

# Consul for Redis HA Configuration

## 1. Consul server List

Server: **10.129.128.68**

Clients: **10.129.129.41 | 10.129.136.156 | 10.129.137.81**

### 1.1 Get consul file to build and install

*wget [https://releases.hashicorp.com/consul/1.0.7/consul\\_1.0.7\\_linux\\_amd64.zip](https://releases.hashicorp.com/consul/1.0.7/consul_1.0.7_linux_amd64.zip)*

### 1.2 make server site configuration

**10.129.128.68**

```
{  
"data_dir": "/data/consul",  
"datacenter": "dc1",  
"log_level": "INFO",  
"server": true,  
"bootstrap_expect": 1,
```

```
"bind_addr": "10.129.128.68",  
"client_addr": "10.129.128.68",  
"ui":true  
}
```

### 1.3 make client site configuration

#### **10.129.129.41**

```
{  
"data_dir": "/data/consul",  
"enable_script_checks": true,  
"bind_addr": "10.129.129.41",  
"retry_join": ["10.129.128.68"],  
"retry_interval": "15s",  
"rejoin_after_leave": true,  
"start_join": ["10.129.128.68"]  
}
```

#### **10.129.136.156**

```
{  
"data_dir": "/data/consul",  
"enable_script_checks": true,  
"bind_addr": "10.129.136.156",  
"retry_join": ["10.129.128.68"],
```

```
"retry_interval": "15s",  
"rejoin_after_leave": true,  
"start_join": ["10.129.128.68"]  
}
```

**10.129.137.81**

```
{  
"data_dir": "/data/consul",  
"enable_script_checks": true,  
"bind_addr": "10.129.137.81",  
"retry_join": ["10.129.128.68"],  
"retry_interval": "15s",  
"rejoin_after_leave": true,  
"start_join": ["10.129.128.68"]  
}
```

## 2. Startup server&client

```
nohup consul agent -config-dir=/etc/consul.d > /data/consul/consul.log &
```

### 2.1 Check server&client logs

Server:

```
BootstrapExpect is set to 1; this is the same as Bootstrap mode.
```

```
bootstrap = true: do not enable unless necessary
```

```
==> Starting Consul agent...
```

```
==> Consul agent running!
```

```
Version: 'v1.0.7'
```

```
Node ID: '5d8bf7b9-19d1-ebae-eeb6-0c4716b24d36'
```

```
Node name: 'a2-prod-redis-128-68.sh'
```

```
Datacenter: 'dc1' (Segment: '<all>')
```

```
Server: true (Bootstrap: true)
```

```
Client Addr: [10.129.128.68] (HTTP: 8500, HTTPS: -1, DNS: 8600)
```

```
Cluster Addr: 10.129.128.68 (LAN: 8301, WAN: 8302)
```

```
Encrypt: Gossip: false, TLS-Outgoing: false, TLS-Incoming: false
```

```
==> Log data will now stream in as it occurs:
```

```
2020/04/10 11:27:26 [WARN] agent: Node name "a2-prod-redis-128-68.sh" will not be discoverable via DNS due to invalid characters. Valid characters include all alpha-numeric and dashes.
```

---

```
2020/04/10 11:27:26 [INFO] raft: Initial configuration (index=1): [{Suffrage:Voter ID:5d8bf7b9-19d1-ebae-eeb6-0c4716b24d36 Address:10.129.128.68:8300}]
2020/04/10 11:27:26 [INFO] raft: Node at 10.129.128.68:8300 [Follower] entering Follower state (Leader: "")
2020/04/10 11:27:26 [INFO] serf: EventMemberJoin: a2-prod-redis-128-68.sh.dc1 10.129.128.68
2020/04/10 11:27:26 [INFO] serf: EventMemberJoin: a2-prod-redis-128-68.sh 10.129.128.68
2020/04/10 11:27:26 [INFO] agent: Started DNS server 10.129.128.68:8600 (udp)
2020/04/10 11:27:26 [INFO] consul: Handled member-join event for server "a2-prod-redis-128-68.sh.dc1" in area "wan"
2020/04/10 11:27:26 [INFO] consul: Adding LAN server a2-prod-redis-128-68.sh (Addr: tcp/10.129.128.68:8300) (DC: dc1)
2020/04/10 11:27:26 [INFO] agent: Started DNS server 10.129.128.68:8600 (tcp)
2020/04/10 11:27:26 [INFO] agent: Started HTTP server on 10.129.128.68:8500 (tcp)
2020/04/10 11:27:26 [INFO] agent: started state syncer
2020/04/10 11:27:32 [WARN] raft: Heartbeat timeout from "" reached, starting election
2020/04/10 11:27:32 [INFO] raft: Node at 10.129.128.68:8300 [Candidate] entering Candidate state in term 2
2020/04/10 11:27:32 [INFO] raft: Election won. Tally: 1
2020/04/10 11:27:32 [INFO] raft: Node at 10.129.128.68:8300 [Leader] entering Leader state
2020/04/10 11:27:32 [INFO] consul: cluster leadership acquired
2020/04/10 11:27:32 [INFO] consul: New leader elected: a2-prod-redis-128-68.sh
2020/04/10 11:27:32 [INFO] consul: member 'a2-prod-redis-128-68.sh' joined, marking health alive
2020/04/10 11:27:32 [INFO] agent: Synced node info
2020/04/10 11:27:48 [INFO] serf: EventMemberJoin: a2-prod-redis-129-41.sh 10.129.129.41
2020/04/10 11:27:48 [INFO] consul: member 'a2-prod-redis-129-41.sh' joined, marking health alive
==> Newer Consul version available: 1.7.2 (currently running: 1.0.7)
2020/04/10 11:27:50 [INFO] serf: EventMemberJoin: a2-sentinel-136-156.sh 10.129.136.156
2020/04/10 11:27:50 [INFO] consul: member 'a2-sentinel-136-156.sh' joined, marking health alive
2020/04/10 11:27:53 [INFO] serf: EventMemberJoin: a2-sentinel-137-81.sh 10.129.137.81
2020/04/10 11:27:53 [INFO] consul: member 'a2-sentinel-137-81.sh' joined, marking health alive
2020/04/10 12:05:18 [INFO] agent: Caught signal: hangup
```

2020/04/10 12:05:18 [INFO] agent: Reloading configuration...

BootstrapExpect is set to 1; this is the same as Bootstrap mode.

bootstrap = true: do not enable unless necessary

## Client:

==> Starting Consul agent...

==> Joining cluster...

Join completed. Synced with 1 initial agents

==> Consul agent running!

Version: 'v1.0.7'

Node ID: '5fda279c-88b2-62df-d1a2-ccdc8c2d7ed8'

Node name: 'a2-prod-redis-129-41.sh'

Datacenter: 'dc1' (Segment: '')

Server: false (Bootstrap: false)

Client Addr: [127.0.0.1] (HTTP: 8500, HTTPS: -1, DNS: 8600)

Cluster Addr: 10.129.129.41 (LAN: 8301, WAN: 8302)

Encrypt: Gossip: false, TLS-Outgoing: false, TLS-Incoming: false

==> Log data will now stream in as it occurs:

2020/04/10 11:27:48 [WARN] agent: Node name "a2-prod-redis-129-41.sh" will not be discoverable via DNS due to invalid characters. Valid characters include all alpha-num

erics and dashes.

2020/04/10 11:27:48 [INFO] serf: EventMemberJoin: a2-prod-redis-129-41.sh 10.129.129.41

```

2020/04/10 11:27:48 [INFO] agent: Started DNS server 127.0.0.1:8600 (udp)
2020/04/10 11:27:48 [INFO] agent: Started DNS server 127.0.0.1:8600 (tcp)
2020/04/10 11:27:48 [INFO] agent: Started HTTP server on 127.0.0.1:8500 (tcp)
2020/04/10 11:27:48 [INFO] agent: Retry join LAN is supported for: aliyun aws azure digitalocean gce os scaleway softlayer
2020/04/10 11:27:48 [INFO] agent: Joining LAN cluster...
2020/04/10 11:27:48 [INFO] agent: (LAN) joining: [10.129.128.68]
2020/04/10 11:27:48 [INFO] agent: (LAN) joining: [10.129.128.68]
2020/04/10 11:27:48 [INFO] serf: EventMemberJoin: a2-prod-redis-128-68.sh 10.129.128.68
2020/04/10 11:27:48 [INFO] agent: (LAN) joined: 1 Err: <nil>
2020/04/10 11:27:48 [INFO] agent: Join LAN completed. Synced with 1 initial agents
2020/04/10 11:27:48 [INFO] consul: adding server a2-prod-redis-128-68.sh (Addr: tcp/10.129.128.68:8300) (DC: dc1)
2020/04/10 11:27:48 [INFO] agent: (LAN) joined: 1 Err: <nil>
2020/04/10 11:27:48 [INFO] agent: started state syncer
2020/04/10 11:27:48 [INFO] agent: Synced node info
2020/04/10 11:27:51 [INFO] serf: EventMemberJoin: a2-sentinel-136-156.sh 10.129.136.156
2020/04/10 11:27:53 [INFO] serf: EventMemberJoin: a2-sentinel-137-81.sh 10.129.137.81

```

## 2.2 Check consul cluster status

```
#consul members --http-addr 10.129.128.68:8500
```

Node	Address	Status	Type	Build	Protocol	DC	Segment
a2-prod-redis-128-68.sh	10.129.128.68:8301	alive	server	1.0.7	2	dc1	<all>
a2-prod-redis-129-41.sh	10.129.129.41:8301	alive	client	1.0.7	2	dc1	<default>
a2-sentinel-136-156.sh	10.129.136.156:8301	alive	client	1.0.7	2	dc1	<default>
a2-sentinel-137-81.sh	10.129.137.81:8301	alive	client	1.0.7	2	dc1	<default>

### 3. Install Redis instances & RW config

#### 3.1 install one master node with two slaves

master node:

**10.129.129.41**

Slave nodes:

**10.129.136.156 , 10.129.137.81**

*# Replication*

*role:master (10.129.129.41)*

*connected\_slaves:2*

*slave0:ip=10.129.136.156,port=6379,state=online,offset=363708,lag=1*

*slave1:ip=10.129.137.81,port=6379,state=online,offset=363708,lag=1*

*master\_repl\_offset:363708*

*repl\_backlog\_active:1*

*repl\_backlog\_size:1048576*

*repl\_backlog\_first\_byte\_offset:363695*

*repl\_backlog\_histlen:14*



### 3.2 R/W consul configuration file

Master node: [w-cofig-redis-6379.json](#) | [r-cofig-redis-6379.json](#)

```
{
  "services": [
    {
      "name": "r-6379-redis-test",
      "tags": [
        "slave-test-6379"
      ],
      "address": "10.129.129.41",
      "port": 6379,
      "checks": [
        {
          "args": ["sh", "-c", "/data/consul/shell/check_redis_slave.sh 6379 "],
          "interval": "10s"
        }
      ]
    }
  ]
}
```

```
{
  "services": [
```

```
{
  "name": "r-6379-redis-test",
  "tags": [
    "slave-test-6379"
  ],
  "address": "10.129.129.41",
  "port": 6379,
  "checks": [
    {
      "args": ["sh", "-c", "/data/consul/shell/check_redis_slave.sh 6379 "],
      "interval": "10s"
    }
  ]
}
```

Two slave nodes:

10.129.136.156 : [w-cofig-redis-6379.json](#) | [r-config-redis-6379.json](#)

```
{
  "services": [
    {
      "name": "w-6379-redis-test",
```

```
"tags": [  
  "master-test-6379"  
],  
"address": "10.129.136.156",  
"port": 6379,  
"checks": [  
  {  
    "args":["sh","-c","/data/consul/shell/check_redis_master.sh 6379 "],  
    "interval": "15s"  
  }  
]  
}  
]
```

```
{  
  "services": [  
    {  
      "name": "r-6379-redis-test",  
      "tags": [  
        "slave-test-6379"  
      ],  
      "address": "10.129.136.156",  
      "port": 6379,  
      "checks": [  

```

```
{
  "args": ["sh", "-c", "/data/consul/shell/check_redis_slave.sh 6379 "],
  "interval": "10s"
}
]
```

10.129.137.81 : [w-cofig-redis-6379.json](#) | [r-config-redis-6379.json](#)

```
{
  "services": [
    {
      "name": "w-6379-redis-test",
      "tags": [
        "master-test-6379"
      ],
      "address": "10.129.137.81",
      "port": 6379,
      "checks": [
        {
          "args": ["sh", "-c", "/data/consul/shell/check_redis_master.sh 6379 "],
```

```
        "interval": "15s"
      }
    ]
  }
]
}

{
  "services": [
    {
      "name": "r-6379-redis-test",
      "tags": [
        "slave-test-6379"
      ],
      "address": "10.129.137.81",
      "port": 6379,
      "checks": [
        {
          "args": ["sh", "-c", "/data/consul/shell/check_redis_slave.sh 6379 "],
          "interval": "10s"
        }
      ]
    }
  ]
}
```

```
}
```

## Two Scripts for consul check

```
#cat /data/consul/shell/check_redis_master.sh
```

```
#!/bin/sh
```

```
#####
```

```
# ScriptName: /data/consul/shell/check_redis_master.sh
```

```
# Create Date: 2020-04-10 14:29
```

```
# Modify Date: 2020-04-10 14:29
```

```
#####
```

```
role=`/usr/local/bin/redis-cli -p $1 info replication |grep -Ec 'role:master'`
```

```
if [ $role -ne 1 ]
```

```
then
```

```
    exit 2
```

```
fi
```

```
#cat /data/consul/shell/check_redis_slave.sh
```

```
#!/bin/sh
```

```
#####
```

```
# ScriptName: /data/consul/shell/check_redis_slave.sh
```

```
# Create Date: 2020-04-10 14:30
```

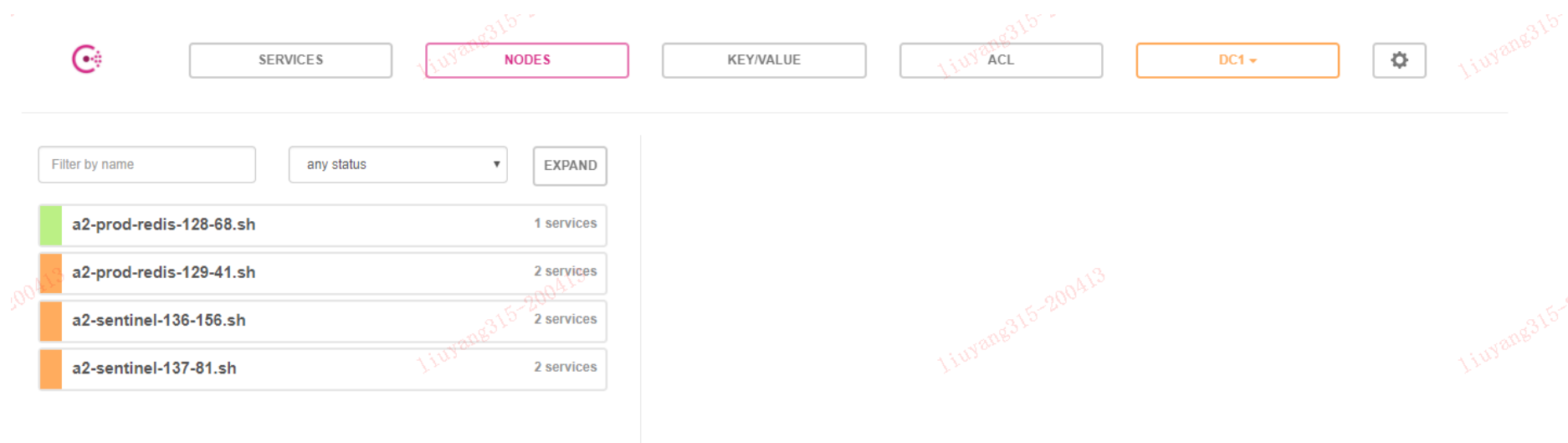
```
# Modify Date: 2020-04-10 14:30
```

```
#####
```

```
role=`/usr/local/bin/redis-cli -p $1 info replication |grep -Ec 'role:slave'`  
single=`/usr/local/bin/redis-cli -p $1 info replication |grep -Ec 'connected_slaves:0'`  
if [ $role -ne 1 -a $single -ne 1 ]  
then  
    exit 2  
fi
```

## 4. Consul for Redis HA

### 4.1 Check Consul web UI - 4 nodes (one server and three clients)



The screenshot shows the Consul web UI interface. At the top, there is a navigation bar with several tabs: SERVICES, NODES (highlighted in pink), KEY/VALUE, ACL, DC1 (highlighted in orange), and a settings gear icon. Below the navigation bar, there is a filter section with a text input for "Filter by name", a dropdown menu for "any status", and an "EXPAND" button. The main content area displays a list of four nodes, each with a colored square on the left and the number of services on the right:

Node Name	Services
a2-prod-redis-128-68.sh	1 services
a2-prod-redis-129-41.sh	2 services
a2-sentinel-136-156.sh	2 services
a2-sentinel-137-81.sh	2 services



#### 4.2 Check Consul web UI - 3 services (one consul self-service and two rw redis ha services)

The screenshot shows the Consul web UI interface. At the top, there is a navigation bar with several tabs: SERVICES (highlighted in pink), NODES, KEY/VALUE, ACL, DC1 (highlighted in orange), and a settings gear icon. Below the navigation bar, there are filter options: 'Filter by name' (empty), 'any status' (dropdown menu), and an 'EXPAND' button. The main content area displays a list of three services:

Service Name	Status
consul	1 passing
r-6379-redis-test	1 failing
w-6379-redis-test	2 failing

r-6379-redis-test service failing in redis master node



SERVICES

NODES

KEY/VALUE

ACL

DC1



Filter by name

any status

EXPAND

consul	1 passing
r-6379-redis-test	1 failing
w-6379-redis-test	2 failing

### r-6379-redis-test

#### TAGS

slave-test-6379

#### NODES

a2-prod-redis-129-41.sh	10.129.129.41	1 failing
Serf Health Status serfHealth		passing
Service 'r-6379-redis-test' check service:r-6379-redis-test		critical
a2-sentinel-136-156.sh	10.129.136.156	2 passing
Serf Health Status serfHealth		passing
Service 'r-6379-redis-test' check service:r-6379-redis-test		passing
a2-sentinel-137-81.sh	10.129.137.81	2 passing
Serf Health Status serfHealth		passing
Service 'r-6379-redis-test' check service:r-6379-redis-test		passing

w-6379-redis-test service failing in two slave nodes



SERVICES

NODES

KEY/VALUE

ACL

DC1



Filter by name

any status

EXPAND

consul

1 passing

r-6379-redis-test

1 failing

w-6379-redis-test

2 failing

### w-6379-redis-test

#### TAGS

master-test-6379

#### NODES

a2-prod-redis-129-41.sh 10.129.129.41 2 passing

**Serf Health Status** serfHealth passing

**Service 'w-6379-redis-test' check** service:w-6379-redis-test passing

a2-sentinel-136-156.sh 10.129.136.156 1 failing

**Serf Health Status** serfHealth passing

**Service 'w-6379-redis-test' check** service:w-6379-redis-test critical

a2-sentinel-137-81.sh 10.129.137.81 1 failing

**Serf Health Status** serfHealth passing

**Service 'w-6379-redis-test' check** service:w-6379-redis-test critical

#### 4.3 DNS now for services:

```
#dig @10.129.128.68 -p 8600 r-6379-redis-test.service.consul
```

```
; <<>> DiG 9.8.2rc1-RedHat-9.8.2-0.37.rc1.el6_7.5 <<>> @10.129.128.68 -p 8600 r-6379-redis-test.service.consul
```

```
; (1 server found)
```

```
;; global options: +cmd
```

```
;; Got answer:
```

```
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 46019
```

```
;; flags: qr aa rd; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 0
```

```
;; WARNING: recursion requested but not available
```

```
;; QUESTION SECTION:
```

```
;r-6379-redis-test.service.consul. IN A
```

```
;; ANSWER SECTION:
```

```
r-6379-redis-test.service.consul. 0 IN A 10.129.137.81
```

```
r-6379-redis-test.service.consul. 0 IN A 10.129.136.156
```

```
;; Query time: 0 msec
```

```
;; SERVER: 10.129.128.68#8600(10.129.128.68)
```

```
;; WHEN: Mon Apr 13 18:35:35 2020
```

```
;; MSG SIZE rcvd: 82
```

```
#dig @10.129.128.68 -p 8600 w-6379-redis-test.service.consul
```

```
; <<>> DiG 9.8.2rc1-RedHat-9.8.2-0.37.rc1.el6_7.5 <<>> @10.129.128.68 -p 8600 w-6379-redis-test.service.consul
; (1 server found)
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 59557
;; flags: qr aa rd; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 0
;; WARNING: recursion requested but not available

;; QUESTION SECTION:
;w-6379-redis-test.service.consul. IN A

;; ANSWER SECTION:
w-6379-redis-test.service.consul. 0 IN A 10.129.129.41

;; Query time: 0 msec
;; SERVER: 10.129.128.68#8600(10.129.128.68)
;; WHEN: Mon Apr 13 18:35:43 2020
;; MSG SIZE rcvd: 66
```

## 5. Switch and failover test

### 5.1 shutdown slave nodes

we shutdown 10.129.137.81 redis instance

```
#redis-cli -p 6379
127.0.0.1:6379> SHUTDOWN
127.0.0.1:6379>
```

#### Original

```
#dig @10.129.128.68 -p 8600 r-6379-redis-test.service.consul

; <<>> DiG 9.8.2rc1-RedHat-9.8.2-0.37.rc1.el6_7.5 <<>> @10.129.128.68 -p 8600 r-6379-redis-test.service.consul
; (1 server found)
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 46019
;; flags: qr aa rd; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 0
;; WARNING: recursion requested but not available

;; QUESTION SECTION:
;r-6379-redis-test.service.consul. IN      A
```



```
:: SERVER: 10.129.128.68#8600(10.129.128.68)  
:: WHEN: Mon Apr 13 18:39:12 2020  
:: MSG SIZE rcvd: 66
```

Shutdown another slave node 10.129.136.156

```
#redis-cli -p 6379  
127.0.0.1:6379> SHUTDOWN  
127.0.0.1:6379>
```

### Original

```
#dig @10.129.128.68 -p 8600 r-6379-redis-test.service.consul  
  
; <<>> DiG 9.8.2rc1-RedHat-9.8.2-0.37.rc1.el6_7.5 <<>> @10.129.128.68 -p 8600 r-6379-redis-test.service.consul  
; (1 server found)  
;; global options: +cmd  
;; Got answer:  
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 46019  
;; flags: qr aa rd; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 0  
;; WARNING: recursion requested but not available  
  
;; QUESTION SECTION:  
;r-6379-redis-test.service.consul. IN A
```





*:: QUESTION SECTION:*

*;r-6379-redis-test.service.consul. IN A*

*:: ANSWER SECTION:*

*r-6379-redis-test.service.consul. 0 IN A 10.129.129.41*

*:: Query time: 0 msec*

*:: SERVER: 10.129.128.68#8600(10.129.128.68)*

*:: WHEN: Mon Apr 13 18:43:04 2020*

*:: MSG SIZE rcvd: 66*

Because two slaves nodes were down. Master node provide read service now.

5.2 shutdown master node and promote one slave node to master role

shutdown 10.129.129.41 and 10.129.136.156 is new master

*# Replication*

*role:slave*

*master\_host:10.129.136.156*

*master\_port:6379*

*master\_link\_status:up*

*master\_last\_io\_seconds\_ago:4*

*master\_sync\_in\_progress:0*

slave\_repl\_offset:378717  
slave\_priority:100  
slave\_read\_only:1  
connected\_slaves:0  
master\_repl\_offset:0  
repl\_backlog\_active:0  
repl\_backlog\_size:1048576  
repl\_backlog\_first\_byte\_offset:0  
repl\_backlog\_histlen:0

### Original

```
#dig @10.129.128.68 -p 8600 w-6379-redis-test.service.consul
```

```
; <<>> DiG 9.8.2rc1-RedHat-9.8.2-0.37.rc1.el6_7.5 <<>> @10.129.128.68 -p 8600 w-6379-redis-test.service.consul
```

```
; (1 server found)
```

```
;; global options: +cmd
```

```
;; Got answer:
```

```
;; ->HEADER<<- opcode: QUERY, status: NOERROR, id: 19394
```

```
;; flags: qr aa rd; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 0
```

```
;; WARNING: recursion requested but not available
```

```
;; QUESTION SECTION:
```

```
;w-6379-redis-test.service.consul. IN A
```

```
;; ANSWER SECTION:
```



*:: ANSWER SECTION:*

*w-6379-redis-test.service.consul. 0 IN A 10.129.136.156*

*:: Query time: 0 msec*

*:: SERVER: 10.129.128.68#8600(10.129.128.68)*

*:: WHEN: Mon Apr 13 18:48:27 2020*

*:: MSG SIZE rcvd: 66*

Write service change dns to 10.129.136.156 (the new master)

*#dig @10.129.128.68 -p 8600 r-6379-redis-test.service.consul*

*; <<>> DiG 9.8.2rc1-RedHat-9.8.2-0.37.rc1.el6\_7.5 <<>> @10.129.128.68 -p 8600 r-6379-redis-test.service.consul*

*; (1 server found)*

*:: global options: +cmd*

*:: Got answer:*

*:: ->HEADER<<- opcode: QUERY, status: NOERROR, id: 53286*

*:: flags: qr aa rd; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 0*

*:: WARNING: recursion requested but not available*

*:: QUESTION SECTION:*

*;r-6379-redis-test.service.consul. IN A*

*:: ANSWER SECTION:*

*r-6379-redis-test.service.consul. 0 IN A 10.129.137.81*

*;; Query time: 0 msec  
;; SERVER: 10.129.128.68#8600(10.129.128.68)  
;; WHEN: Mon Apr 13 18:50:25 2020  
;; MSG SIZE rcvd: 66*

Read service changed to one record 10.129.137.81

5.3 shutdown only slave 10.129.137.81

### **Original**

*#dig @10.129.128.68 -p 8600 r-6379-redis-test.service.consul*

*; <<>> DiG 9.8.2rc1-RedHat-9.8.2-0.37.rc1.el6\_7.5 <<>> @10.129.128.68 -p 8600 r-6379-redis-test.service.consul  
; (1 server found)  
;; global options: +cmd  
;; Got answer:  
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 50646  
;; flags: qr aa rd; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 0  
;; WARNING: recursion requested but not available*

*:: QUESTION SECTION:*

*;r-6379-redis-test.service.consul. IN A*

*:: ANSWER SECTION:*

*r-6379-redis-test.service.consul. 0 IN A 10.129.137.81*

*:: Query time: 0 msec*

*:: SERVER: 10.129.128.68#8600(10.129.128.68)*

*:: WHEN: Mon Apr 13 18:51:45 2020*

*:: MSG SIZE rcvd: 66*

**Now**

*#dig @10.129.128.68 -p 8600 r-6379-redis-test.service.consul*

*; <<>> DiG 9.8.2rc1-RedHat-9.8.2-0.37.rc1.el6\_7.5 <<>> @10.129.128.68 -p 8600 r-6379-redis-test.service.consul*

*; (1 server found)*

*:: global options: +cmd*

*:: Got answer:*

*:: ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 42176*

*:: flags: qr aa rd; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 0*

*:: WARNING: recursion requested but not available*

*:: QUESTION SECTION:*

*;r-6379-redis-test.service.consul. IN A*

*:: ANSWER SECTION:*

*r-6379-redis-test.service.consul. 0 IN A 10.129.136.156*

*:: Query time: 0 msec*

*:: SERVER: 10.129.128.68#8600(10.129.128.68)*

*:: WHEN: Mon Apr 13 18:51:53 2020*

*:: MSG SIZE rcvd: 66*

Read service changed to master node ip

#### 5.4 startup the two slave nodes

Now master node is 10.129.136.156. We startup two other nodes 10.129.129.41 and 10.129.137.81 and change them to slave role

Write service DNS

```
#dig @10.129.128.68 -p 8600 w-6379-redis-test.service.consul
```

```
; <<>> DiG 9.8.2rc1-RedHat-9.8.2-0.37.rc1.el6_7.5 <<>> @10.129.128.68 -p 8600 w-6379-redis-test.service.consul
```

```
; (1 server found)
```

```
:: global options: +cmd
```

```
:: Got answer:
```

```
:: ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 25883
```

```
:: flags: qr aa rd; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 0
```



*:: WARNING: recursion requested but not available*

*:: QUESTION SECTION:*

*;w-6379-redis-test.service.consul. IN A*

*:: ANSWER SECTION:*

*w-6379-redis-test.service.consul. 0 IN A 10.129.136.156*

*:: Query time: 0 msec*

*:: SERVER: 10.129.128.68#8600(10.129.128.68)*

*:: WHEN: Mon Apr 13 18:56:52 2020*

*:: MSG SIZE rcvd: 66*

Read service DNS

*#dig @10.129.128.68 -p 8600 r-6379-redis-test.service.consul*

*; <<>> DiG 9.8.2rc1-RedHat-9.8.2-0.37.rc1.el6\_7.5 <<>> @10.129.128.68 -p 8600 r-6379-redis-test.service.consul*

*; (1 server found)*

*:: global options: +cmd*

*:: Got answer:*

*:: ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 14850*

*:: flags: qr aa rd; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 0*

*:: WARNING: recursion requested but not available*

*:: QUESTION SECTION:*

*;r-6379-redis-test.service.consul. IN A*

*:: ANSWER SECTION:*

*r-6379-redis-test.service.consul. 0 IN A 10.129.137.81*

*r-6379-redis-test.service.consul. 0 IN A 10.129.129.41*

*:: Query time: 0 msec*

*:: SERVER: 10.129.128.68#8600(10.129.128.68)*

*:: WHEN: Mon Apr 13 18:56:54 2020*

*:: MSG SIZE rcvd: 82*