

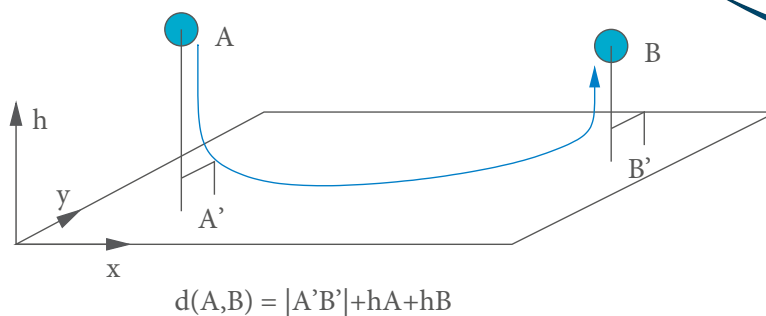
SIMGRID AS A P2P/VC SIMULATOR

- ___ Sick of unrealistic and/or slow simulations for **Peer-to-Peer and Volunteer Computing**?
- ___ Want to study new protocols or algorithms at **very large scale**?
- ___ Need a framework to test **new network models**?
- ___ In search of **stock implementations** of state-of-the-art algorithms?

- + Scalable and realistic models that account for both latency and bandwidth (vivaldi + last-mile)
- + Scalable, compact and hierarchical execution environment description and modeling
- + Easy replay of real-life dynamic resource characteristic evolution (availability, failure, load)
- + Several contributed projects

Scalable and realistic models

- + Last-mile model for instance

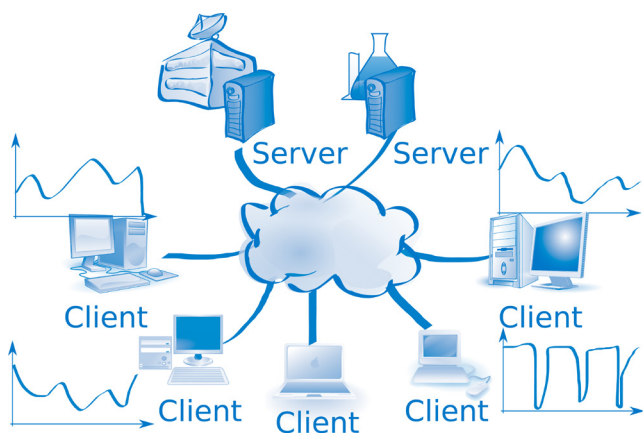


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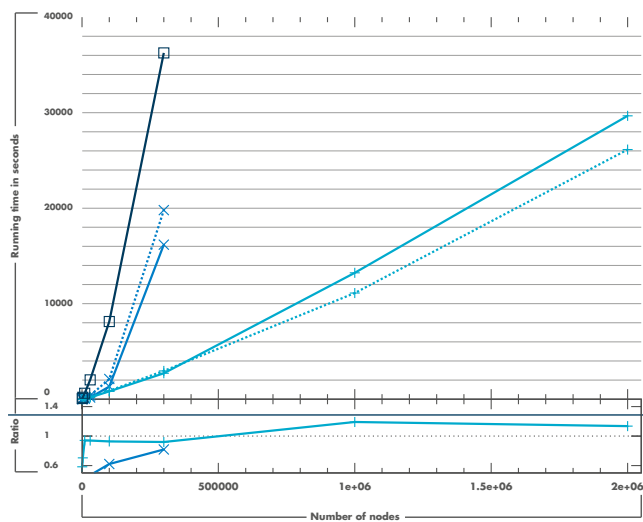
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Success stories

- + SimGrid vs. Volunteer Computing simulator (SimBA)
 - SimBA models clients by simply picking random numbers to decide when it should contact server
 - Thanks to clever algorithmic and coding tricks, SimGrid is 60 times faster than SimBA



- + SimGrid vs. Peer-to-Peer simulators (OverSim)
 - Simgrid with a realistic and precise network model outperforms OverSim with a basic constant-time model
 - Simulated 2 million nodes on a single machine



- Oversim (simple underlay)
- ×— Precise network (0.00001), sequential
- - × - - Precise network (0.00001), parallel
- - + - - Precise network (0.1), sequential
- - + - - Precise network (0.1), parallel

Several contributed projects

- + Complete model of the BOINC client scheduling process
- + Stock implementation of the Chord protocol

