XDP guest offloading

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Introduction

- XDP support is added to many paravirtualized drivers: virtio-net, xen-netfront, hv_netvsc

Introduction

- Some on it's way: vmxnet3

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- XDP is super fast on real hardware since we're processing packets before allocating an skb

XDP guest offloading

- We don't want to process each packet twice (host kernel → guest kernel), we want to avoid data copying

- And it turns out that we can get a better performance while offloading a guest XDP program to a host

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- Implementation challanges: eBPF maps offloading, per-cpu maps, a live migration case

- Effective eBPF maps access from a guest

- XDP_REDIRECT

XDP guest offloading

- Related work:
- https://netdevconf.info/0x13/session.html?xdp-offload-with-virtio-net

Thank you