UrDHT: A Unified Model for Distributed Hash Tables

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***Abstract*—UrDHT is an abstracted Distributed Hash Table (DHT). By completing a few simple functions, a developer can implement the topology of any DHT.**

Current distributed systems suffer from fragmentation , high overhead and inability to scale due to difficulty of adoption. UrDHT is P2P system designed to improve the adaptability of P2P distributed serves.

I. Introduction

Distributed Hash Tables have been extensively researched for the past decade. Despite this, no one has created a cohesive specification for what a DHT is.

UrDHT is our specification and implementation of an abstract DHT. UrDHT uses a single

II. Motivation

III. What Defines a DHT

A DHT requires the following functions

A `distance` function
: This measures distance in the overlay formed by the Distributed Hash Table. In most DHTs, the distance in the overlay has no correlation with real-world attributes. This is not the case with UrDHT (see Section IV-B).

A `midpoint` function

An `ownership` definition

The DHT requires

IV. UrDHT

A. UrDHT Components (or maybe logic)

UrDHT is sectioned off into 3 components: database, network, and logic. Database handles file storage and network dictates the protocol for how nodes communicate.