SDC 19
SNIA INDIA
May 23-24, 2019
Bangalore, India
STORAGE DEVELOPER CONFERENCE

Storage Tiering with Deduplication

Nalini Kumari Nallamalli
Santosh Kalekar
Veritas Technologies LLC

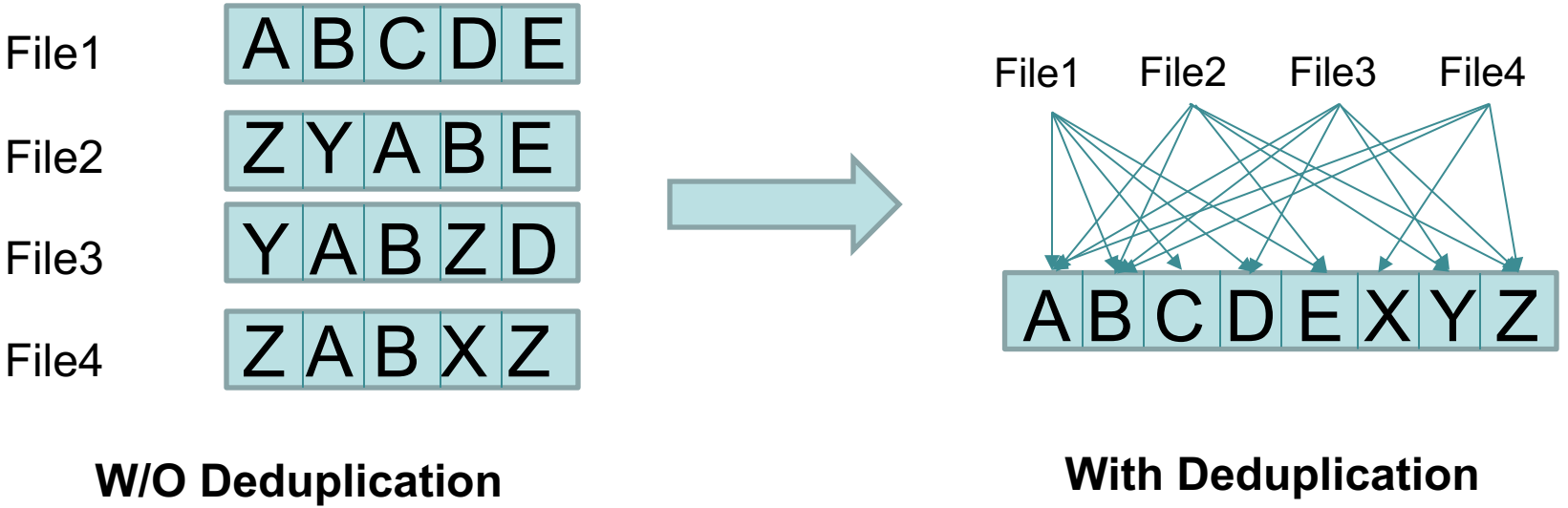
Agenda

- Deduplication
- Tiering
- Tiering w/o Deduplication
- Tiering with Deduplication
- Summary

Deduplication

- Data deduplication is a specialized data compression technique for eliminating duplicate copies of repeating data.
- Used to improve storage utilization and to transfer less data across the network.

Deduplication Contd..



W/O Deduplication

With Deduplication

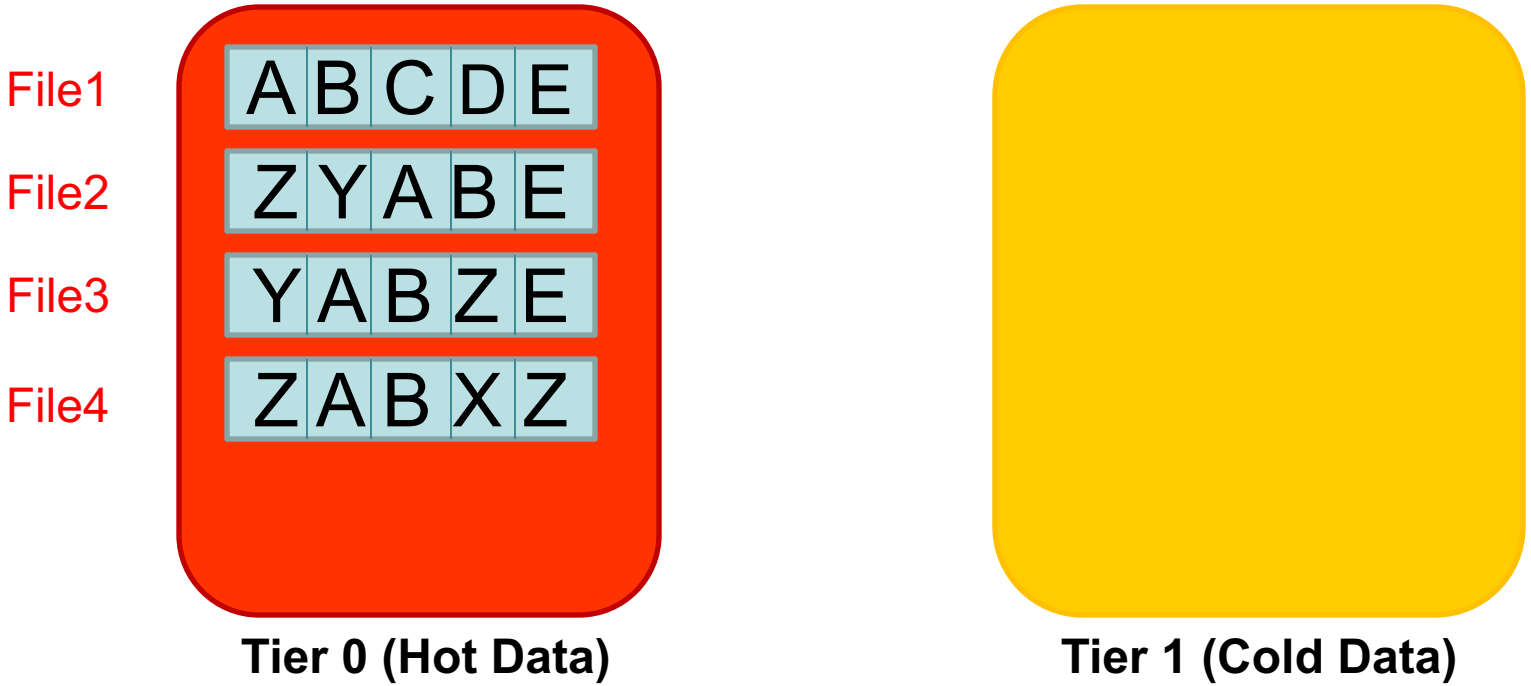
Tiering

- Progression or demotion of data across different tiers (types) of storage devices and media.
- Assigned to the related media according to performance and capacity requirements.
- User define rules and policies that dictate if and when data can be moved between the tiers.

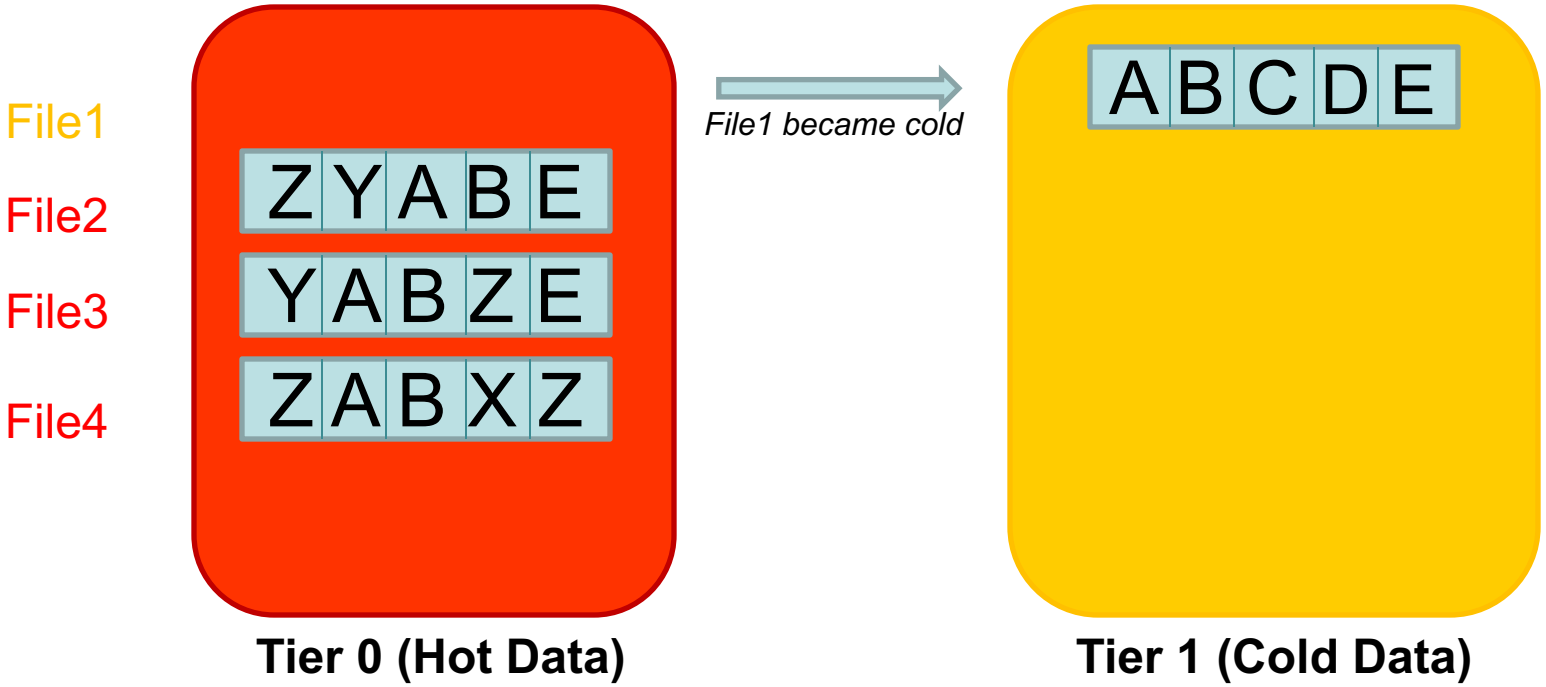
Tiering Policies

- mtime or atime (Aging)
- I/O or Access temperature (Activity)

Tiering w/o Deduplication



Tiering w/o Deduplication



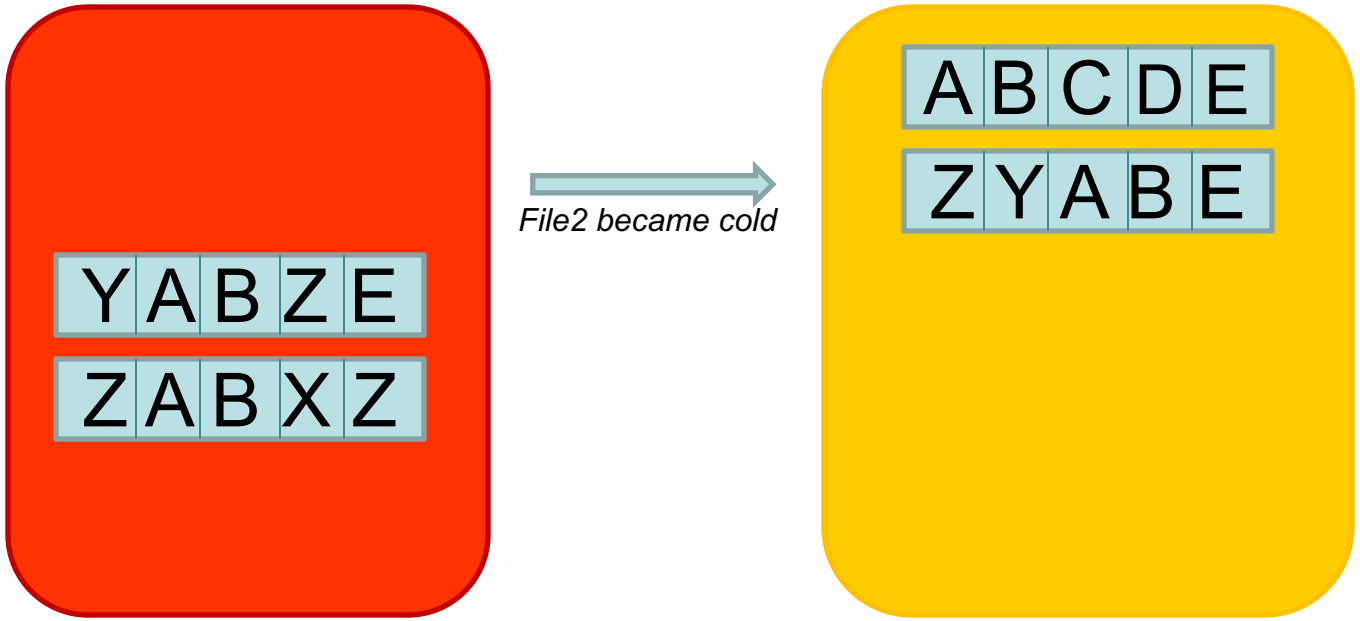
Tiering w/o Deduplication

File1

File2

File3

File4



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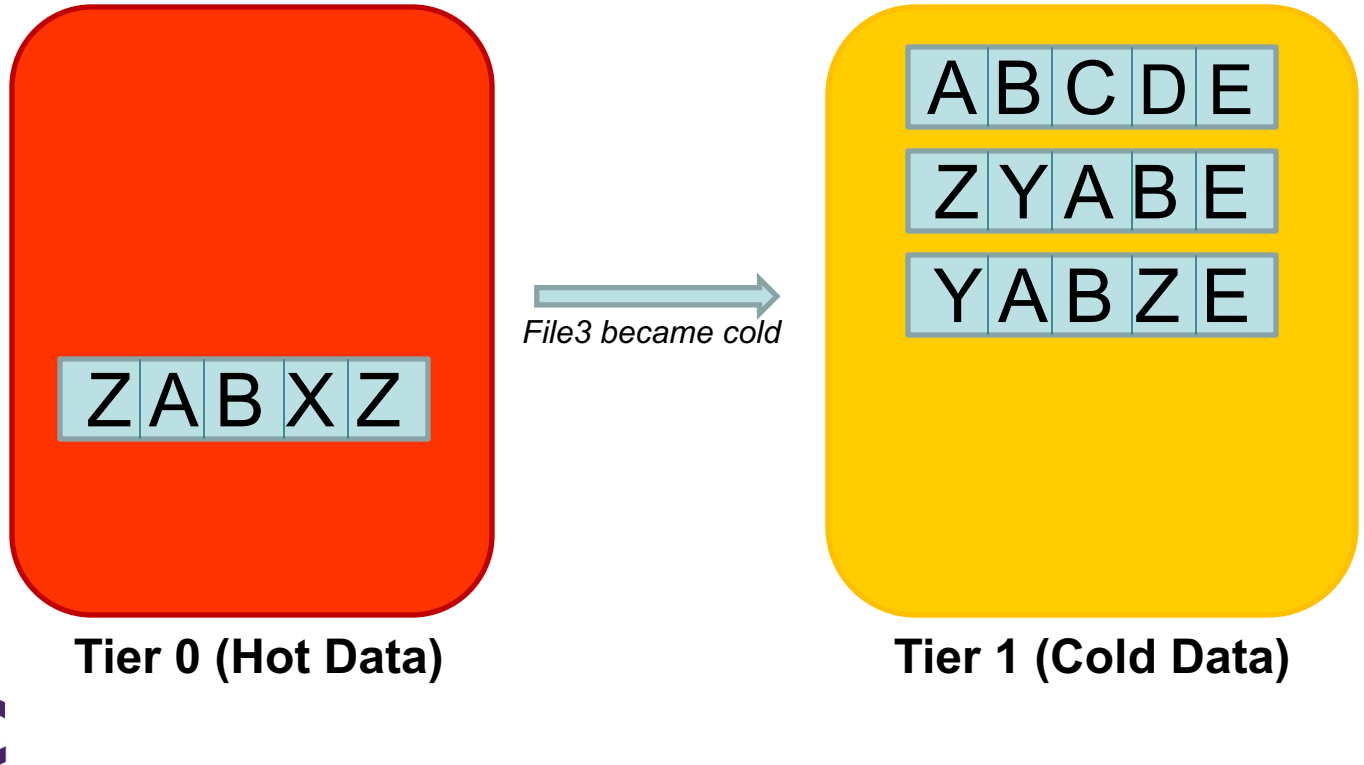
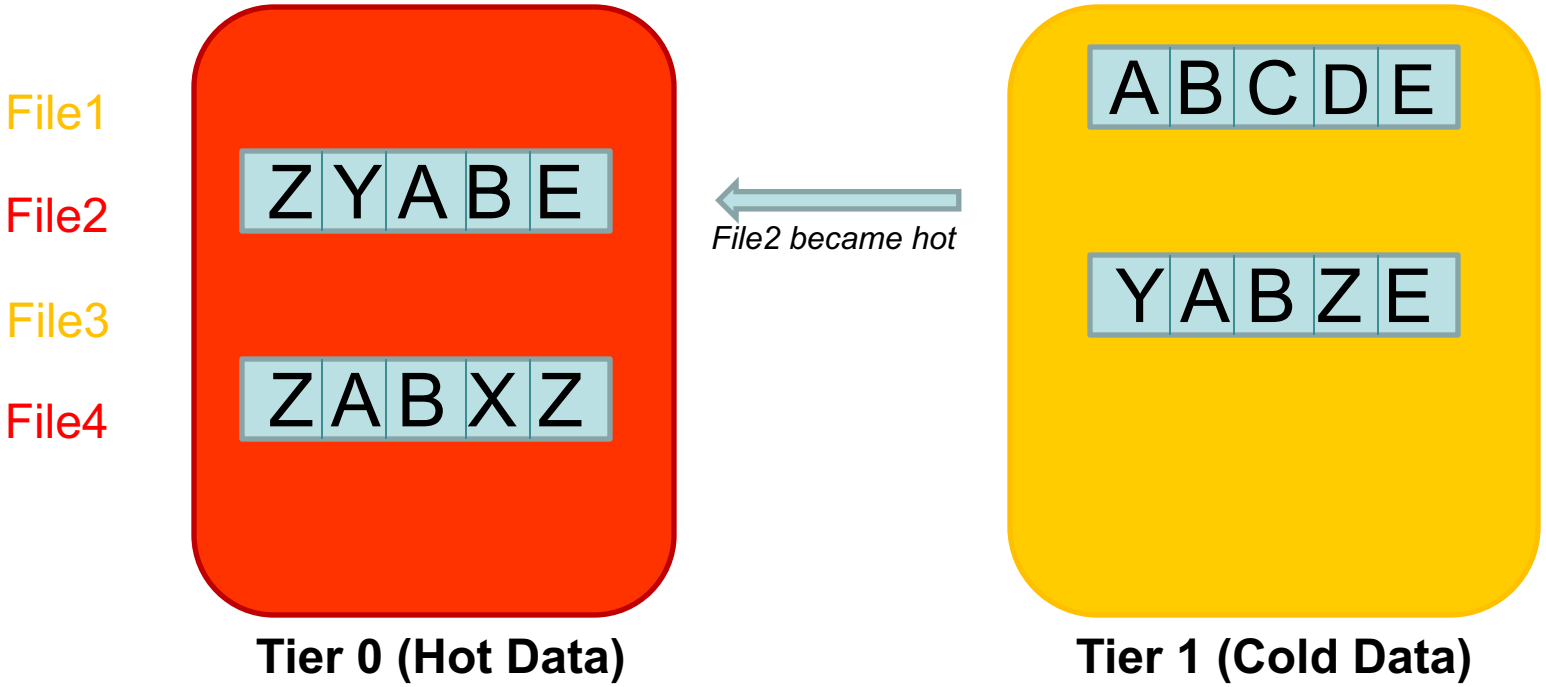
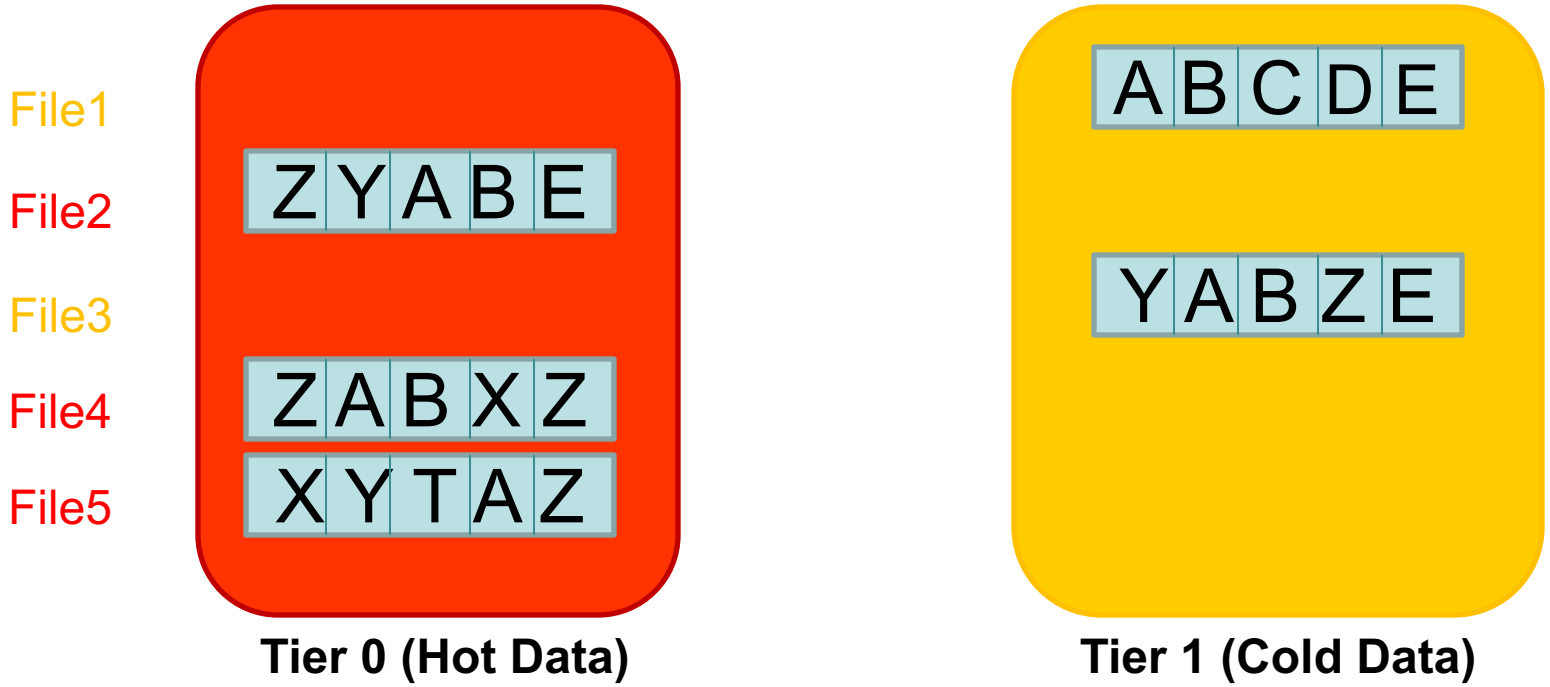


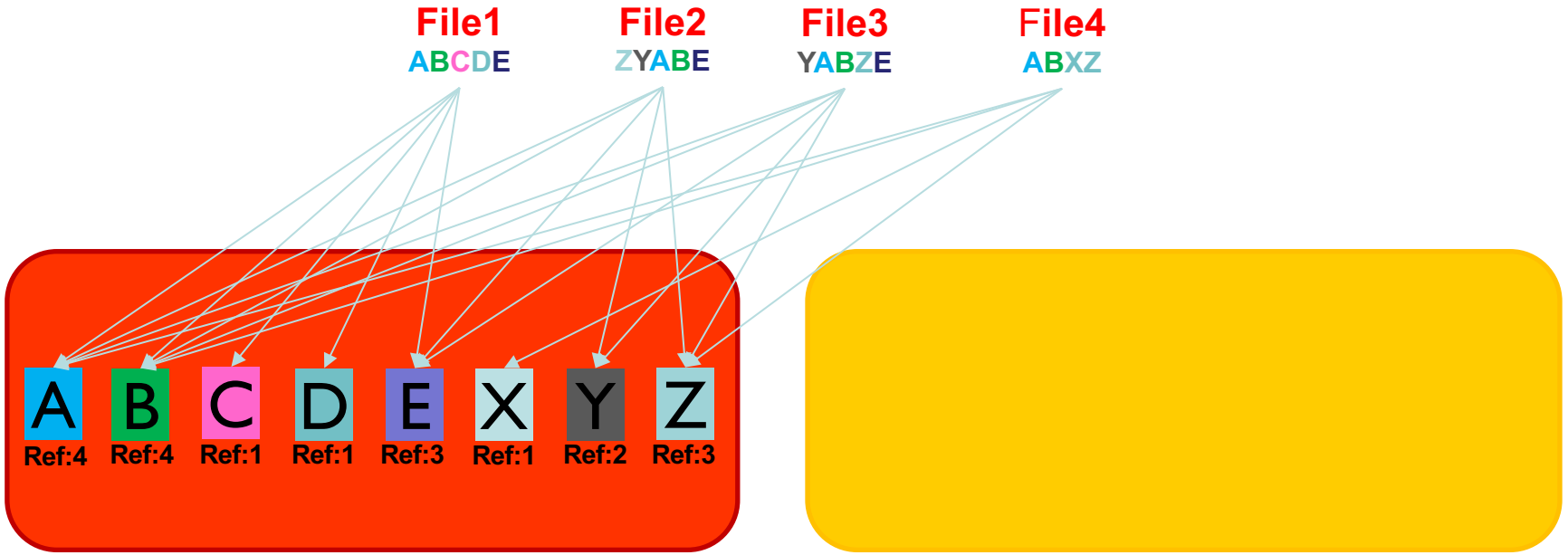
Tiering w/o Deduplication



Tiering w/o Deduplication



Tiering with Deduplication - Challenges



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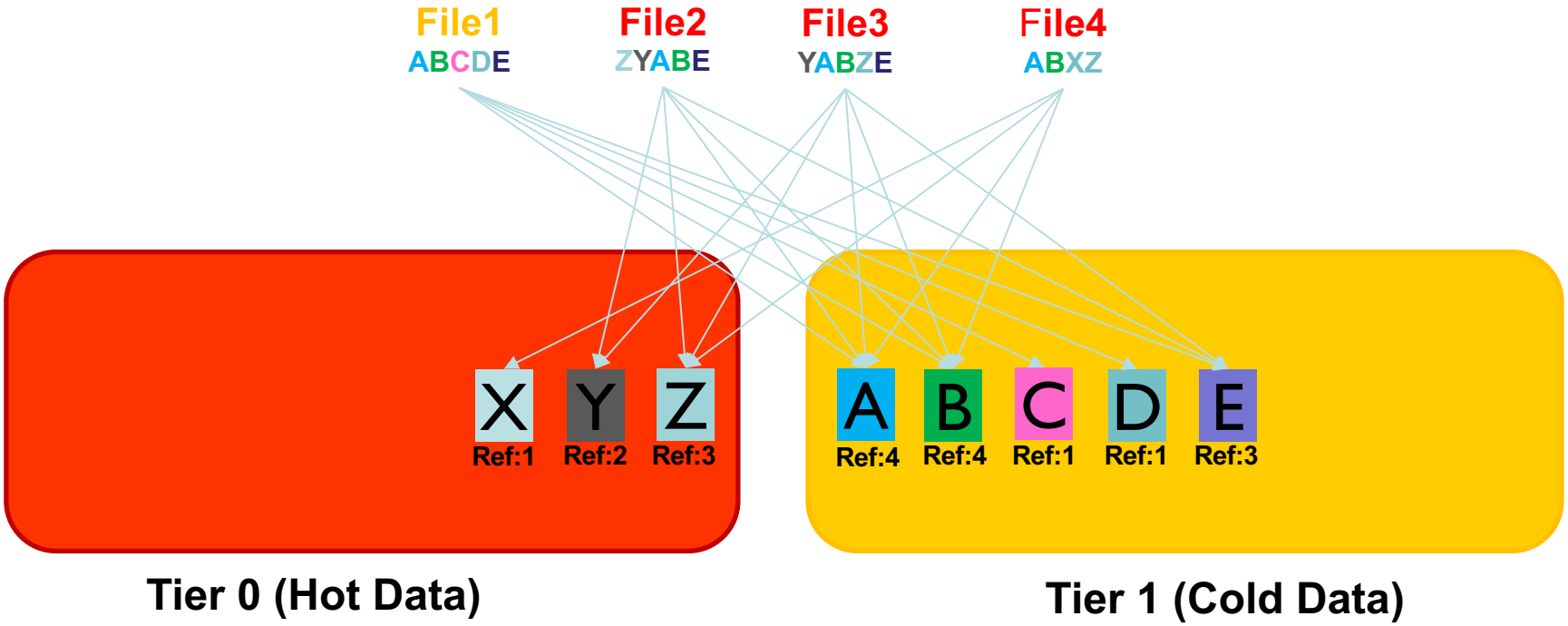

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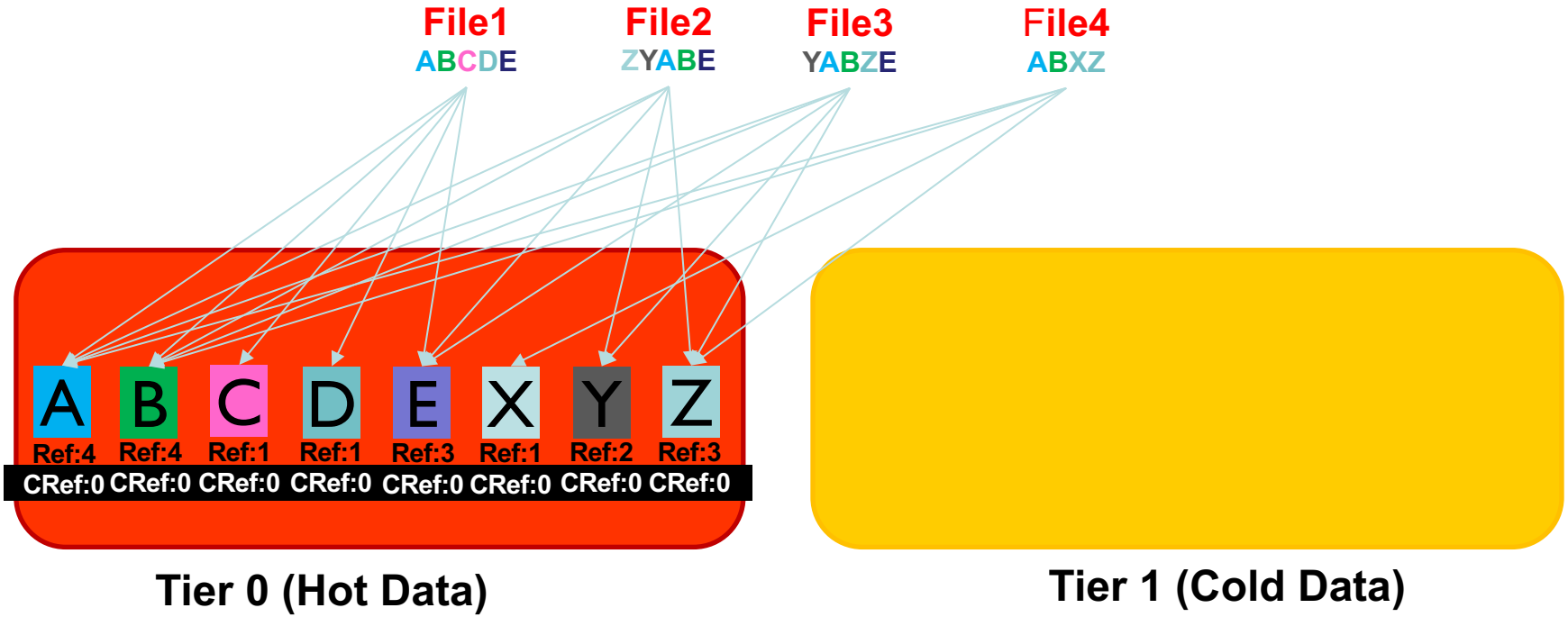
Tiering with Deduplication - Solution



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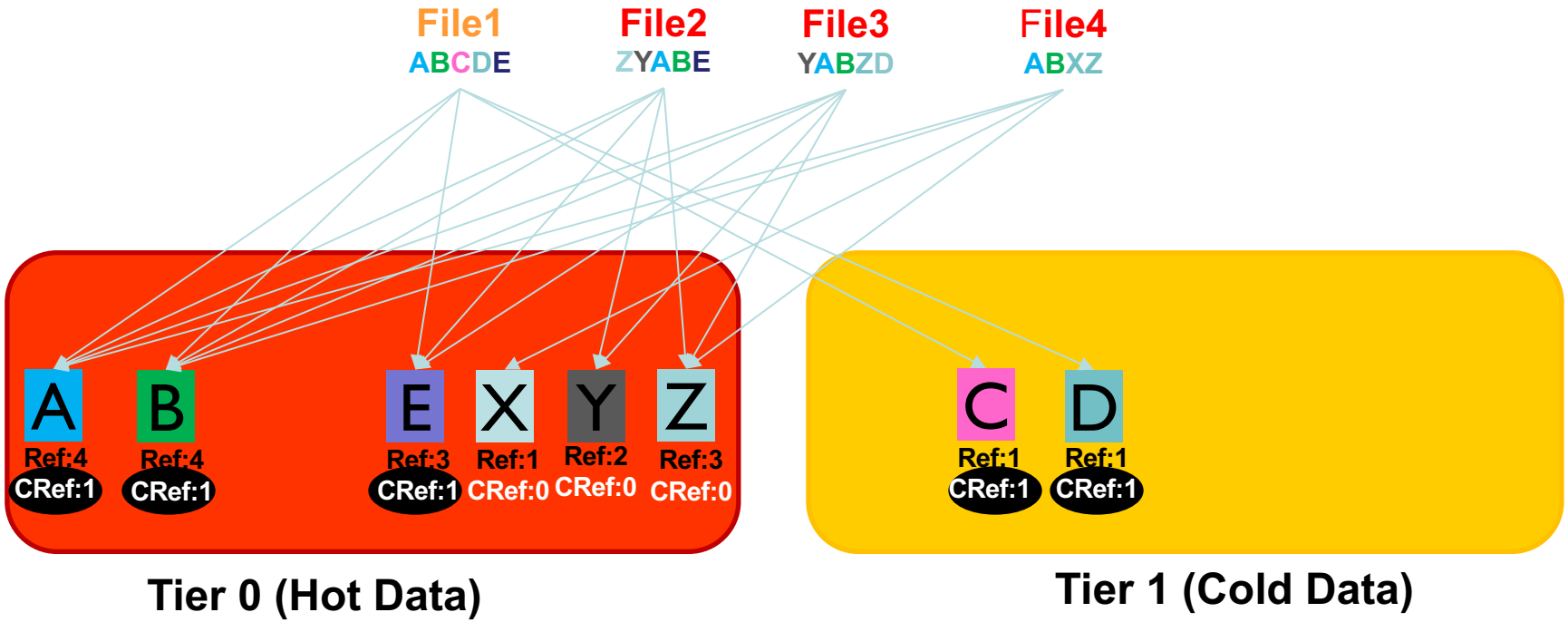
Tiering with Deduplication



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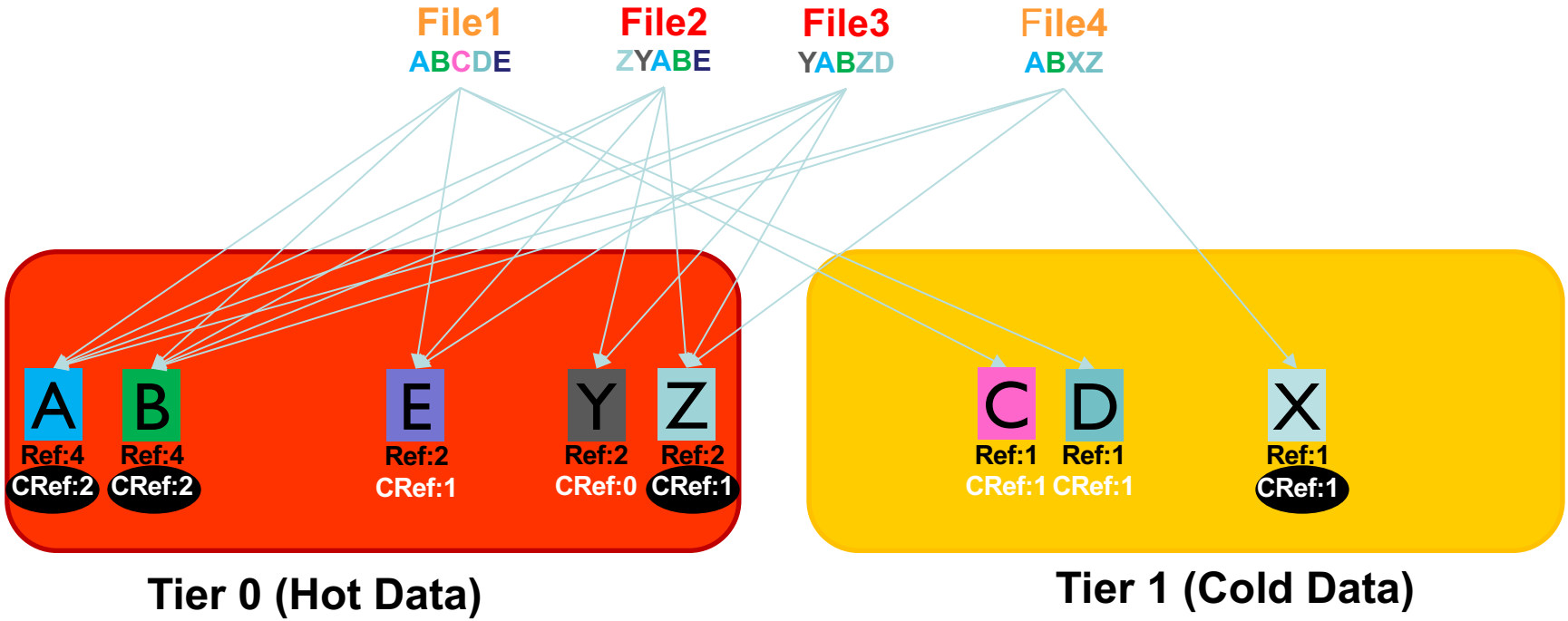

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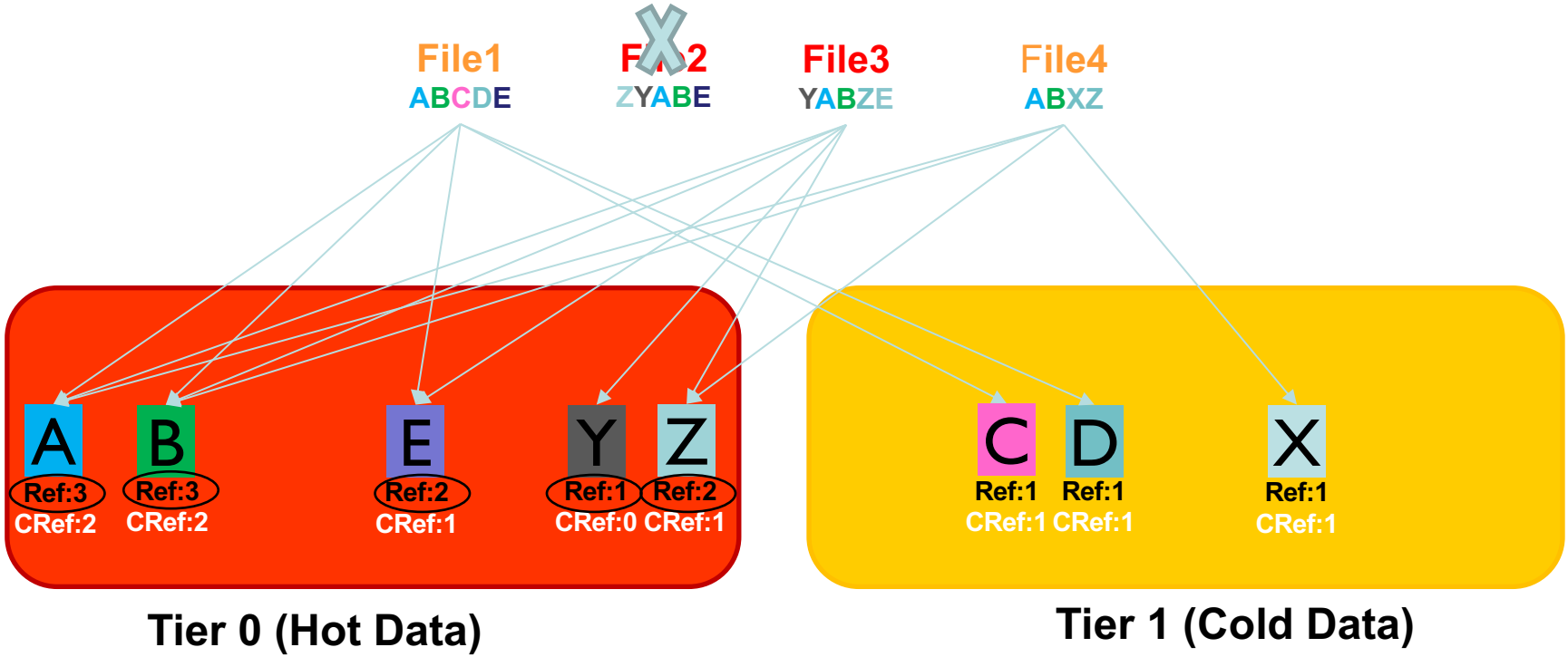

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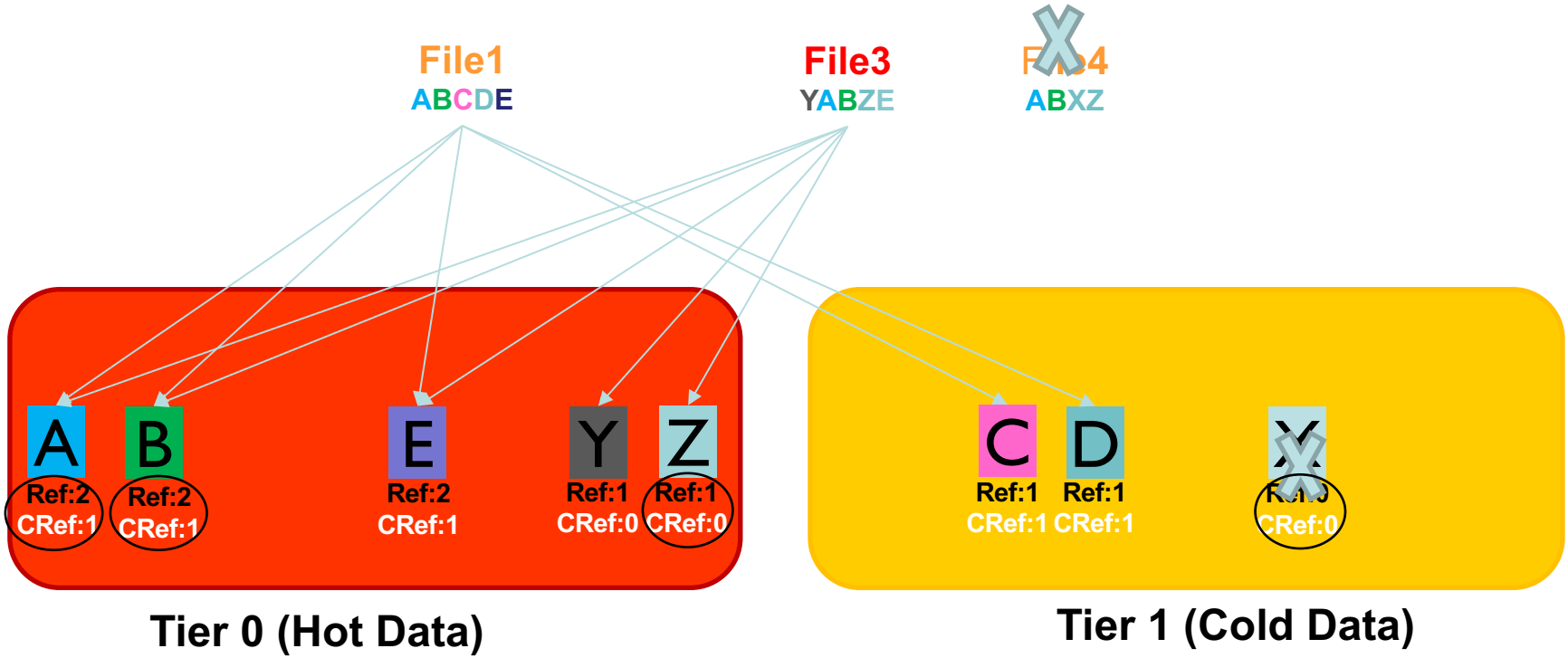

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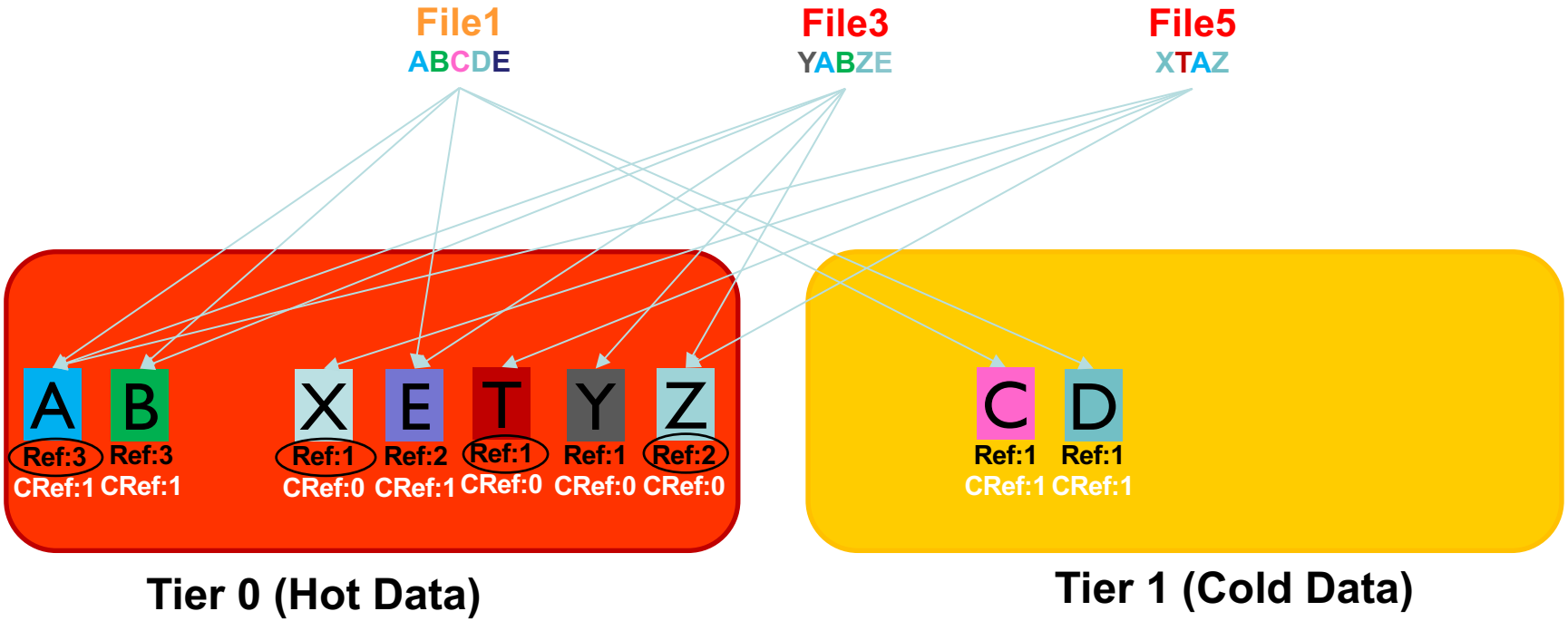

Summary

- Deduplication
- Tiering
- Challenges with Tiering
- Tiering with Deduplication

Questions?