

Detecting failures in distributed systems with the Falcon spy network

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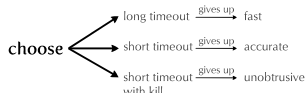
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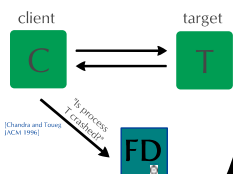
Failure detection today

Unpredictable system latency forces a trade-off

Failure detector must give up one ideal characteristic

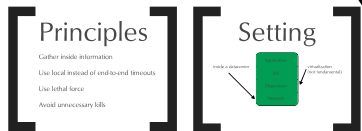


C is a backup checking on master T
C is waiting on a remote procedure call at T
C is choosing a server from a server pool



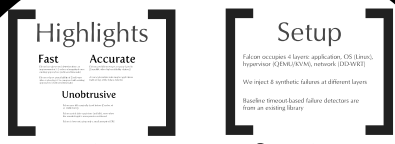
End-to-end failure detectors give up too much

Design of Falcon



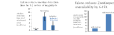
Use spies to get inside the layers

1. What do spies do?
2. How are spies coordinated?
3. What happens in the corner cases?



Evaluation of Falcon

Fast



Accurate



Unobtrusive



Discussion

