C2115
Practical introduction to supercomputing

organization

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Content

➢ **Teaching organization**

schedule, block teaching, course completion

➢ **WOLF cluster**

structure, rules of use, administrators, classroom 1.18

➢ **Prerequisites**

accounts

Teaching organization

Semester schedule

Teaching: October 5, 2020 – January 15, 2021
Examination period: January 18, 2021 – February 26, 2021

Total number of lectures: 13 x 2 hours = 26 hours

Termination: colloquium (2 + 1 credits)

Total hourly load of the subject:

 1 ECTS credit -> 26 hours of study load

 3 credits -> 3x 26 hours = **78 hours of study load**

about 15 hours per day during
5-day block teaching :-)

Self-study.

Block teaching - 8.-12.2. 2021

Monday - Thursday: teaching
start at 9:00, end at 16:00
lunch and breaks according to the subject

Friday: teaching
start at 9:00, end at 10:00
final test: start at 10:00

Presence form
unfortunately not until next year (possibly)

Block teaching - 8.-12.2. 2021

```
Monday - Friday:        online consultation
                        starting at 9:00
                        starting at 13:00
                        or by prior arrangement
```

Distance form

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Assesment method:
        - final test (1 hour, 50 questions)        50 points
        - summary protocol from exercises
========================================================
Total:                                              50 points
Succeeded:                                          >= 30 points
```
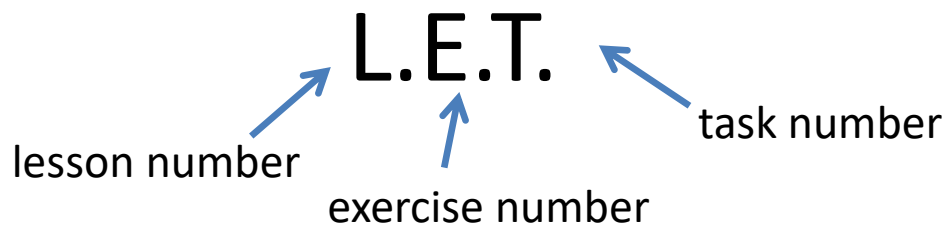
The test will be open in the IS from 12.2. 12:00 to 26.2. 12:00.
You will insert the report to the "Protocols" Homework Vault no later than 26.2. 12:00.

Protocol - requirements

➢ state your full name and date of preparation
➢ protocol will be contained in one file
➢ number the pages
➢ state the assignment of the task (it can be abbreviated) including its number (see below) and then your solution; provide only relevant information so that the result presented by you can be **reproduced**
➢ the graphs will be correctly described, i.e., will include key of the axes, the description of the data series, in case of interpolation by the curve the measured or calculated data points will be highlighted by a cross; I recommend to script graphs in gnuplot
➢ if the quantity has a unit, always state it; a space is typed between the value and the unit, except for angular units (degree, minute, second), where the space is not typed
➢ if the result of the exercise is not a quantitative result, then briefly describe what you did
➢ submit the report in **pdf** format no later than Friday, February 26, 2021 12:00 to the Homework Vault "**Protocols**"; the file name will be **SurnameNameC2115.pdf**

Task numbering:

L.E.T.

lesson number

exercise number

task number

Teamwork

Teamwork is essential. It allows you to blame someone else.

Teamwork is allowed, but…

WOLF cluster

Rules of use

WOLF cluster is intended exclusively for teaching purposes or for scientific work within the National Center for Biomolecular Research.

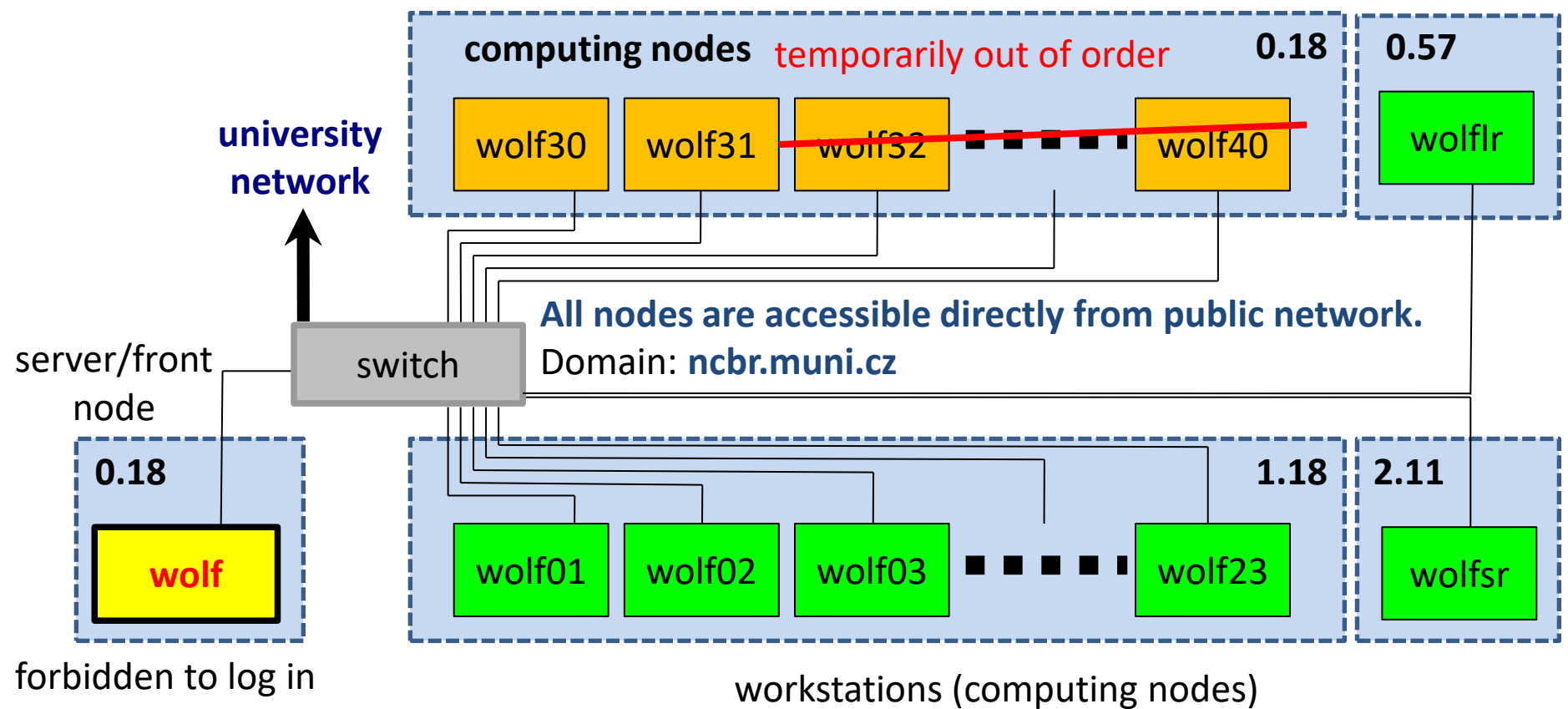**It is expressly prohibited to WOLF cluster use WOLF cluster for:**
- downloading illegal content (copyrighted works, etc.)
- sending viruses, spam and similar materials
- breaking the protection of other computers
- read, delete, or change the unprotected contents of other users' files

Rules for using computer network of Masaryk University:

https://is.muni.cz/auth/do/mu/Uredni_deska/Predpisy_MU/Masarykova_univerzita/Smernice_MU/SM10-17/

The login name and password form the identity of the user and therefore are not shared with third parties by us, we do not store or send them (e.g., by e-mail) in unencrypted form!

WOLF cluster structure

computing nodes temporarily out of order   0.18   0.57

| wolf30 | wolf31 | wolf32 | ▪▪▪▪ | wolf40 |

wolflr

university network

All nodes are accessible directly from public network.
Domain: **ncbr.muni.cz**

server/front node

switch

0.18

wolf

1.18   2.11

| wolf01 | wolf02 | wolf03 | ▪▪▪▪ | wolf23 |

wolfsr

forbidden to log in

workstations (computing nodes)

Rooms:

0.18 Server room C04/UKB
1.18 Computer room C04/UKB
2.11 Seminar room C04/UKB
0.57 Seminar room (library) C04/UKB

Operating system: **Ubuntu 18.04 (Bionic) LTS (http://www.ubuntu.com/)**

Cluster administrators

Before contacting the administrator, **consult** your problem with your colleague, teacher or supervisor. If you do not resolve the issue, **report the problem to the administrators** by sending an e-mail to

<p align="center">support@lcc.ncbr.muni.cz</p>

In the report, indicate
- ➢ Problem description, command name
- ➢ User name, machine
- ➢ Copy of error output (complete from command entry)

Practical:
error reporting, RT system

Classroom 1.18

> Classroom with 23 PCs
> Arranged into a computing cluster

Safety!

The classroom is freely accessible to students studying at the NCBR and also to students who have lectures in the classroom during given semester.

Prerequisites

Prerequisites - accounts

➢ Account on the WOLF cluster

https://wolf.ncbr.muni.cz

- create an account
- resetting password, account renewal
- classroom occupancy
- documentation

➢ Account in a virtual organization MetaCentrum

http://metavo.metacentrum.cz

- application
- account management
- resetting password, account renewal
- overview of computing resources and data repositories
- documentation

➢ Who doesn't have an account in MetaCentrum – applies now!