University
*of Ljubljana*

Faculty
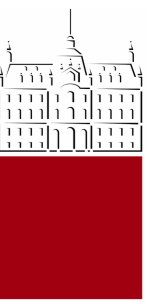*of civil and geodetic*
*engineering*

# Computer Mediated Communication (CE6014)
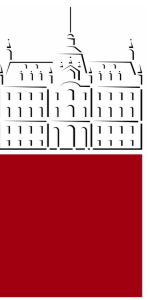## HTC - Condor Tutorial

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# Introduction

▸ Basic idea: try to use Condor system to remotely execute different programs/jobs

- prepare batch/shell script for execution

- prepare Condor submit file

- submit job/jobs

- check the results

# Requirements

- Internet connection

- Secure shell client (SSH client)

  - Windows OS:
    Putty, http://www.chiark.greenend.org.uk/~sgtatham/putty/

  - Mac OS: use Terminal command `ssh`

- Secure file transfer client (SFTP, SCP client)

  - Windows platform:
    WinSCP, http://winscp.net/eng/index.php

  - Mac OS, use Terminal command `sftp`

# Tutorial Basic Workflow

▸ Connect to the remote machine

▸ Use Condor system

- prepare data

- check batch/shell scripts

- check Condor submit files

- run basic example

- run different examples with one ore more jobs

- get the results back to a local machine

- visualise the results using a viewer

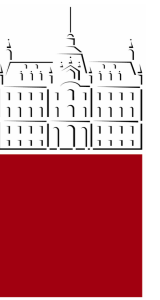▸ Disconnect from the remote machine

# Tutorial Steps

- ▸ Use putty to connect to the remote machine

  - computer: `kgi-cl.fgg.uni-lj.si`

  - username: `hpc4e`

  - password: `hpc4e.`

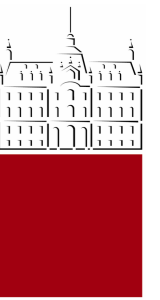- ▸ Create a new working directory for you

  – `mkdir mydir`

- ▸ Prepare data

  - go to your directory, `cd mydir`

  - copy hpc4e directory, `cp -R ../hpc4e .`

# Some Condor basic commands

- ▸ Condor manual at http://www.cs.wisc.edu/condor/

- ▸ Commands

  - condor_status ... see the status of the Condor pool

  - condor_submit ... submit a job/jobs to the Condor pool

  - condor_q ... check the Condor queue

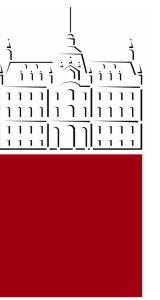  - condor_rm ... remove job/jobs from the queue

# Tutorial Steps

- ▶ **Check Condor pool status**

  - condor_status

- ▶ **Try to run `get_ip` example**

  - check `get_ip.sh` for the command that will be execute on a remote machine

  - check Condor submit file (`get_ip.condor`)

  - `test.out` file should contain the results printout

  - IP number should be something like 193.2.91.xxx

# Tutorial Steps

▸ Try running other examples

- check Condor submit files and batch/shell scripts

- check output files for possible errors

- visualise the results