Part III

Clojure STM Demo on Azul Systems Box

- Azul has built a software and hardware infrastructure which completely focused on Java scalability and throughput
- Their own JVM: the Azul Virtual Machine (AVM)
  - Solves memory problem: alloc/GC 10's of GB/sec
- Their own operating system
- Their own hardware
  - The Azul Vega™ 3 7300 series has up to

    864 processor cores and 768 GB of memory

And we get to play with it ;-)

- We'll run a parallel Clojure program using agents and refs, to solve a large TSP instance

- Reproduction of Cliff Click's Clojure experiments for JavaOne 2009! http://blogs.azulsystems.com/cliff/ (good stuff!!)
  - See also:

    http://blogs.azulsystems.com/cliff/2009/07/javaone-slides.html

tsp-ants.clj

- Uses a simple probabilistic parallel algorithm with worker ”ants” that try to find best routes
- Ants are making weighted random tours, dropping pheromones on edges
  - The shorter the edge, the more weight
  - The shorter the tour, the more pheromones are dropped on tour edges
  - Updates edge pheromones after a tour completes