

YARN-HA集群配置

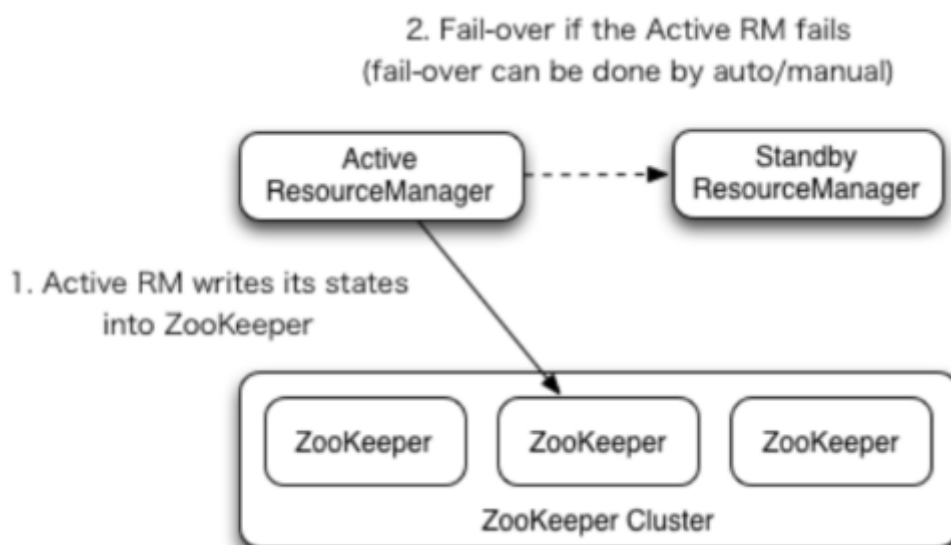
YARN-HA工作机制

1. 官方文档

<http://hadoop.apache.org/docs/r2.7.2/hadoop-yarn/hadoop-yarn-site/ResourceManagerHA.html>

2. 工作机制图

其实就是配置多台RM保证集群高可用，操作和上个文档差不多



配置YARN-HA集群

1. 环境准备

- (1) 修改IP
- (2) 修改主机名及主机名和IP地址的映射
- (3) 关闭防火墙
- (4) ssh免密登录
- (5) 安装JDK，配置环境变量等
- (6) 配置Zookeeper集群

2. 规划集群

本来的RM是在hadoop103，现在在hadoop102也配置一个

hadoop102	hadoop103	hadoop104
NameNode	NameNode	
JournalNode	JournalNode	JournalNode
DataNode	DataNode	DataNode
ZK	ZK	ZK
ResourceManager	ResourceManager	
NodeManager	NodeManager	NodeManager

3.具体配置

(1) yarn-site.xml

```
<configuration>

  <property>
    <name>yarn.nodemanager.aux-services</name>
    <value>mapreduce_shuffle</value>
  </property>

  <!--启用resourcemanager ha-->
  <property>
    <name>yarn.resourcemanager.ha.enabled</name>
    <value>true</value>
  </property>

  <!--声明两台resourcemanager的地址-->
  <property>
    <name>yarn.resourcemanager.cluster-id</name>
    <value>cluster-yarn1</value>
  </property>

  <property>
    <name>yarn.resourcemanager.ha.rm-ids</name>
    <value>rm1,rm2</value>
  </property>

  <property>
    <name>yarn.resourcemanager.hostname.rm1</name>
    <value>hadoop102</value>
  </property>

  <property>
    <name>yarn.resourcemanager.hostname.rm2</name>
    <value>hadoop103</value>
  </property>

  <!--指定zookeeper集群的地址-->
```

```

<property>
  <name>yarn.resourcemanager.zk-address</name>
  <value>hadoop102:2181,hadoop103:2181,hadoop104:2181</value>
</property>

<!-- 启用自动恢复-->
<property>
  <name>yarn.resourcemanager.recovery.enabled</name>
  <value>true</value>
</property>

<!-- 指定resourcemanager的状态信息存储在zookeeper集群-->
<property>
  <name>yarn.resourcemanager.store.class</name>
  <value>org.apache.hadoop.yarn.server.resourcemanager.recovery.ZKRMStateStore</value>
</property>

</configuration>

```

(2) 同步更新其他节点的配置信息

4.启动hdfs

(1) 在各个JournalNode节点上, 输入以下命令启动journalnode服务:

```
sbin/hadoop-daemon.sh start journalnode
```

(2) 在[nn1]上, 对其进行格式化, 并启动:

```
bin/hdfs namenode -format
sbin/hadoop-daemon.sh start namenode
```

(3) 在[nn2]上, 同步nn1的元数据信息:

```
bin/hdfs namenode -bootstrapStandby
```

(4) 启动[nn2]:

```
sbin/hadoop-daemon.sh start namenode
```

(5) 启动所有DataNode

```
sbin/hadoop-daemons.sh start datanode
```

(6) 将[nn1]切换为Active

```
bin/hdfs haadmin -transitionToActive nn1
```

5.启动YARN

(1) 在hadoop102中执行:

```
sbin/start-yarn.sh
```


(2) 在hadoop103中执行:

```
sbin/yarn-daemon.sh start resourcemanager
```

(3) 查看服务状态, 如图3-24所示

```
bin/yarn rmadmin -getServiceState rm1
```

← → ↻ ① hadoop102:8088/cluster

**hadoop102也启动了RM****All Applications**

▼ Cluster

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[SUBMITTED](#)
[ACCEPTED](#)
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[FINISHED](#)

Cluster Metrics

Apps Submitted	Apps Pending	Apps Running	Apps Completed	Containers Running	Memory Used	Memory Total	Memory Reserved	VCores Used	VCores Total
0	0	0	0	0	0 B	16 GB	0 B	0	16

Scheduler Metrics

Scheduler Type	Scheduling Resource Type	Minimum
Capacity Scheduler	[MEMORY]	<memory:1024, vCores:1>

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