Agenda

Year in review
Welcome ARM & Power (again)
Climbing up the stack
Open Virtualization Alliance
Agility vs. Stability
Recent kernel activity

- Nested NPT, nested VMX
- Asynchronous page faults
- Shadow MMU performance improvements
- Hypervisor-mode Powerpc hosts
- Transparent hugepages
- Vhost-net zero-copy

Any activity becomes creative when the doer cares about doing it right or better.

John Updike
Work in progress

- VFIO
- Dynamic NUMA

At the present rate of progress, it is almost impossible to imagine any technical feat that cannot be achieved - if it can be achieved at all – within the next few hundred years.

Arthur C. Clarke
New ports

• A15 ARM
  • Large physical addresses – terabyte class hosts
  • Virtualization extensions – near-native performance
• Hypervisor-mode power
  • Fully exploit hardware capabilities

Software is the soul to the lifeless body of the hardware.
Climbing up the stack

• More emphasis on complete stack

One that would have the fruit must climb the tree.
Thomas Fuller
Open Virtualization Alliance

- ~100 members
- Fill in the marketing gap

One man may hit the mark, another blunder; but heed not these distinctions. Only from the alliance of the one, working with and through the other, are great things born.

Antoine de Saint-Exupery
Agility vs. Stability

- The downsides of stable, conservative development
  - Loss of agility
  - Developer frustrations
  - Fragmentation
- But cannot break users' expectations
  - No crashes
  - No data loss
  - No ABI breakage

The stability of the whole is guaranteed by the instability of its parts.

Karin Meißenburg,
Questions