Distributed Storage Systems

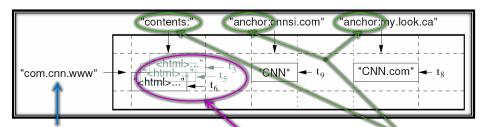


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Bigtable Data Model

(row:string, column:string, time:int64) → string

Webtable



Row key: up to 64KB, 10-100B typically, sorted by reverse URL

cell w/ timestamped versions + GC

column families

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Bigtable API Example

```
// Open the table

Table *T = OpenOrDie("/bigtable/web/webtable");

// Write a new anchor and delete an old anchor

RowMutation rI(T, "com.cnn.www");

rI.Set("anchor:www.c-span.org", "CNN");

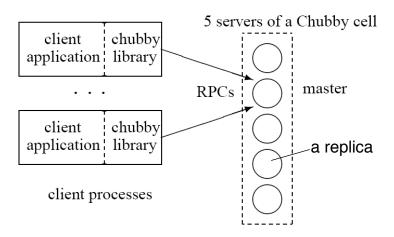
rI.Delete("anchor:www.abc.com");

Operation op;

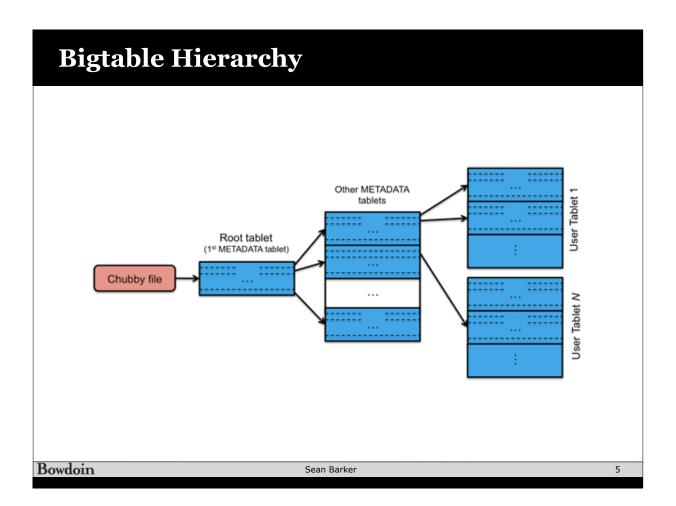
Apply(&op, &rI);
```

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Chubby Lock Service



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nd storage stots in a tape norary.

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es

RAID o: Striping

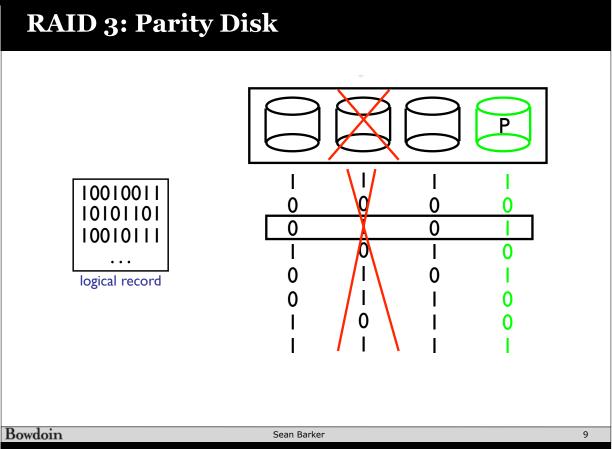
ed to tape for low cost storage;
to disk storage for active USE.

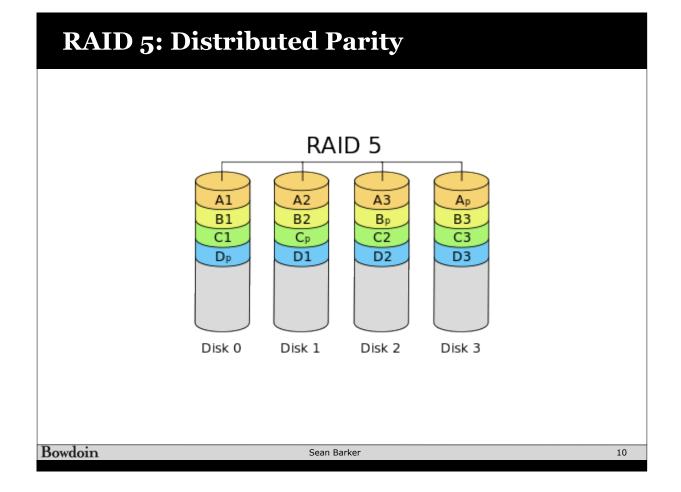
Disk 0 Disk 1

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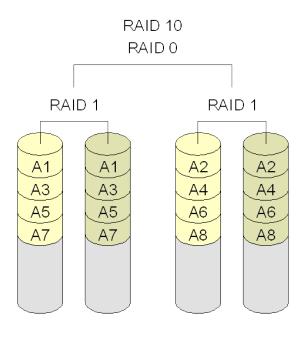
can be archived to tape for low cost storage;

age it back into diels store





RAID 1+0: Mirroring and Striping



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