



uid/gid shifting mounts



shiftfs updates

- inotify fixes
 - Map shiftfs inodes to lower fs inodes
 - Hash inodes using pointer to lower fs inode
- File capabilities
 - Copy up inode attrs
- Posix ACLs
 - Add xattr handlers and `get_acl()` inode op
 - Shift ids in ACLs
- Nesting
 - Allow `CAP_SYS_ADMIN` in `s_user_ns` for mark mount
 - Work around filesystem stacking depth limits
- More updates needed for 4.19

Observations



- “Vestigal” inodes will not work
- Gains more commonalities with overlayfs
 - Should consider sharing foundational code with overlayfs

Discussion



- Marking - mark mount, xattrs, ...
- shiftfs or vfs