

If the CAP fits, you can't forget!



Myles A. K. Steinhauser
@masteinhauser

About Me

- Really, hardly anyone ever cares but if you insist...
- Worked at Applied Data Consultants
 - Helped build a stable and reliable Real-Time Routing and Tracking SaaS
 - Was not yet a globally deployed solution, but was heading in that direction...
- Now at Stratus Technologies in Maynard, MA (Boston)
 - I am helping build an automated Disaster Recovery system for Fault-Tolerant and Highly-Available VMs

Onward!

WTF is CAP?!?

- Brewer's Conjecture
- Later was proven into the CAP Theorem
- CAP is
 - Consistency
 - Availability
 - Partition-Tolerance

WTF is CAP?!?

- OH, and did we mention...
- It is a Negative Assertion

So, PICK TWO

WTF is CAP?!?

- But wait! You can **only pick**
 - Consistency
 - OR***
 - Availability

“Because a system that is not Partition-Tolerant will, by definition, be forced to give up Consistency or Availability during a partition”
<https://foundationdb.com/white-papers/the-cap-theorem/>

WTF is CAP?!?

- However, CAP only applies to the *complete* system
- This means you can tweak any of the 3 properties to increase the others

Welcome to NoSQL

So, Why CAP?

- Traditionally, only the RDBMS cared about consistency
- Cross Datacenter, this is extremely complex due to CAP and handling it appropriately per application demands
- [Amazon Dynamo paper](#) (SOSP 2007)

More info/slides coming soon!

Images

- <http://learnyoussomeerlang.com/static/img/cap.png>
-