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
Introduction

• 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
XDP guest offloading

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- Implementation challenges: eBPF maps offloading, per-cpu maps, a live migration case
- Effective eBPF maps access from a guest
- XDP_REDIRECT
XDP guest offloading

- Related work:
Thank you