

0 $N_1 \times \text{append}(f)$
1 $N_{1-3} \text{fsync}(f)$

(a) *append File*

0 $\text{creat}(\text{prop.new})$
1 $\text{append}(\text{prop.new})$
2 $\text{fsync}(\text{prop.new})$
3 $\left[\text{unlink}(\text{prop}) \right]$
4 $\text{rename}(\text{prop.new}, \text{prop})$

(b) *update properties*

