



Intelligent
Systems
Lab

Administration of Operating Systems

Course Examination

December 05, 2011

Course Examination



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- Pass all five labs
 - make-up session: Monday 12.12, 13-15
- Pass practical exam
 - Wednesday 14.12, 8-17
 - Wednesday 4.01, 10-15
 - Monday 9.01, 10-12
- Pass theoretical exam — Wednesday 11.01, 9-13
 - remember to register!
 - additional Q&A session: 9.01, 13-15
- Grade 3: 75% of 40 questions
- Grade 4: 75% of 10 questions
- Grade 5: 75% of 5 questions

Bonus Points



- 12 lectures == 24 questions
 - maximum of 24 points
- Each point is worth 1% on the theoretical exam
- Slawek earned 24 bonus points
 - got 55% of grade 3 exam
 - final grade: 3
- Wagner earned 15 bonus points
 - got 80% of grade 3 exam, 60% of grade 4
 - final grade: 4
- Mattias earned 15 bonus points
 - got 70% of grade 3 exam, 70% of grade 4
 - final grade: 4

GRADE 3



- What command does show the manual for man?
 - A) cat cat
 - B) man man
 - C) man cat
 - D) cat man

GRADE 3



- What does "sudo <xxx>" do?
 - A) Sudo is not a default command.
 - B) Run sudo as user <xxx>
 - C) Switch user to <xxx>.
 - D) Run <xxx> as superuser

GRADE 3



- What words are missing?

apt-get X

apt-get Y tar

- A) X=upgrade, Y=update
- B) X=update, Y=install
- C) X=upgrade, Y=install
- D) X=update, Y=upgrade

GRADE 3



- What does a Linux-based Samba-client do?
 - A) shares files and printers from Linux systems to Windows.
 - B) allows a Linux system to use files or printers on shared by Windows system.
 - C) shares files and printers from Windows systems to Linux.
 - D) allows a Windows system to use files or printers shared by Linux system.

GRADE 3



- Who is the group?

```
d--x--x--- 3 pubs zach 512 2010-03-10 15:16 ide
```

- A) pubs
- B) ide
- C) zach
- D) The group cannot be identified.

GRADE 3



- What could happen if you run the command `mv bigzero /dev/null`?
 - A) You get a file consisting of zeros.
 - B) You fill the partition where bigzero resides.
 - C) A + B.
 - D) Neither A or B.

GRADE 3



- After a default installation of Ubuntu, the root password is?
 - A) toor
 - B) 32 random unknown characters.
 - C) root
 - D) There is no password for root.

GRADE 3



- Your manager wants you to add a SSH daemon on port 55 on one of your computers. You say:
 - A) It is ok. Just change the server's settings.
 - B) It is not possible. SSH has a fixed port (22).
 - C) It is ok. Just change the client's settings.
 - D) It is not possible. The port is not privileged.

GRADE 3



- What is nano
 - A) Part of time management
 - B) A user- and group editor
 - C) A text editor
 - D) A utility to send messages to other logged in users.

GRADE 3



- A hard drive is typically a:
 - A) None of the options.
 - B) Character device.
 - C) Block device.
 - D) Track device.

GRADE 3



- The command to connect to another computer via secure shell is:
 - A) ssh
 - B) scp
 - C) sftp
 - D) sshd

GRADE 3



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- To allow another computer to connect to you via secure shell you will need:
 - A) sshd
 - B) scp
 - C) ssh
 - D) sftp





- What is correct for FTP?
 - A) The password is sent encrypted, the data are transmitted encrypted.
 - B) The password is sent encrypted, the data is sent in clear text.
 - C) The password is sent in clear text, the data are transmitted encrypted.
 - D) The password is sent in clear text, the data is sent in clear text.

GRADE 3



- What does noclobber do?
 - A) Prevents deletion using `rm`.
 - B) Prevent confusion with `|`.
 - C) Prevents overwriting with `>`.
 - D) Prevents deletion using `mv`.



- To hide a file in Linux...
 - A) ... let the filename begin with a backslash
 - B) ...set mode +x using chmod
 - C) ... let the filename begin with a period.
 - D) ...set the flag invisible in the fileproperties.

GRADE 3



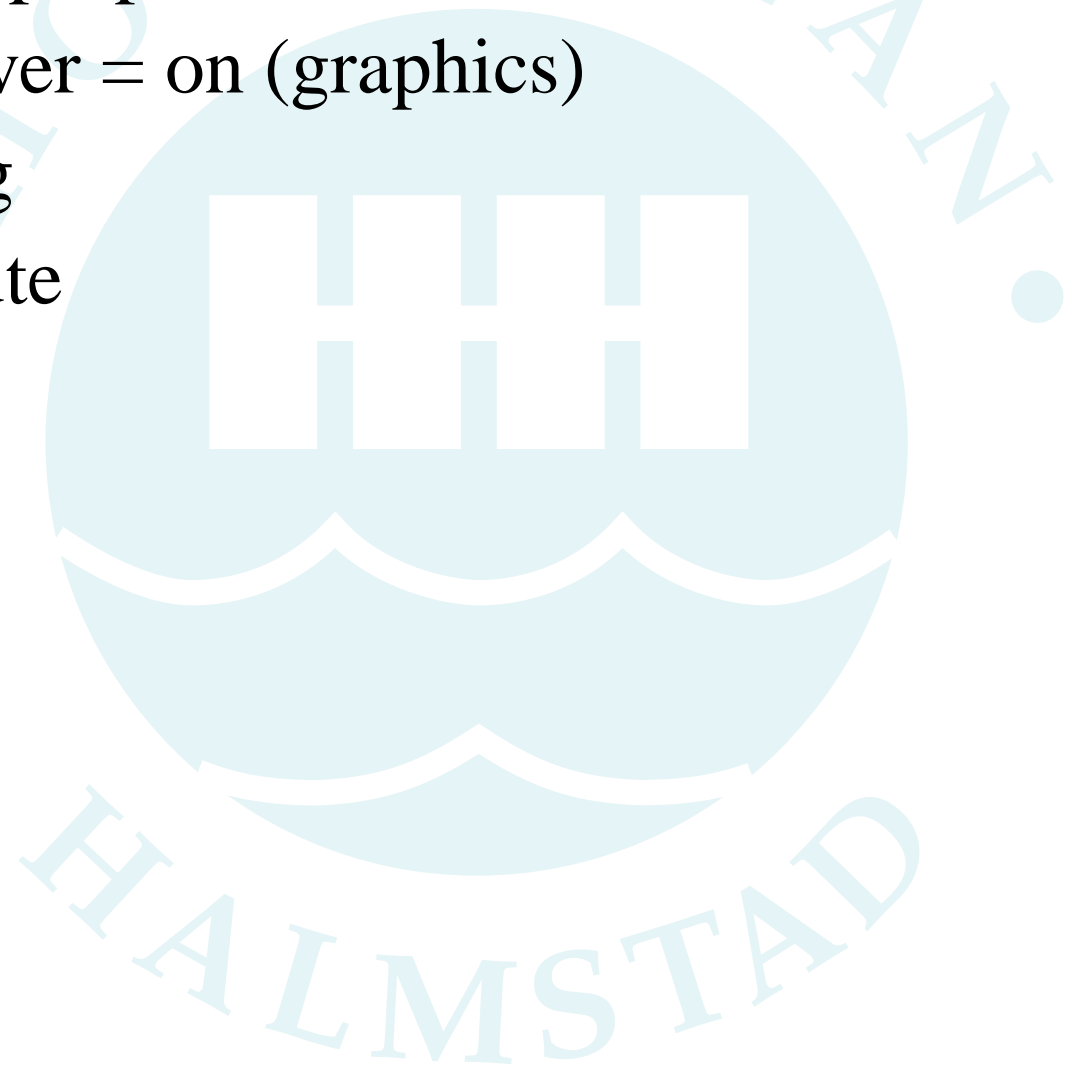
- You are logged on as user ide. What does sudo su do?
 - A) Switch from user ide to super user (root).
 - B) Nothing. sudo is not a true command.
 - C) Switch from current user to super user (root) for root's password.
 - D) Switch from current user to super user (root) for ide's password.

GRADE 3



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- What is the purpose of -x? bash -x script
 - A) Other purpose
 - B) X-server = on (graphics)
 - C) Debug
 - D) Execute





- What is `/etc/apt/sources.list`?
 - A) A list of all packages to search when you want to install a package.
 - B) A list of all installed packages.
 - C) A list of all source code for all packages.
 - D) A list of all sources to be searched when you want to install a package.

GRADE 3



- "ls -lh" or "df -h" are useful commands. What does option h do?
 - A) Show the help file.
 - B) Show the manual.
 - C) List data horizontal.
 - D) List data human readable



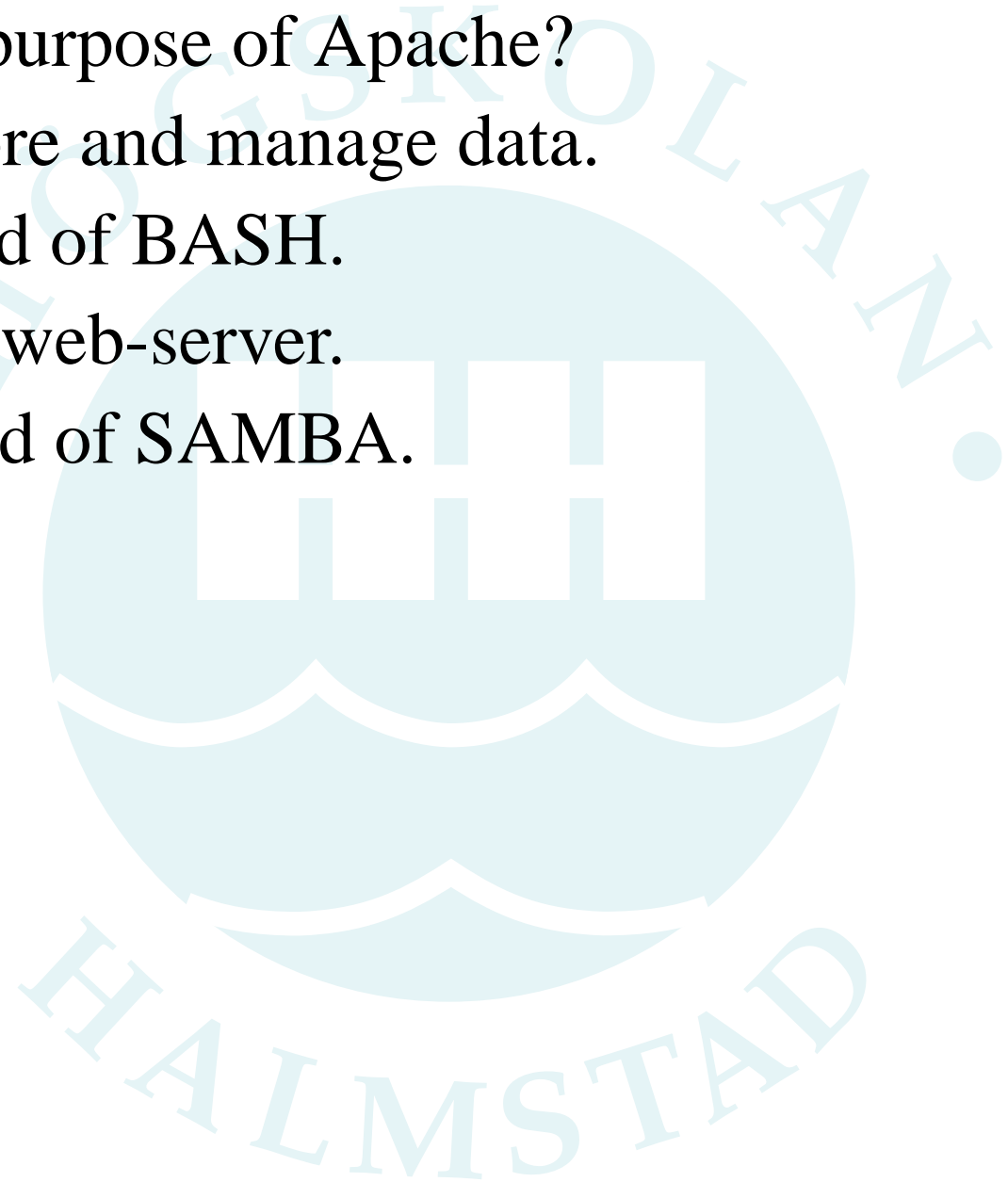
- What is the purpose of PostgreSQL?
 - A) To store and manage data.
 - B) Instead of BASH.
 - C) It is a web-server.
 - D) Instead of SAMBA.

GRADE 3



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- What is the purpose of Apache?
 - A) To store and manage data.
 - B) Instead of BASH.
 - C) It is a web-server.
 - D) Instead of SAMBA.



GRADE 3



- How do you send the output of a program (eg. ls) to a file?
 - A) file | ls
 - B) file < ls
 - C) ls > file
 - D) ls | file

GRADE 3



- Which statement is true?
 - A) You can have only one firewall in each segment.
 - B) ufw is an interface to iptables.
 - C) A firewall needs to be a router.
 - D) iptables is a interface to firestarter.

GRADE 3



- How do you send the output of the command `ls` to the command `more`?
 - A) `ls > more`
 - B) `more < ls`
 - C) `ls | more`
 - D) `more | ls`

GRADE 3



- Identify the file name:

```
---x--x--- 3 zach pubs 512 2010-03-10 15:16 ide
```

- A) ide
- B) zach
- C) The file name cannot be deduced.
- D) pubs

GRADE 3



- What does "sudo passwd user_1" do?
 - A) Changes the password for user_1 without any further requests.
 - B) Changes the password for user_1 but asks for the password of the current logged on user.
 - C) Changes the password for user_1 but asks for the password of the current logged on user and the current password of user_1.
 - D) Changes the password for user_1 but asks for the current password of user_1.

GRADE 3



- What is the role of the key [TAB] in the Terminal?
 - A) Command rejection - erase what you've written.
 - B) Reject completion - "guessing" what you have typed wrong.
 - C) Command indent - indents the command 8 spaces.
 - D) Command completion - "guessing" what to write.



- Being logged on as user ide, what does "sudo su" do?
 - A) Switch from current user to super user (root) for ide's password.
 - B) Switch from current user to super user (root) for root's password.
 - C) Nothing, su is not a real command.
 - D) Switch from current user to the user ide.

GRADE 3



- Which of the options indicate an absolute path?
 - A) ../folder
 - B) /folder
 - C) A + B
 - D) Neither A or B

GRADE 3



- `exim4` can be configured as
 - A) open relay, but it is a bad idea
 - B) smarthost, but it is a bad idea
 - C) closed relay, but it is a bad idea
 - D) open relay, and it is a good idea



- Kerberos

- A) is a file transfer protocol
- B) is an authentication protocol for non-networked computers
- C) is a distributed authentication protocol
- D) is a firewall program

GRADE 4



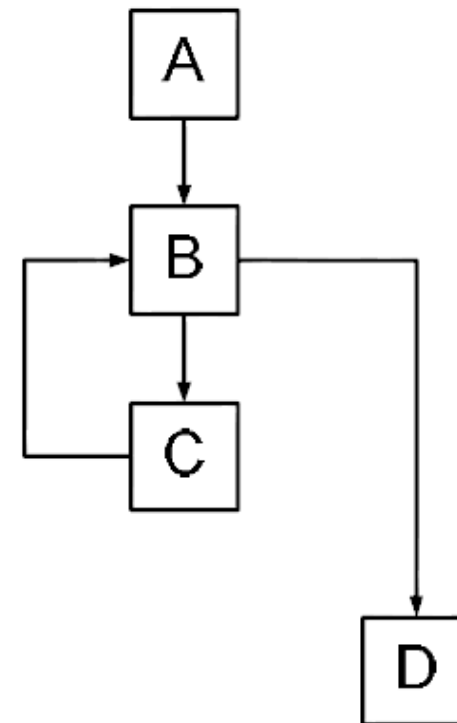
- Where do I find the following?
 - 1) configuration files
 - 2) Administrator's files
 - 3) users' files
 - 4) log files
 - A) /var
 - B) /etc
 - C) /home
 - D) /root

GRADE 4



- The figure shows a flow chart of a script. The parameters to the script will be one or several file names. These files will be copied to a folder; the name of the folder is entered using keyboard. After copying all files the script will exit and report that it is finished. Match the code fragments below with the correct letter. Only four of the fragments will be used.

- 1) for i in \$@
- 2) read \$1
- 3) read a
- 4) shift
- 5) echo "Finished!"
- 6) echo \$1
- 7) cp \$i \$a
- 8) cp \$1 \$a



GRADE 4



- You are logged on as a user `ide`, which has `sudo` rights. You want to list all lines containing the word `sda` from the file `/var/log/messages` and send this data to `/tmp/logg`. Order the elements correctly.
 - A) `>`
 - B) `cat`
 - C) `/var/log/messages`
 - D) `sda`
 - E) `grep`
 - F) `/tmp/logg`
 - G) `|`

GRADE 4



- Order the following programs involved in sending an email message from Alice to Bob, starting with the first one to handle the message first and ending with the one to handle that message last.
 - A) Alice's MUA
 - B) Bob's Mail User Agent
 - C) MTA
 - D) Mail Delivery Agent
 - E) Alice's Mail Submission Agent

GRADE 4



- Match the following DNS resource records with the information they contain
 - 1) SOA
 - 2) AAAA
 - 3) CNAME
 - 4) MX
 - A) Authoritative name server for the domain
 - B) IP address of mail exchange server
 - C) IPv6 address
 - D) Canonical Name

GRADE 5



- Give comments on the command below. What does it do? What was it supposed to do?

```
user@ubuntu:~$ rm /etc/passwd
```

GRADE 5

- Give comments on the commands below.
What do they do? What were they supposed to do?

```
user@ubuntu:~$ sudo cp /etc/app.conf.bak /etc/app.conf
File /etc/app.conf.bak not found.
user@ubuntu:~$ sudo nano /etc/app.conf
```



GRADE 5



- Fill in missing parts of the following script

```
while [ _____ 0 ]  
do  
    echo $1  
    _____  
done
```

GRADE 5

- Write a script that lists all subdirectories in a directory given as an argument.



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Questions?

