Multi-Disk and GPT on MBR for OpenXT

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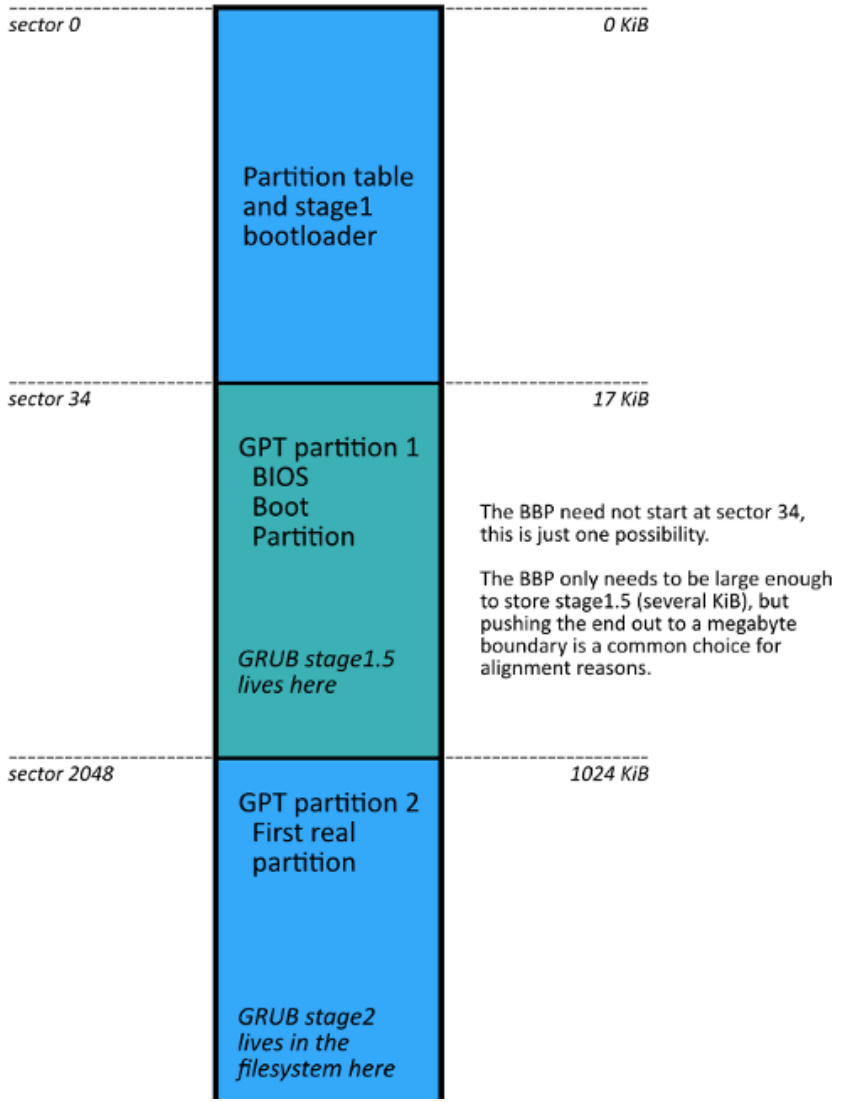
GPT on MBR

GPT on MBR - Motivation

- MBR uses 32-bit addressing
- 2.2TB max limit
- Supports only 4 primary partitions (layout in 512-byte sector)
- GPT is the future

GPT on MBR – Design/Implemenation

- **Use grub2 and a BPP**
- **Modify installer to include gdisk/sgdisk**



https://www.anchor.com.au/blog/2012/10/the-difference-between-booting-mbr-and-gpt-with-grub/

GPT on MBR - Benefits

- Effectively removes drive size limit
- Removes dependency on LVM
- OpenXT wants UEFI, GPT is a must
- Support both BIOS (until Intel stops shipping) and UEFI with unified partitioning scheme
- Multiple OpenXT installs per disk

Multi-Disk

Multi-Disk - Motivation

- Unrealistic that workstations have only single disk nowadays
- Not everyone has access to multi TB drives
- Isolation is always desired

Multi-Disk – Design/Implementation

- Toolstack, installer, UI
- At install time, format/partition secondary disks
- At first boot, auto-assign labels to each disk, toolstack mounts the secondary disks
- Label→disk mapping tracked by toolstack
- On VM creation, choose an existing disk label, vhds created live on that disk

Multi-Disk - Benefits

- Provides better VHD isolation
- Secondary drives could be SED drives, or normal drives with full-disk encryption
- Lays foundation for disk hot-swapping
- Lays foundation for read-only dom0

End

Thanks for listening!