Log-based recovery
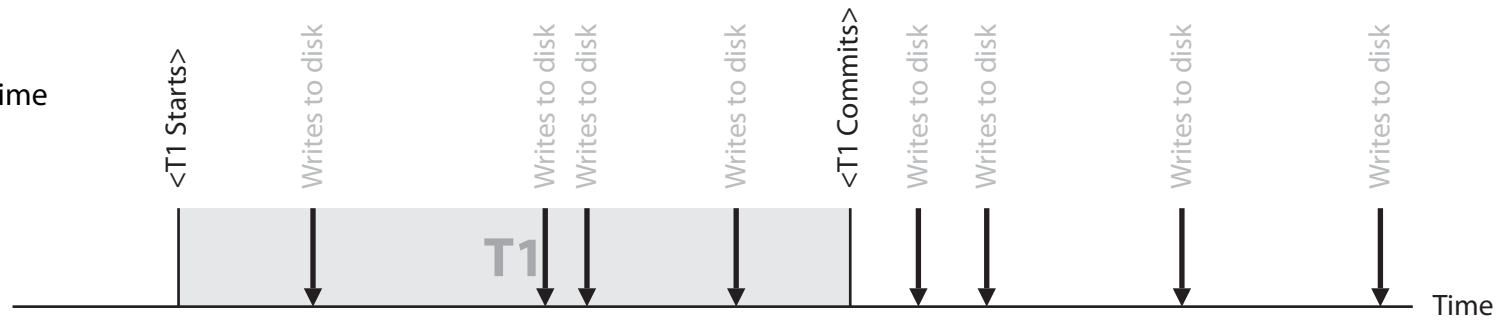
Cachemanager - Output to disk
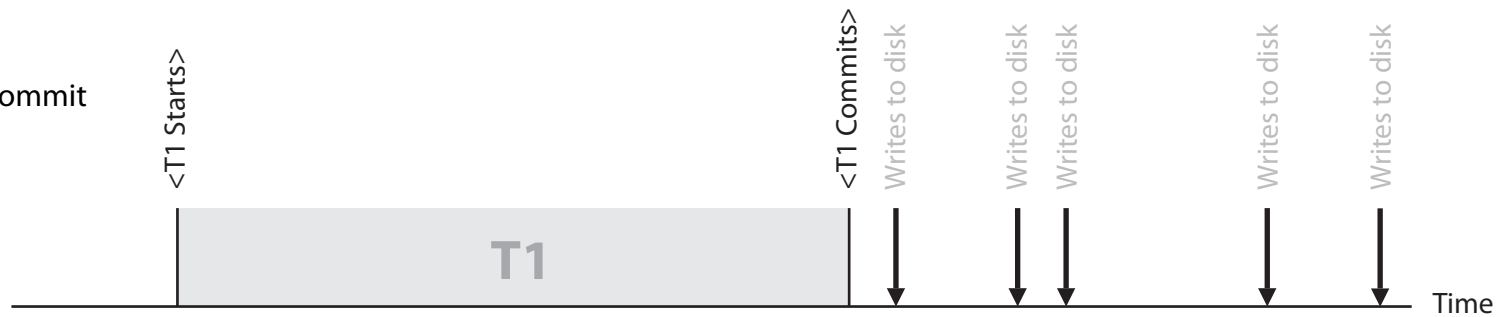
Undo/Redo
• Randomly writes sometime before or after commit
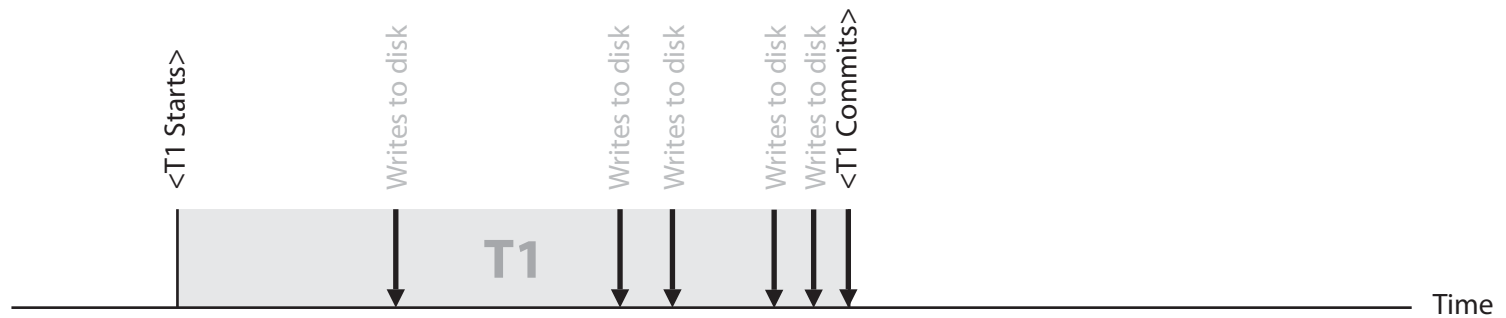
<T1 Starts> Writes to disk Writes to disk Writes to disk Writes to disk <T1 Commits> Writes to disk Writes to disk Writes to disk Writes to disk

T1

Time

No-Undo/Redo
• Writes sometime after commit

<T1 Starts> <T1 Commits> Writes to disk Writes to disk Writes to disk Writes to disk Writes to disk

T1

Time

Undo/No-Redo
• Writes before commit

<T1 Starts> Writes to disk Writes to disk Writes to disk Writes to disk Writes to disk <T1 Commits>

T1

Time

No-Undo/No-Redo
• Add new values to disk
• Write to change pointer on commit

S.C = Shadow Copy

<T1 Starts> Writes to S.C. Writes to S.C. <T1 Commits> Change pointer

T1

Time