

TDH集群的角色分配

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The background of the slide features a complex network diagram. It consists of numerous small, dark grey circular nodes connected by thin, light grey lines. These nodes and lines are arranged in a way that suggests a global or distributed network, with some nodes appearing more central than others. The overall aesthetic is clean and technical.

1 chapter

非实时集群的角色分配

- ✓ 分配原则
- ✓ 分配示例

➤ 总体原则

- 集群需分配单独的管理节点
- 集群规模较大时，需多个机柜（至少两个）
- 高可用的管理角色尽量分散到多个机柜中
- 各管理节点上的服务角色尽量保证负载均衡

➤ 具体原则


- Zookeeper
 - Zookeeper尽量分散到不同机柜中
- HDFS
 - Active NameNode与Standby Namenode必须分配到不同机柜中
 - JournalNode尽量分散到不同机柜中
 - 每个机柜的DataNode节点数相同

➤ 具体原则

- YARN
 - Active ResourceManager与Standby ResourceManager必须分配在不同机柜中
 - 在DataNode节点上部署NodeManager
- Hyperbase
 - HMaster尽量分散到不同机柜中
 - 在DataNode节点上部署RegionServer
- Inceptor
 - InceptorServer尽量分散到不同机柜中
 - 在DataNode节点上部署InceptorExecutor
- Search
 - MasterNode尽量分散到不同机柜中
 - 如果ES负载很高，可考虑ES DataNode和HDFS DataNode不共享数据盘，另外CPU需要更高配置
- Transwarp Manager尽量分散到不同机柜中

Rack		Rack1		Rack2		Rack3		
Service	Role	Node	node1	node2~9	node11	node12~19	node21	node22~29
Transwarp Zookeeper	Zookeeper		✓		✓		✓	
Transwarp HDFS	NameNode		✓		✓			
	JournalNode		✓		✓		✓	
	DataNode			✓		✓		✓
Transwarp YARN	ResourceManager				✓		✓	
	NodeManager			✓		✓		✓
Transwarp Hyperbase	HMaster		✓		✓		✓	
	RegionServer			✓		✓		✓

Rack		Rack1		Rack2		Rack3		
Service	Role	Node	node1	node2~9	node11	node12~19	node21	node22~29
Transwarp Inceptor	InceptorMetastore			✓		✓		
	InceptorServer			✓		✓		
	InceptorExecutor		✓		✓		✓	
Transwarp Search	MasterNode	✓		✓		✓		
	DataNode		✓		✓		✓	
Transwarp Discover	Discover			✓				
Transwarp Sophon	Sophon					✓		
Transwarp Manager	Manager	✓		✓		✓		



2 chapter

实时集群的角色分配

- ✓ 分配原则
- ✓ 分配示例

➤ 总体原则

- 因为实时集群对实时性要求很高，为避免非实时集群对它的影响（主要CPU和磁盘IO），建议使用单独的几个节点做实时集群

➤ 具体原则

- 实时集群单独配置YARN，进行计算资源隔离
- 在Kafka节点上部署NodeManager
- 在Kafka节点上部署StreamExecutor

Rack		Rack1	Rack2	Rack3
Service	Role	node10	node20	node30
Transwarp Zookeeper (非实时)	Zookeeper			
Transwarp HDFS (非实时)	DataNode			
Transwarp Kafka	KafkaServer	✓	✓	✓
Transwarp YARN	ResourceManager	✓	✓	
	NodeManager	✓	✓	✓
Transwarp Stream	StreamMeatstore (非实时)			
	SteamServer		✓	✓
	StreamExecutor	✓	✓	✓



Q&A

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