FlightHotel scenario (Uniqueness Constraints) Plain implementation Separate labels alternative implementation Constraints on Nodes and Relationships Constraints on Nodes and Relationships Constraints on Nodes only Constraints on Nodes only Constraints on Relationships only Constraints on Relationships only Without constraints Without constraints  $10^{3}$ 10<sup>2</sup>  $10^{2}$  -200 400 800 1000 800 1000 600 200 400 number of rows per input relation number of rows per input relation Conflict Detection over Separate labels Conflict Detection over Plain implementation — Indexes on Nodes and Relationships Constraints on Nodes and Relationships Indexes on Nodes only Constraints on Nodes only — Indexes on Relations only Constraints on Relationships only Without indexes Without constraints  $10^{3}$ 10<sup>2</sup>  $10^{2}$ 200 400 1000 1000 200 400 number of rows per input relation number of rows per input relation