AMD’s virtualization technology
SVM

Xen Summit
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SVM, The Past

- Formerly codenamed “Pacifica”
- Specification published
- SimNow simulator published
- HVM abstraction layer
- AMD port published for Xen’s Full Virtualization infrastructure
SVM, Present and Future

✓ 32-bit Development complete

☐ 64-bit port
☐ Device Exclusion Vector (DEV)
☐ Secure Initialization (SKINIT)
☐ Nested Paging
☐ Performance & Paravirtual drivers
✓ Posted patch: GART as minimal IOMMU for Xen’s Para-virtualization
Hardware Virtual Machine

• One management and user interface for Fully Virtualized Machines
• HVM=common layer + an interface to architecture specific components
• Very similar hardware technology with some functional differences
• Analysis based on specification and code inspection
  – Instruction names
  – Opcodes
  – VMCB and VMCS
  – Exit handling
  – AMD Paged Real Mode
Resources

- Updated AMD64 Architecture Tech Docs
  - PID 24593 and PID 24594

- Xenbits HVM tree

- SimNow
Contacts

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