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Files on Unmounted Mounts

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For CRIU to successfully checkpoint/restore a process, files must be opened correctly at the correct mounts. Generally, we get `mnt_id` for the mount from `/proc/<pid>/<fd>/fdinfo` and information about the mount from `/proc/<pid>/mountinfo`.

But, if a file is open on an “unmounted” mount, i.e, a mount has been unmounted using `MNT_DETACH` (we still have access to `fds`),

CRIU can’t do checkpoint/restore, since it can’t get `mountinfo` for these “unmounted” mounts.

They are not present in `/proc/<pid>/mountinfo`, and `statmount` does not work on them.

This talk will discuss potential ways to extract `mountinfo` for these mounts.

One such approach is to add “unmounted” mounts to a new “umount” mount namespace, along with adding support to `statx` for exporting `mnt_ns_id`, which we implemented here:

<https://github.com/bsach64/linux/commits/umount-mnt-ns-plus-statx/>

Primary authors: SACHDEV, Bhavik; Mr TIKHOMIROV, Pavel

Presenter: SACHDEV, Bhavik

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