## On the Use of Traffic Information to Improve the Coordinated P2P Detection of SLA Violations

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- Active measurement mechanisms → better accuracy than passive measurements, specially considering service levels
  - Prime choice for SLA monitoring
  - $\bullet~\text{Expensive} \rightarrow \text{CPU}$  cycles, memory footprint, human resources
- $\bullet$  Total amount of resources required by active measurement probes on all possible network destinations  $\to$  normally prohibitive
- Small # of activated probes  $\to$  covered subset of all network flows in a given active monitoring scenario
- Choosing which particular probes to deploy in a network is critical

## Using traffic information to improve the detection of SLA violations in a P2P approach

- $\bullet$  Traffic matrix  $\rightarrow$  valuable information to plan the deployment of active measurement mechanisms
  - SLA violations intrinsically related to traffic (congestion and high utilization of network links)
  - $\bullet\,$  Traffic-related SLA violations  $\rightarrow\,$  more relevant from the operator point of view
- $\bullet\,$  Traffic info on network devices as passive measurement results  $\rightarrow\,$  distributed information
- **Rationale**: traffic info can improve the detection of relevant SLA violations by a P2P management overlay
  - Selection of candidate destinations that can be relevant for active measurement mechanisms
  - Prioritization of destination for the deployment of acitve measurement probes

## Simulation Experiments



center topology

Figure : Without traffic information

## Simulation Experiments



center topology

Figure : With traffic information