Analytical and Practical Evaluation of Sybil Attacks

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1   Introductions

Security analysis typically assumes an omnicient attacker.

I want to practically demonstrate this as well demonstrating how easy it is to place nodes in regions.

Most DHTs are vulnerable to a *sybil attack* or *eclipse attack*.

This is a lot like a birthday attack, only searching for a collision with a region

Why am I doing this? DHTS are important cause I like them.

Security is not something that is thought about for a DHT, unless the DHT is specifically made to be secure against X. Or it's left to the applications

2   Analysis

3   Simulations

Experiment 1: Potatoing 2 random nodes The amount of time to potato two random hashkeys was 29.6218323708 microseconds, and was achevied 99.996%of the time

Experiment 2: Naive Complete Eclipse via Sybil Attack objective is to place