderson.ca/18W-NET3012-010/ContactInfo-18WNET3012.pdf>

### Course Objectives:

- ◆ To provide a solid understanding of IP *Services*, with an emphasis on MPLS and VPNs (L1, L2, L3).
- ◆ To increase your knowledge and skill of networking equipment, using Nokia equipment.
- ◆ To prepare you to complete your study of networking, following Nokia's NRS II curriculum.

For additional info on this course, please see the official **course outline**, as posted on the course web site. We'll look at a few items, including **schedule** (final week), textbooks, **tests**, marks allocation, and use of electronic devices in the classroom.

### Course Prerequisite

You must obtain a passing grade in NET3008. All students not meeting this requirement will be withdrawn from the course once final grades are posted.

## Introductions

- (Re-)introduce myself, especially *Why do I teach?*
- *Have great confidence in me, but don't trust me*  
... Be sure to check it out for yourself!
- *My focus is on learning, not on marks*  
... This answers a lot of questions
- *TL;DR = F (guaranteed)*  
... I can guarantee you won't pass the course without reading the textbook
- *I would like to know everything about everything, but I don't*  
... Bring your work experience to the table and please share it during lectures.
- **NO** cell phones or laptops in lectures; **no** cell phones in labs  
Please see addendum notes for Wk01Day1.
- Quick review of some past course evaluations (course has run 4 times so far)

## Required Resources

- Course web site: <http://www.michaelanderson.ca/18W-NET3012-010>
- Nokia account for remote access to lab equipment
- Lab book: hard-bound book with non-removable pages (same as always!)
- External HD or USB memory stick: for backups, etc.
- Printouts of labs (on a week-by-week basis)
- Required textbooks (provided free, courtesy of Algonquin ICT dept):
  - ✓ Alcatel-Lucent Network Routing Specialist II (NRS II) Self-Study Guide, by Glenn Warnock & Amin Nathoo, Wiley, 2011, ISBN: 978-0-470-94772-2 / 978-1-118-17813-3
  - ✓ Multi-Protocol Label Switching (MPLS) and Service Architecture (SA) course texts from Nokia
- Suggested textbooks:
  - ✓ Alcatel-Lucent Scalable IP Networks Self-Study Guide by Kent Hundley, Wiley Press 2009, ISBN: 978-0-470-42906-8

## Week 1: Assigned Readings & Lab work

- Just like NET1002 where you registered on the Cisco Academy site, you need to complete a Nokia confidentiality agreement
  - Lab 01 prelab:
    - (Due date dependent on date emails issued by Nokia)
    - **create your Nokia corporate account**; use your **Algonquin email !!**
    - familiarize yourself with standard lab topology
    - familiarize yourself with layers of passwords required for remote access
  - Download ebook and etextbooks (free, after registering and signing Nokia confidentiality agreement); "install" your free ebook so you can start reading it
  - Lab 1: Connect via VPN to Nokia lab equipment; create interfaces and configure **full** static routing
  - Lab 1 post-lab: book a MySRLab session; connect & use MySRLab
    - (Due date dependent on date emails issued by Nokia)
  - Due next Wed (subject to availability of NRS-II textbook):
    - Read in NRS-II: pp 1-32; scan the Forward; Introduction (first 3 pages)
    - Read in NRS-II: Ch 11, pages 473-513
- Expect a quiz every week** eg. beginning of **every** Mon lecture (don't be late!!)

## Schedule for Regular Weekly Due Dates

Expect this every week

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	A1 Lab <b>In-class Q</b>				A2 Lab	Sect A1 post-lab
	<b>In-class Q</b>			Sect A2 post-lab		

This schedule was designed to (hopefully) mesh with due dates for other courses.

## New Material: Course Overview

- Who is Alcatel-Lucent? – purchased by Nokia (completed in Feb 2016)
- Material taken from Modules 0-1 of Nokia MPLS courseware:
  - Comparison of Cisco vs Nokia certification tracks
  - What are IP services? - A brief introduction
  - What is MPLS? - A brief introduction
  - What is a VPN, really?
- How different is Nokia networking equipment?
  - Whirl-wind comparison of Cisco & Nokia CLI (in lab this week)

## Getting Signed-up with Nokia

You should receive an email at your Algonquin student email from learning.services@Nokia.com with the subject "Nokia Student Portal Account Activation" (TBC) which gives details of the following steps.

1. Create an Nokia corporate account
  - you must use your **Algonquin email** address!
  - request "General Access"
  - Wait for a response from (?) iCare <[icare@Nokia.com](mailto:icare@Nokia.com)> titled (?) "Welcome to Nokia.com <your name>"
2. Activate / initialize your SRC student account; credentials are provided in the email above; or try the shortcut: <https://networks.nokia.com/src/studentportal> or possibly even more direct: <https://networks.nokia.com/src/certmanager>
3. Complete the confidentiality agreement: go to Online Agreements & Orders
4. Go to the Downloads section to grab the course notes (MPLS and SA)

Details for accessing the NRS-II Self Study Guide e-textbook are outlined below.

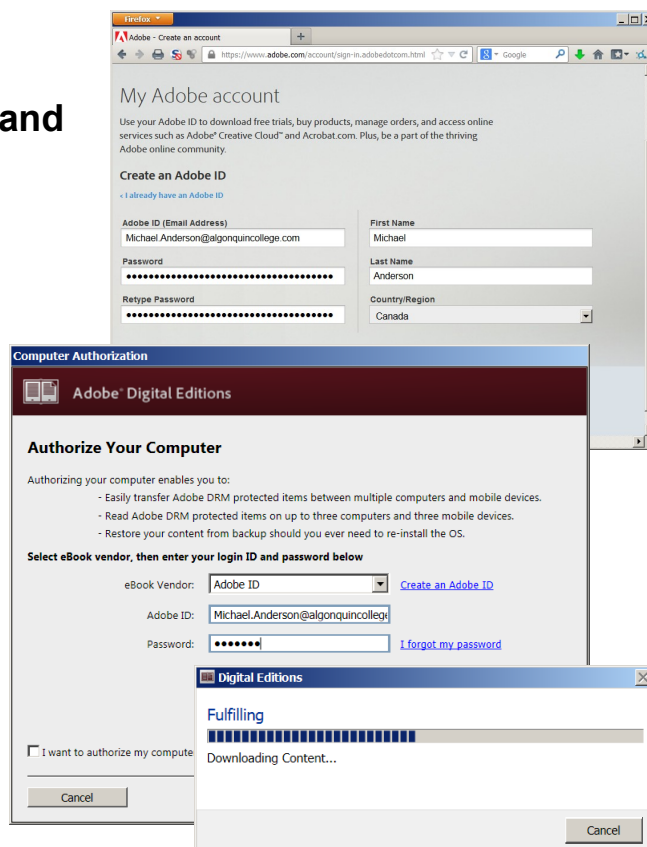
## Access to Nokia Resources

1. Course Materials – pdf textbook access: *download from SRC Student portal*  
– NRS II ebook access: *details forthcoming by email*
2. Lab Access – Trio for remote access: Aventail VPN (always) plus  
either *regular weekly lab access* **OR** *MyNetworkLab access*

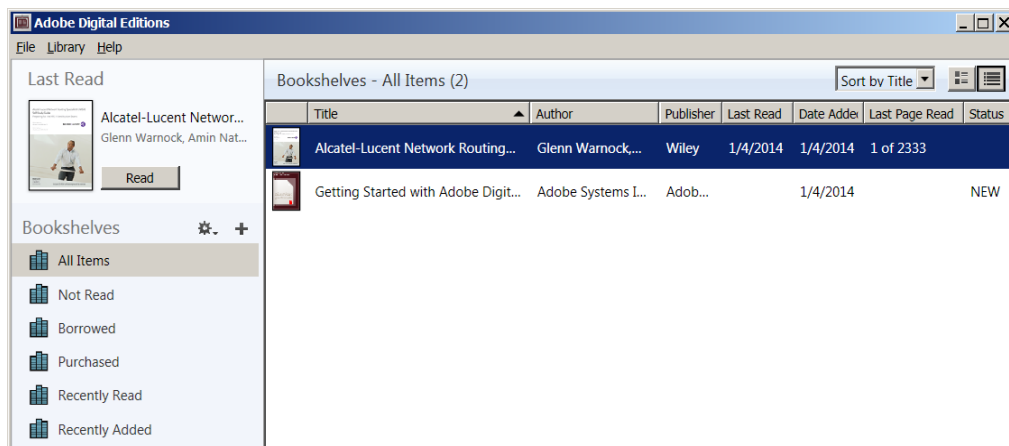
## NRS II ebook access (Overview)

An message will be sent to your Algonquin email account from [sr.publications@nokia.com](mailto:sr.publications@nokia.com). It will contain details instructions and links.

1. Create an "Adobe ID" (ie. an account)
2. Install *Adobe Digital Editions (ADE)* and authorize your computer
3. **Verify** that ADE works correctly using sample ebooks from Adobe.
4. Download your file copy using the link supplied in the email.  
**NB: one-time download only!!**



You can now read the NRS II ebook on your computer.

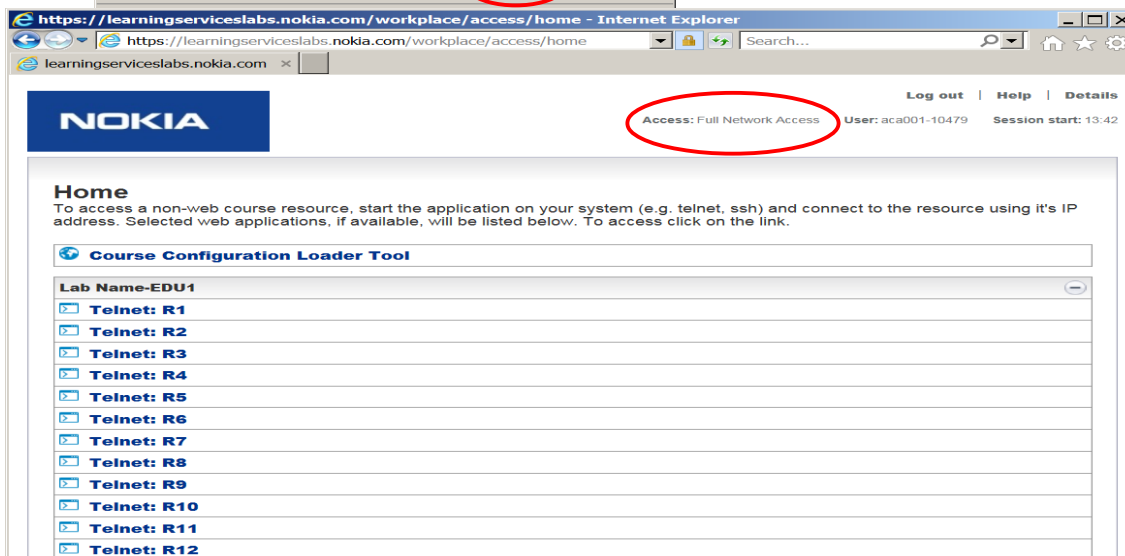
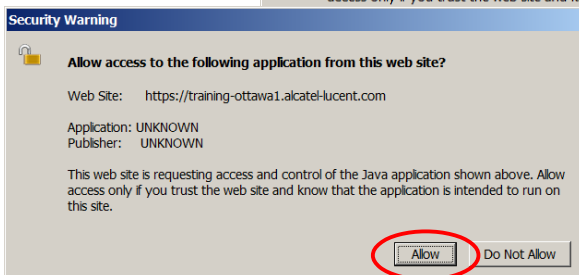
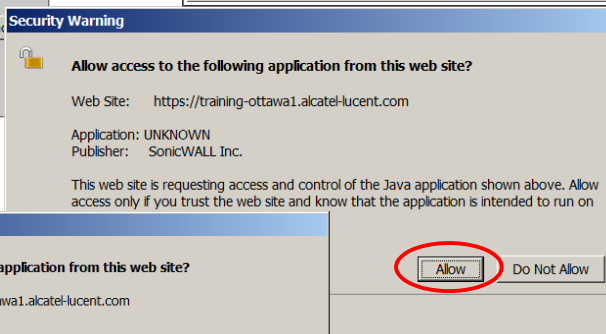
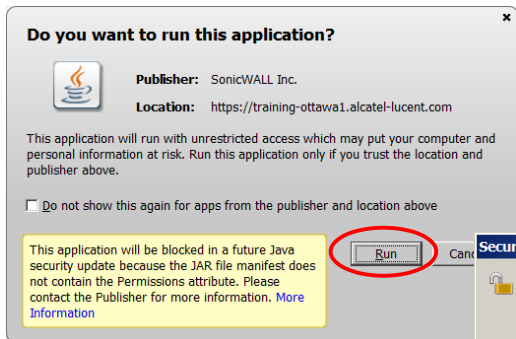
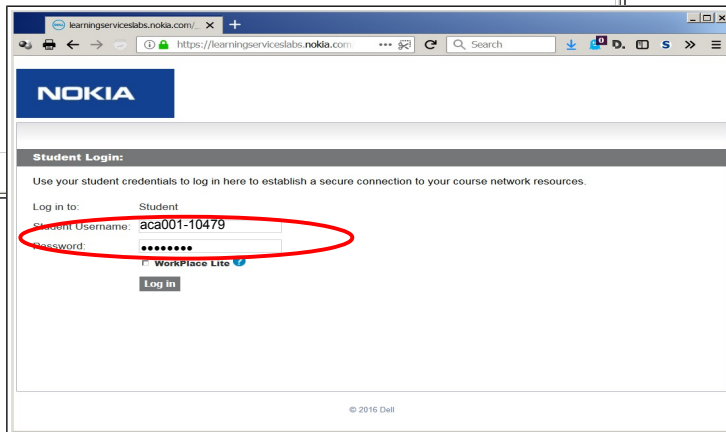
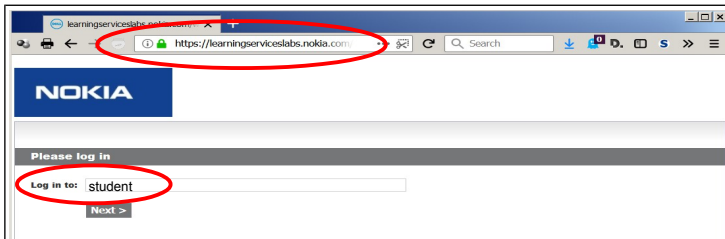


Follow additional instructions to transfer the pdf to other devices.

# Trio for remote access: Aventaail VPN for regular lab access & MySRLab access

Regular lab access: <https://learningserviceslabs.nokia.com>

1. Browser-based VPN (must have activeX or Java!)
2. Log into service: **student**
3. Use **lab**-access credentials (Blackboard)
4. Permit all requests to run (ActiveX or Java)
5. Launch Telnet sessions to your assigned routers.

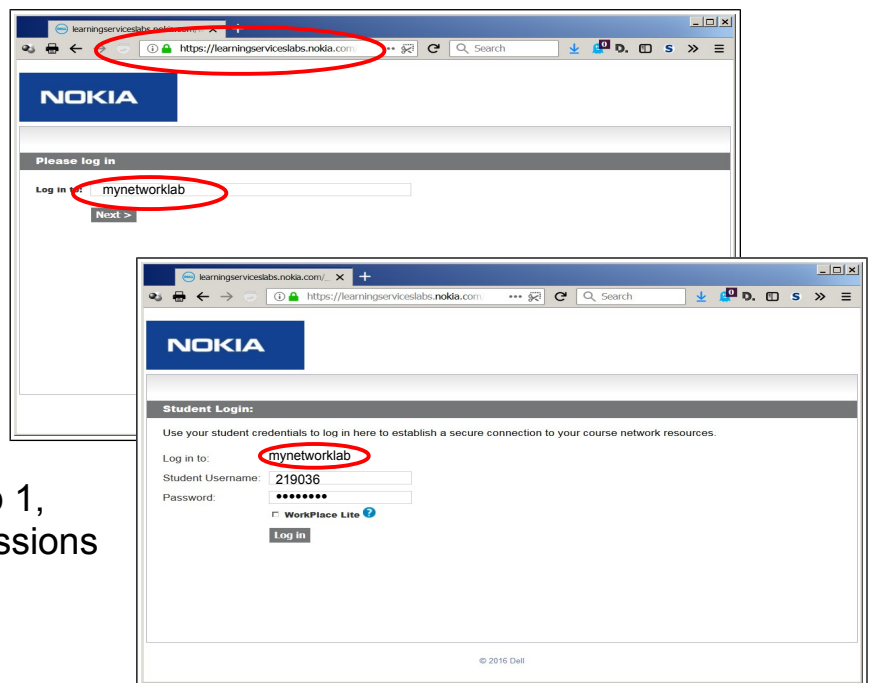


## **Booking** extra practice (Live demo??)

1. Normal browser access to <https://src.alcatel-lucent.com/src/mynetworklab>  
if that expires, try: <https://ps-kb.alcatel-lucent.com/src/mynetworklab/>  
(Confirmed 6/Jan/2018: no known "Nokia" URLs available.)
2. Login using your Nokia corporate web-site account (Algonquin email + chosen password)
3. In the section "My Unreserved Sessions", click Reserve Session.
4. Choose "SR Standard Lab" for the Lab Type; choose a time, then Submit
5. You should book a single 3-hr practice session each week  
(... You should have plenty of lab sessions but if you run out, please let me know and we should be able to get more sessions.)
6. There will be a post-lab exercise **every week!** There is are a **limited** number of lab sets available, so **do not expect** to get a booking if you leave it until the last minute! **Book ahead now for every week!**

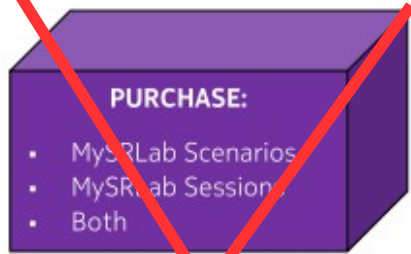
Extra practice **access**: <https://learningserviceslabs.nokia.com>

1. Browser-based VPN  
(must have activeX or Java!)
2. Log into service:  
**mynetworklab**
3. Use one-time **numeric** account + password  
(sent via email)
4. Permit all requests to  
allow Java VPN to run
5. Using the addressing  
chart supplied during Lab 1,  
launch multiple Telnet sessions  
to all the routers.



Nokia MySRLab Quick Start Guide  
<https://src.alcatel-lucent.com/src/mynetworklab>  
~~[www.networks.nokia.com/src/mynetworklab](http://www.networks.nokia.com/src/mynetworklab)~~

<https://learningserviceslabs.nokia.com>



Connection Information Email

username and password



Login = Nokia corporate ID:  
Alg email + chosen pswd



Log in to Avenail Web Client



Log in to your personalized page

With one-time credentials emailed to you

MyNetworkLab fixed ID & password

Log in **during** session time

Fully equipped lab (varies based on scheduled lab type)

FTP Utilities

Lab scenario documents and configurations (varies based on scheduled lab type)

Log in **outside** session time

Lab scenario documents

1. Register for access at URL [www.networks.nokia.com/src/mysrlab](http://www.networks.nokia.com/src/mysrlab)
2. Purchase Scenarios
3. Purchase Practice Sessions
4. Schedule Sessions
5. Connect to MySRLab Avenail Client site
  - Install Avenail Web Client software, first time access only
6. Login to MySRLab Avenail Client site and Personalized Page
  - Enter your Session ID and Session Password during lab practice session time
  - Enter your Personalized Page username and password outside of lab practice session time

**Help and Support:**

[mynetworklab.support@nokia.com](mailto:mynetworklab.support@nokia.com)