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Supporting Live Update in VFIO

In this talk, we'll discuss our work to support Live Update in VFIO for PCI devices.

Live Update is a mechanism to quickly update the kernel while running virtual machines using kexec. VFIO is a kernel module to allow devices to be controlled by userspace and virtual machines.

During our talk we will cover the problems that need to be solved to support Live Updates in VFIO, and our proposed solutions, including:
- Preserving VFIO cdev device files across Live Update
- Preserving vfio-pci driver state across Live Update
- Restrictions on VFIO operation during a Live Update
- Verifying VFIO state restoration by userspace after kexec
- Testing VFIO Live Update support

We hope to get the community's feedback on our approach and align on a path to solving these problems in the upstream kernel.

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