

Subject Summary

If you missed some lectures, then don't miss this one!

Nick Urbanik <nicku@nicku.org>

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A computing department

Main Topics in this Subject

- Perl
- SNMP
- Network Troubleshooting
- Network Design
 - DHCP and DNS systems
 - LDAP directories and querying them
- Routing, Route Summarisation

Perl

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- We covered the basics of the language
- Refer to the Perl Summary that I wrote
- You did two assignments
 - **Revise your work in both of them**
- I will provide a copy of the booklet *Perl Reference Guide* in the exam (no need to bring your own copy)
 - Please return the booklet in the exam
 - Please do not write in it or mark it
 - We want to use them again next year
- There is **one question in the exam** on this topic

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SNMP

SNM — Subject Summary— ver. 1.0 – p. 2/14

- There are **two** sets of notes on this topic;
 - one (short set) from Albert on the ISO network management model,
 - one (long set) on the practicalities of SNMP
- You have configured an SNMP agent in the laboratory
- In the lectures you also studied SNMP version 3
 - If I had more time, I would have made some laboratory exercises on this topic
- You had a test on this topic. I suggest that you revise this.
- **There is one question** on this topic in the exam

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Network Troubleshooting — 1

- This is a *new topic*; there are *no previous exam questions* on this topic.
- I focussed on the use of Ethereal and `tcpdump` for collecting information about network problems
 - However, Ethereal screen dumps don't fit well into an exam paper
 - I wrote additional notes on using `tcpdump` with DHCP
 - So you may use your judgement as to which Ethernet packet sniffing tool I refer to in the exam.

Network Troubleshooting — 2

- We also examined many uses of such important and commonly available basic tools as `traceroute` (or `tracert`) and `ping`
 - Do *not* waste time memorising any lengthy formulas; if they are required, they will appear in an *appendix to the exam*.
- We covered many topics in this area, including troubleshooting a switched network
- Altogether, *there is one question directly* on this area, and *half a question* that is *at least partly* on this area

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DHCP and DNS Management Systems

- We covered the basics of DHCP operation
 - including normal operation, and
 - problems that can occur in DHCP operation
- We also studied two schemes for automating DHCP and DNS management
 - One scheme introduced at this Institute, in the Computer Centre and our Department,
 - One fully automated registration scheme involving a web registration application to which new users are automatically directed
- There is *half a question directly* on these topics, and *another half question* that *includes* these topics

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SNM — Subject Summary— ver. 1.0 – p. 6/14

LDAP directories and querying them — 1

- We covered a number of aspects of LDAP directories, and
 - I provided a laboratory exercise in setting up network accounts on a directory server,
 - But due to insufficient laboratory time, we did not work through this in the classroom
 - That will not be in the exam
- However, we covered a few topics in authentication and authorisation
 - both in the lectures and in the laboratory

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LDAP directories and querying them — 2

- I have already told you that:
 - an **appendix** to the exam paper from RFC 2254 describes the grammar for LDAP
 - Another **appendix** to the exam paper from RFC 2255 describes the grammar for LDAP URLs.
- There is **one question** on this topic in the exam.

Routing, Route Summarisation

- Due to the SARS epidemic, my planned coverage of this area has been reduced, mainly to covering:
 - route summarisation and
 - address block allocation and design.
- In particular, we have *not* covered the same areas of switching as in the previous year
- I suggest that you be guided by the tutorial exercises we do in this area.
- There is **half a question** on this topic in the exam.

Format of the Exam (2002–2003)

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- There are **five** questions
- There are **no options**—do all five questions
- That's good—no need to waste time deciding which one to leave out!

Advice for the Exam

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- **Budget your time** wisely in the exam:
 - Spend a few minutes to **plan** your time
 - Divide remaining time by five
 - Do **not** spend more than this time on any one question until you have answered five questions fully
- **Show your working**
 - A wrong answer with no working gets **zero** marks
 - A wrong answer with some working that is on the right track gets **some** marks

Summary of Topics in Exam

Topic	Number of Questions: directly, partly
Perl	1
SNMP	1
Network Troubleshooting	1, 1/2
Network Design:	
DHCP and DNS systems	1/2, 1/2
LDAP directories and querying them	1
Routing, Route Summarisation	1/2

Watch the Subject Web Site

- I will begin writing *solutions* to past exam papers, the test, laboratory exercises and workshops, and *post them on our subject web site*
- Watch the web site for announcements:
- I will write and post *solutions* to problems as soon as I can.
- I will make a *new icon* to highlight changes on the site,
 - including solutions to problems as I write them.