

Eventual consistency

CAP theorem



1995



2000

Managing Update Conflicts in Bayou,  
a Weakly Connected Replicated Storage System

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**Towards Robust  
Distributed Systems**

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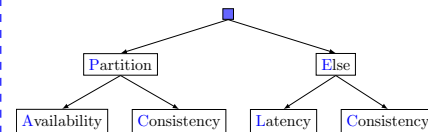


Bigtable: A Distributed Storage System for Structured Data  
**Dynamo: Amazon's Highly Available Key-value Store**

Fay Chang, Jeffrey Dean, Sanjay Ghemawat, Wilson C. Hsieh, Debika Ghosh, Amit V. Lakshman, Alex Pilchin, Swaminathan Sivasubramanian, Peter Voshall, Mike Burrows, Tushar Chandra, Andrew Fikes, Robert E. Gruber  
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Giuseppe DeCandia, Deniz Hastorun, Madan Jampani, Gunavardhan Kakulapati, Avinash Lakshman, Alex Pilchin, Swaminathan Sivasubramanian, Peter Voshall, and Werner Vogels  
Amazon.com



PACELC tradeoff



2012

