



Försättsblad Prov Original

Kurskod	Provkod	Tentamensdatum
D T 1 5 3 G	T 2 0 1	2 0 1 8 - 0 4 - 0 5
Kursnamn	Datateknik GR (A), Nätverksteknik A	
Provnamn	Tentamen P4, delkurs 2	
Ort	Sundsvall	
Termin	V18	
Ämne	Datateknik	

Final Exam – RSE
DT153G Network Technology A

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Instructions

Carefully read the questions before you start answering them. Note the time limit of the exam and plan your answers accordingly. Only answer the question. The questions are *not* sorted by difficulty. Clearly show which answer you are giving your solution to. *Always motivate your answers and show your calculations.*

Time 2.5 hours.

Exam Aids .

Maximum points 25

Questions 6

Preliminary grades

The following grading criteria applies: $E \geq 12p$, $D \geq 15p$, $C \geq 17p$, $B \geq 20p$, $A \geq 22p$.

Covered ILO

Questions

The questions below are not given in any particular order.

- (4p) 1. There are two types of interfaces that can be setup on a switch, SVI and Routed Interface. Give some different scenarios of when it is suitable to use which interface. For each scenario that you give, you should also explain how an equal function can be achieved (if possible, otherwise explain why it isn't possible) using the opposite interface type.
2. Explain to your friend who haven't studied computer networking
- (2p) (a) What inside, outside, global and local means when speaking of NAT
- (2p) (b) Account for at least two problems that NAT introduces into a network
- (2p) (c) Explain NAT for IPv6.
3. Give a good *thorough* explanation about the different types of routing protocols.
- (3p) (a) Compare distance vector routing protocols with link state routing protocols.
- (2p) (b) Compare Exterior Gateway Protocols with Interior Gateway Protocols.
- (2p) (c) Inform the hippie about the difference between classful and classless routing protocols.
- (1p) 4. What are some advantages and disadvantages of using only ip or only interface as 'next hop' when creating a static route (if any)?
- (1p) 5. Using as few static routes as possible, summarize the subnets listed below. Your static routes **MUST ONLY** cover the subnets listed.
- 176.46.192.0/22
 - 176.46.200.0/22
 - 176.46.204.0/22
 - 176.46.208.0/22
 - 176.46.212.0/22
- (6p) 6. If there are multiple paths to a destination in a routing table, the router need to check the administrative distance, and then the metric, in order to be able to make the final decision of where to forward the package.
- Discuss this process. Finally, If you got to decide the AD priority, and how to calculate costs, how would it look like?