

inf5071 Project Description

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1 Introduction

1.1 Compare p2p video-streaming applications

The p2p distribution model has shown to be cost effective and efficient for the distribution of data, for both private and public parties. Recently a number of p2p clients for live video-streaming have emerged, as such, it would be of interest to see how good these applications are at performing their job. We will compare applications such as SwarmPlayer, ppLive and Veetle (or any other such client we might find interesting). We will install them in a a virtual machine that shares nothing with the host machine and that is deleted after the testing. This is because such clients are known to contain virus/spyware/malware. We will then analyze the patters of the streams created by these application, captured by tcpdump/wireshark and analyzed with respect to the connections that are made and amount of data transfered.

2 Implementation

We want to profile the data streams, and see how the different applications handles some of the problems described earlier, as well as their measures taken to optimize the performance and resource utilization. Here is a list of things we want to measure:

- Packet size pr. peer.
- How big is the buffer size.
- How big is each "chunk".
- Bandwidth consumptions.
- "Tracker" resources.
- Traffic pattern.
- Upstream vs Downstream - Various network conditions.

3 How

There are various tools that will help us with this assignment, we will focus on tcpdump and wireshark to get a dump of the network traffic. Once set up properly we should be able to "record" a complete network session and analyze it later. This will also make it easier to compare the different programs. We will also try to compare the relative quality of the stream by how we perceive the image and sound quality.

4 Schedule

Because of other mandatory delivery's around presentation date, we reserve a couple of weeks with evening work for making the presentation documents. The experiments for gathering data will be spread out through next month (October and some in September)

- 5. October - 11.October: Do some extended preliminary work, and put a foundation for further testing and measurements. (Maybe do everything this week, depending on mandatory assignments in other classes)
- 19.October - 25.October: If we did not do testing and measurements last period, we will do this, this week.
- 2.November - 8.November: Start developing the presentation material for our presentation on 14.November.

5 Presentation

We would like to give a live demo of the different programs in the class and then give the test-results in a series of presentation slides.