

# VFIO virtual device

Device types supported:

- KVM\_DEV\_TYPE\_VFIO

Only one VFIO instance may be created per VM. The created device tracks VFIO groups in use by the VM and features of those groups important to the correctness and acceleration of the VM. As groups are enabled and disabled for use by the VM, KVM should be updated about their presence. When registered with KVM, a reference to the VFIO-group is held by KVM.

Groups:

KVM\_DEV\_VFIO\_GROUP

KVM\_DEV\_VFIO\_GROUP attributes:

KVM\_DEV\_VFIO\_GROUP\_ADD: Add a VFIO group to VFIO-KVM device tracking

kvm\_device\_attr.addr points to an `int32_t` file descriptor for the VFIO group.

KVM\_DEV\_VFIO\_GROUP\_DEL: Remove a VFIO group from VFIO-KVM device tracking

kvm\_device\_attr.addr points to an `int32_t` file descriptor for the VFIO group.

KVM\_DEV\_VFIO\_GROUP\_SET\_SPAPR\_TCE: attaches a guest visible TCE table

allocated by sPAPR KVM. `kvm_device_attr.addr` points to a struct:

```
struct kvm_vfio_spapr_tce {
    __s32  groupfd;
    __s32  tablefd;
};
```

where:

- `@groupfd` is a file descriptor for a VFIO group;
- `@tablefd` is a file descriptor for a TCE table allocated via `KVM_CREATE_SPAPR_TCE`.