1.ZooKeeper

2.ZooKeeper dubbo

zookeeper 心跳机制 ip zookeeper dubbo: dubbo zookeeper dubbo Dubbo ZooKeeper, Memcached, Redis dubbo zk 3.Zookeeper java • zk zkclient • Apache Curator 4.ZooKeeper ZooKeeper 5. Zookeeper (znode) Zookeeper Zookeeper 1M 6. **ZAB** ZAB Zookeeper 崩溃恢复的原子广播协议 ZAB 崩溃恢复 消息广播 zookeeper Leader Leader Leader Leader Follower Leader Leader

Zookeeper: zookeeper

7.Znode

• PERSISTENT-持久节点

Zookeeper

- EPHEMERAL-临时节点
 - zookeeper
- PERSISTENT_SEQUENTIAL-持久顺序节点
- EPHEMERAL_SEQUENTIAL-临时顺序节点

8.Zookeeper

Zookeeper 不少于3个服务器 Zookeeper

> Follower 2 Zookeeper Leader Zookeeper Leader

ZK ZK

- 3 1 (leader 2 >1.5) cluster • 2 1 (leader cluster 1 <=1)
- 9.Zookeeper

Zookeeper

- 单机部署
- 集群部署
- 伪集群部署 Zookeeper

10.Zookeeper

Zookeeper 发布/订阅模式

Zookeeper

Watcher事件通知机

制

/

Master

11. Zookeeper Watcher

Zookeeper Znode Watcher Watcher

Watcher

- watcher
- watcher
- watcher

12. Watcher

1 Watcher实现 2 getData()/getChildren()/exist() API Watcher

3 request Watcher WatchRegistration 4 Packet

request 5 Watcher ZKWatcherManager 6

13. Watcher

1 服务端接收watcher并存储 Watcher

ServerCnxn ServerCnxn Watcher

process Watcher WatcherManager WatchTable

watch2Paths

2 Watcher触发

• setData() NodeDataChanged

WatchedEvent

SyncConnected NodeDataChanged

WatchedEvent

Watcher

• WatchTable Watcher

Watcher WatchTable Watch2Paths Watcher

Watcher

3 调用process方法来触发watcher process ServerCnxn TCP

Watcher

14. Watcher

1 SendThread EventThread Watcher 2

Watcher Watcher

15.Zookeeper watch ?

?

Watch Watch

Watch

getData "/ " true A

watch A watch

16. ACL

1 权限模式 (Scheme) IP IP Digest

username:password World

digest "world:anyone" Super

2 授权对象 IP

3 权限 Permission

• CREATE Znode

• DELETE

READ

WRITE

• ADMIN ACL

•

17.

1 Leader

2 Follower Leader Proposal

Leader

3 Observer Leader

18.Zookeeper Server

1 LOOKING Leader Leader
Leader 2 FOLLOWING Follower 3

LEADING Leader 4 OBSERVING

Observer

19.

Zookeeper

• 全部重启 Zookeeper

3.5

20. Chroot

3.2.0 Chroot

Chroot

Zookeeper