The New Server

Smaller, Faster, and Less Hungry

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The Server Evolution

- Independent computing entity
  - Mainframe-type machines
  - Large multi-processor machine
  - Some still present and used (e.g. Sun E10K)

- Computing clusters
  - Process clusters
    - All machines share the load
    - Use some sort of clustering mechanism
  - Management clusters
    - Machines operate independently
    - Unified hardware management platform
  - Load Balanced Clusters

Load Balanced Clusters

- Hardware/software based load balancing
- Many machines look like one to the outside world
- Load balancer is responsible for:
  - Server health checking
  - Server selection
  - Session management
  - Server management
    - Maintenance preparation
    - Gradual activation/deactivation
  - All machines still operate independently

Some of Today's Server Problems

- Real estate
  - Rack space price
  - Management of a large deployment
- Power
  - Power sources are becoming more and more precious
- CPU Utilization
  - CPU "hogging"
  - Virtualization
- Fail-over and High Availability
  - More than just load balancing
  - state failover

Future Trends

- High density/less space
- Low power consumption
- Servers on blades
- Virtualization
- Advanced clustering
- More integrated/embedded functions

- Perhaps new OS offsprings to help in some or all of these

Today's Agenda

- Presenters:
  - John Lawler – Director, E-Business Infrastructure, Infonetics Research
  - Vern Brownell – CEO & Founder, Egenera
  - Sally Stevens – Director, Density Optimized Servers, Compaq
- Q & A and panel discussion