

FlowAware: Automatic Discovery of Network Traffic Patterns

Mohammad Jalali
Professor Yashar Ganjali
University of Toronto

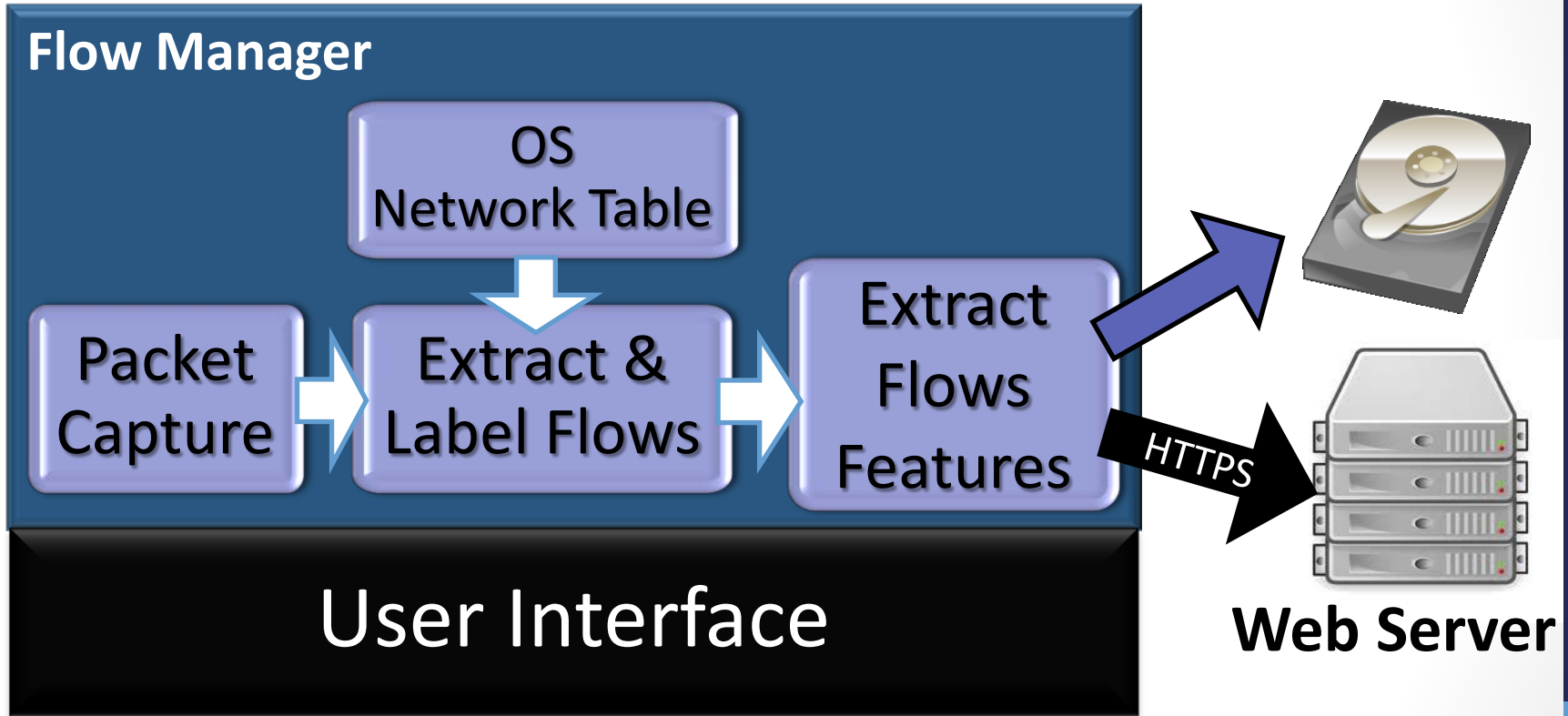
Background

- **Internet**
 - How does it work?
 - We have a limited bandwidth
 - Some applications take more bandwidth than others
 - Some connections are higher priority and time-sensitive
- **Network Flow:** A unique connection between a client and a server

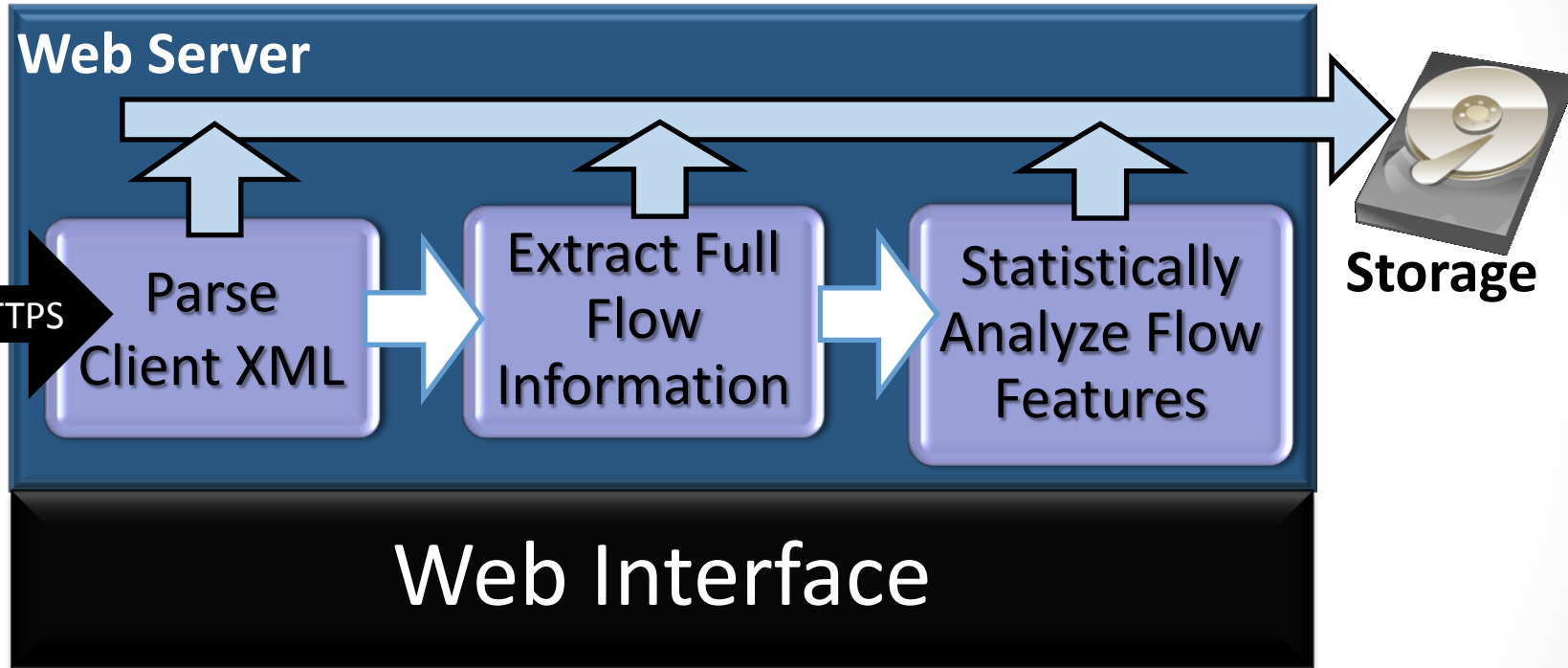
Motivation

- There is a need to prioritize and classify Internet traffic
- With the current design of the Internet/ Operating Systems, a flow can be uniquely attributed to an application
- We want to understand the patterns of each network flow and how they affect each other
- Goal is to improve the performance and quality of the network at the client level, ISP (Internet Service Provider) level and server level

FlowAware: Client Side



FlowAware: Server Side



Future Work

- Redesign the application for novice usage
 - More graphical information and less text
 - Reduce the unnecessary information
- Automatic Traffic Controller
 - Use flow features and feedback from the server to throttle the network priorities for various applications
- Automated Network Traffic Classifier
 - Use the ground truth flow features as the training set

Questions?

- Please send your questions and comments to flowaware@cs.toronto.edu