

# Contents

<b>1</b>	<b>Introduction</b>	1
<b>2</b>	<b>DHT Theory</b>	5
2.1	Chord	5
2.2	Content-Addressable Network (CAN)	8
2.3	Global Information Sharing Protocol (GISP)	10
2.4	Kademlia	11
2.5	Pastry	13
2.6	Tapestry	14
2.7	Viceroy	16
2.8	Comparison	17
2.8.1	Overlay Network Topology	18
2.8.2	Distance	18
2.8.3	Routing and Data Model	19
2.8.4	Node's Joining and Leaving	21
<b>3</b>	<b>DHT Platforms</b>	23
3.1	Academic and Open-Source Platforms	23
3.1.1	Bamboo	24
3.1.2	CoDeeN	24
3.1.3	CoralCDN	25
3.1.4	OpenDHT	26
3.1.5	JXTA	27
3.1.6	GNUnet	28
3.1.7	Open Chord	29
3.1.8	Hazelcast	29
3.1.9	i3	30
3.1.10	Overlay Weaver	31
3.1.11	Cassandra	32
3.2	Commercial Platforms	33
3.2.1	WebSphere eXtreme Scale	33
3.2.2	Dynamo	33

3.2.3	SandStone.....	35
3.2.4	An Overlay Platform: Service Routing Layer.....	36
3.3	Conclusion .....	37
<b>4</b>	<b>DHT Applications .....</b>	<b>39</b>
4.1	Multicast.....	39
4.2	Anycast .....	41
4.3	DNS.....	42
4.4	Search.....	44
4.4.1	YaCy .....	44
4.4.2	FAROO .....	45
4.5	Storage.....	46
4.5.1	OceanStore.....	46
4.5.2	PAST .....	47
4.6	CDN .....	48
4.7	File Sharing .....	49
4.8	Communication .....	51
4.9	Conclusion .....	53
<b>5</b>	<b>Summary .....</b>	<b>57</b>
	<b>References.....</b>	<b>61</b>

Distributed Hash Table

Theory, Platforms and Applications

Zhang, H.; Wen, Y.; Xie, H.; Yu, N.

2013, VIII, 67 p. 15 illus., 3 illus. in color., Softcover

ISBN: 978-1-4614-9007-4