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HS2020: 11072 Advanced Networking and Future Internet

Practical Execises 1

Jesutofunmi Ademiposi Ajayi
Lucas Pacheco
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Experimental Setup

- For the practical experiments in this course, you'll often require the use of Mininet and other linux tools
- You can run the experiments on Docker or on a Virtual Machine if necessary, you can download the VM engine and installation image on the links below:
  - https://www.virtualbox.org/
  - https://xubuntu.org/

Experiment 1

Effects of loss in multimedia application and QoE

For the experiments in this class you'll need:

- A Linux machine, VM, or container (if you have any questions setting it up contact me at lucas.pacheco@inf.unibe.ch).
- You'll need permissions to install the packages ffmpeg and wine.

Experiment 1

Effects of loss in multimedia application and QoE

1. Download codes and video traces from https://github.com/lsiddd/exercise-1 and decompress.
2. Inside the directory, you'll find the following tools:
   - exercise traces: a directory which contains the information to rebuild a transmitted video with different loss rates.
   - etm4, a binary part of evalvid that can rebuild tranmitted videos.
   - MSU, a video QoE analyzer tool.
   - exercise_qoe.sh, a script to rebuild and analyze video streams.
   - prepate_ubuntu.sh a script to install the used tools in ubuntu.

Experiment 1
Tasks

1. Run the exercise_qoe.sh script and generate the reconstructed videos.
2. Each video has a packet percentage loss, give an evaluation for each in terms of MOS score (you can write it to a spreadhseet).
3. For each MOS score evaluated, what is the corresponding SSIM score for the video (found in the reference_videos directory)?
4. Upload to ILIAS the SSIM score csv files generated.