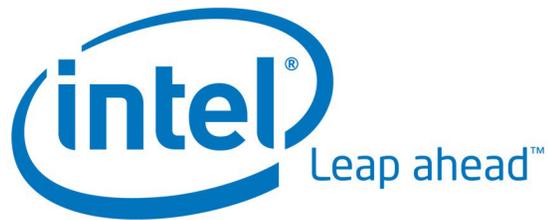# KVM Forum 2007
Tucson, AZ

Benny Schnaider, CEO

bennys@qumranet.com

Thank You KVM Forum 2007 Sponsors

Company Overview

- **Founded 2005**
- **A Delaware corporation**
- **Locations**
  - **US Office – Santa Clara, CA**
  - **R&D - Netanya/Poleg**
- **40+ Employees**
- **Funding**
  - **Founders**

Qumranet

SEQUOIA CAPITAL™

NVP NORWEST VENTURE PARTNERS

Expertise in enterprise infrastructure (networking, storage, servers) and virtualization

Qumran & The Dead Sea Scrolls

- The Qumran Caves are in Israel on the Western shores of The Dead Sea

- The Dead Sea Scrolls were discovered in the Qumran Caves

- The scrolls include practically the only known surviving copies of Biblical documents made before AD 100

- Between the 2nd Century B.C. and 1st Century A.D., a sect called the Essenes worked tirelessly on the scrolls and led a pure life in the desert.

KVM
2007

4

KVM Developer Forum 2007 – August 29th-31st

- 57
  - Registered
- 21
  - Companies Represented
- 7
  - Countries Represented
- 5
  - Sponsors
  - Intel – Platinum Sponsor
  - Novell – Gold Sponsor
  - AMD – Silver Sponsor
  - RedHat – Reception Sponsor
  - Qumranet – Platinum Sponsor
- 2 ½ days of sessions
- 15-20 Speakers

The KVM Forum 2007
August 29th-31st
Loews' Ventana Canyon Resort
Tucson, Arizona
Linux
Hypervisor
Virtualization
Open-Source
Attend the
1st Annual KVM Developer
Community Forum

KVM Forum
2007

Personal experience with Open Source

- Real Time embedded systems
- UTS (Unix) for mainframes
- VCPU
  - HW/SW co-simulation tool
  - Can run the SW before the HW is ready
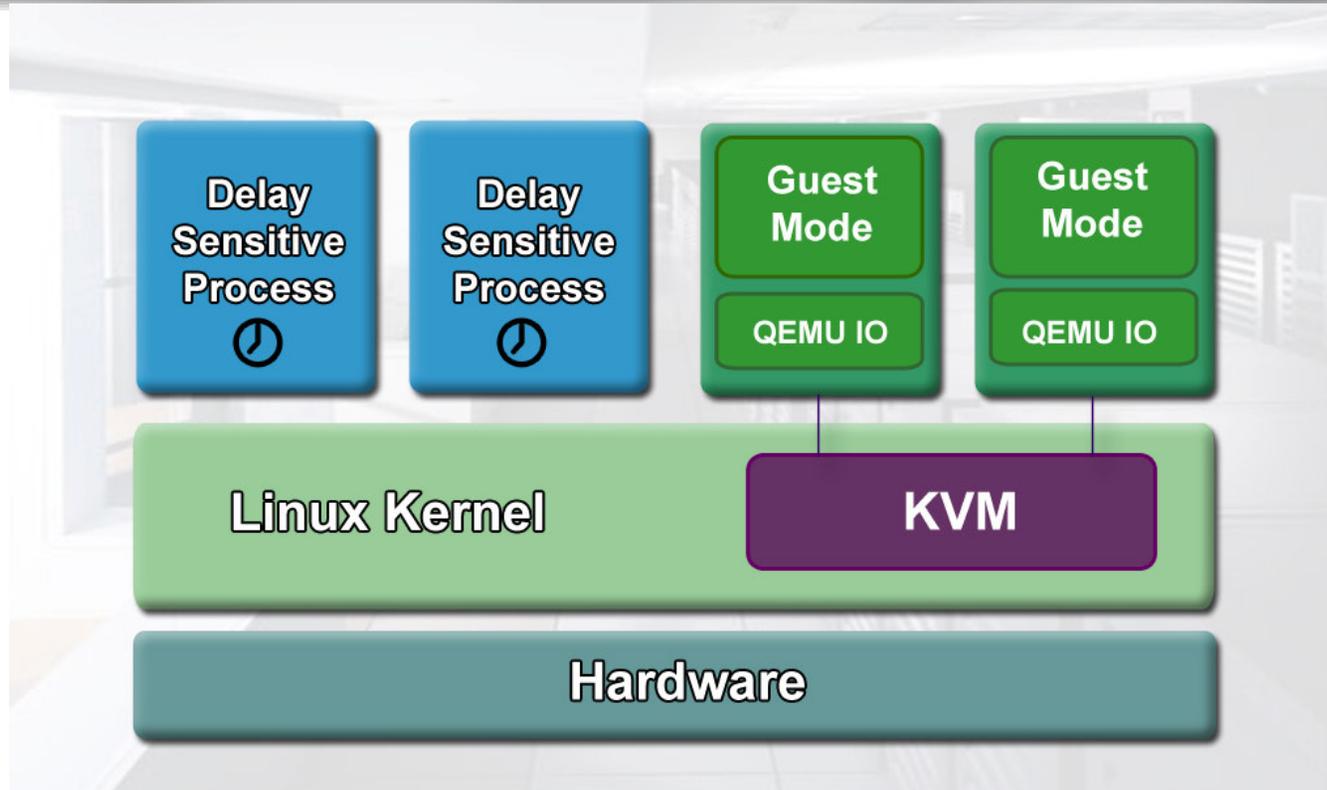
When to Open Source* ?

1. Reliability/stability/scalability are critical.
2. Correctness of design and implementation cannot readily be verified by means other than independent peer review.
3. The software is critical to the user's control of his/her business.
4. The software establishes or enables a common computing and communications infrastructure.
5. Key methods (or functional equivalents of them) are part of common engineering knowledge.

*Based on The cathedral and the bazaar, Eric S. Raymond

Qumranet experience with Open Source

- The power of equal access to information

- The Business Model challenge

- Extreme sensitivity

  - We can always use help from you

- The KVM had been an extreme success for all of us

  - Qumranet included
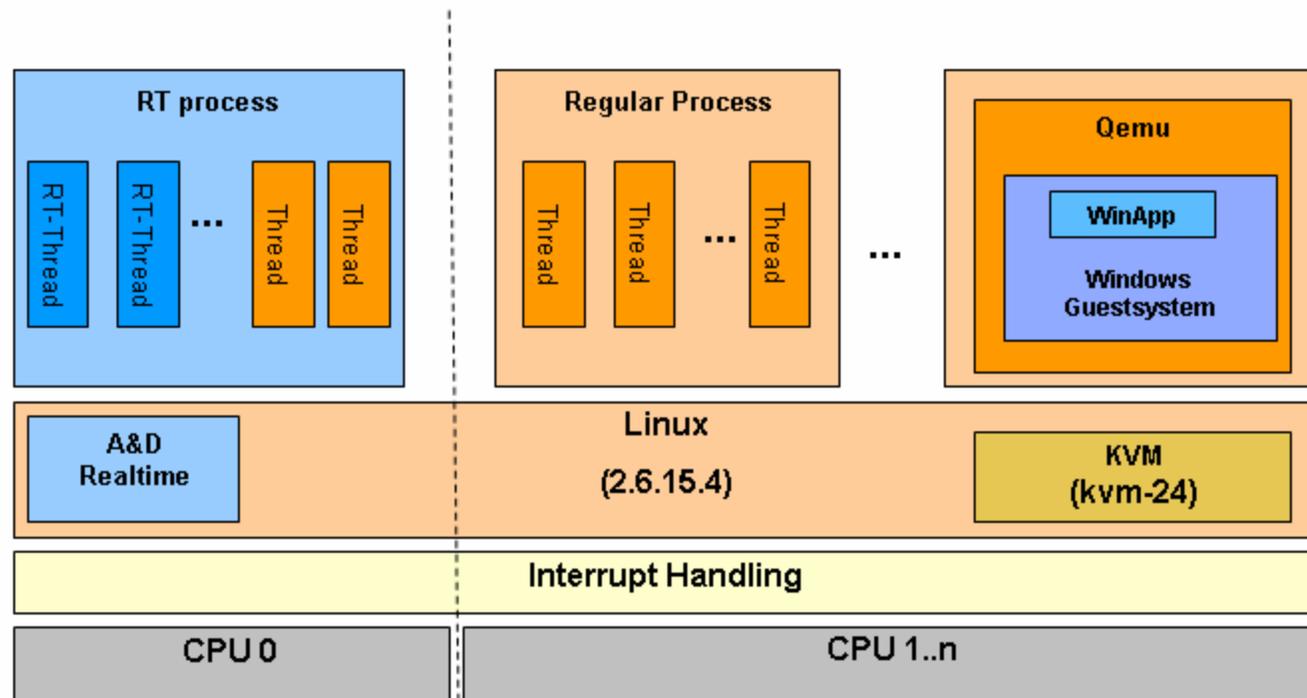
KVM in Customer Scenario

- Delay sensitive tasks to collect real time information streams
- Virtual Machines to batch-process that information

A&D Platform

- Dedicated Partitioning (processes, interrupts) guarantees optimal latency periods in the range of single-digit micro seconds (e.g. AMD X2 Dual-Core 4200+, 2.2 GHz).
  - Interrupt pinning (Realtime vs. non-Realtime)
  - Boot parameter: isolcpus=0

RT process	Regular Process	Qemu
RT-Thread RT-Thread ... Thread Thread	Thread Thread ... Thread ...	WinApp Windows Guestsystem

A&D Realtime	Linux (2.6.15.4)	KVM (kvm-24)

Interrupt Handling

CPU 0	CPU 1..n

- We do not observe deteriorated latency periods when running a virtualized Windows guest system in parallel.
- Realtime capable host system (e.g. machine control) and a non-realtime capable Windows guest system (HMI) is a combination which is frequently asked for.

SIEMENS

What is Qumranet's BM ???

- We are still in Stealth mode
- Virtualization offers major enabling technologies:
  - The user environment is just a file
  - You can play the file anywhere KVM is supported
  - Migration
  - Security*

"The essence of strategy is choosing what not to do"
Source: Michael E. Porter, "What is Strategy"," Harvard Business Review

What next ???

- Keep pushing…
- Real end-user, in production deployments
- KVM Forum 2008
  - US
  - Europe
  - Israel

Qumranet

Thank You!

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