FreeBSD bhyve/ARM Status Report

Mihai Carabas
{mihai}@freebsd.org

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Tokyo University of Science
Tokyo, Japan
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About me

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  - PhD Student: virtualization on embedded devices
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- BSD world
  - DragonFly BSD: SMT aware scheduler - 2012, Intel EPT for vkernels - 2013
  - FreeBSD - bhyve: instruction caching - 2014, porting bhyve on ARM - 2015
- Coordinating `bhyve` related diploma and master projects

bhyve through diploma and master projects

- Promote and Coordinate
- Lot of work have been done, not too much yet commited to upstream
  - instruction caching
  - emulate NE2000 network device driver
  - emulate ATA disk controller
  - porting bhyve on ARM
  - emulate HD-Audio device driver
  - bhyve save-restore mechanism

Instruction Caching

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- Not yet commited due to its low impact
- When we will support nested virtualization

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- ATA disk controller emulation needs reworking (Peter said that found a candidate)

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- More tech details on AsiaBSDCon2017 presentation (12th of March, last presentation)

bhyve save-restore feature

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- Prerequisite for live migration!

bhyve save-restore feature (2)

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- Follow-up the technical presentation in BSDCan2017!

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- Is hard to have results if you do not ensure a minimal scholarship from them
- On-going projects: bhyve save-restore, bhyve on ARM
- Personal perspective:
  - I will try to work with Peter and Andrew to integrate the projects in the main repo (even with missing stuff)
  - May be University POLITEHNICA of Bucharest will organize a EuroBSDCon in the feature

Thank you for your attention!

ask questions

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