INTERNET MEASUREMENTS: A HANDS-ON INTRODUCTION

1. Introduction
2. Topology and routes
3. Connectivity, losses, latency, and geolocation
4. Bandwidth
5. Traffic measurements

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Week 1: Introduction

1. **Course presentation**
2. Background: Internet infrastructure
3. Types of measurements
4. Measurement platforms
5. Sound measurement practices
6. Ethical issues
7. Conclusion

Motivation: Internet measurements

- Network operators
  - Network performance, fault diagnosis, security
- End users
  - Verify network performance, diagnosis
- Applications and services
  - Tune application to network conditions
- Regulators, policy makers
  - Compliance to laws, decisions on investments
- Scientists
  - Internet structure, evaluation of new systems

Who should take this course

- Computer science and engineering students
  - Senior undergraduates, and graduate students
- Network engineers and operators
- Developers of Internet applications and system engineers
- Curious Internet users

Prerequisites

- Basic TCP/IP networking knowledge
  - E.g., J. Kurose, K. Ross, “Computer Networking: A Top-Down Approach”
- Recommended
  - Running commands at the command line