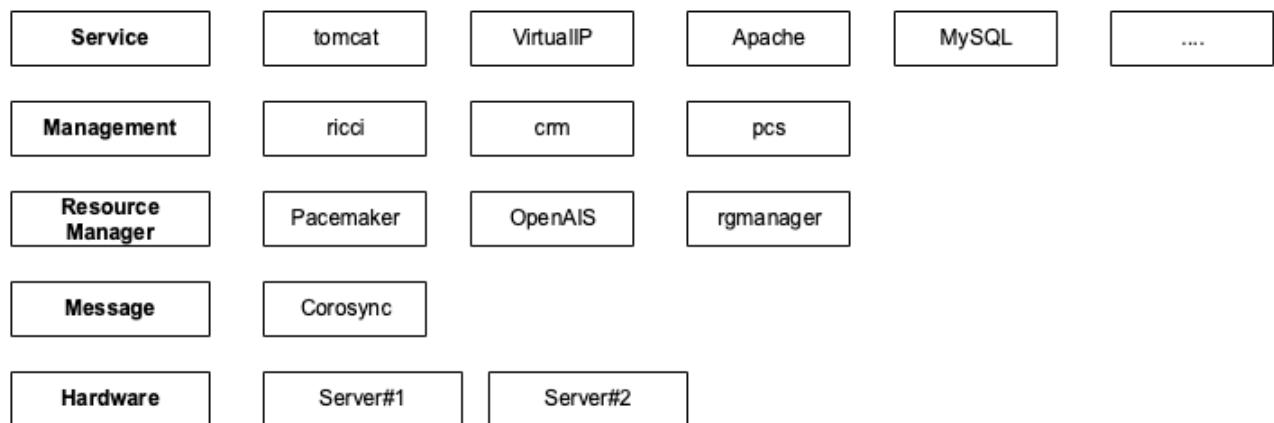


corosync / pacemaker



1. HA stack



1. Hardware : ㅁㅁㅁ

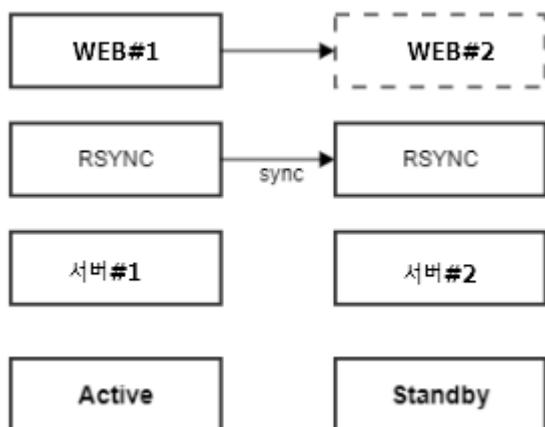
2. Message : Clustering ㅁㅁ ㅁㅁㅁ ㅁ

3. Resoure Manager : failover / fallback ㅁ ㅁ

4. Management : HA ㅁㅁㅁ ㅁㅁㅁ Tool

5. Service : HA ㅁ ㅁ

2. Service Architecture (Active / Standby)



□□ □□ (□□ □□)

1. □□ □

```
$> yum install corosync pacemaker pcs automake -y
```

1.HA□ □ □□ □□□ □ pcasd □□ □ (□□□ □□ □□□ □)

```
$> passwd hacluster
```

Changing password for user hacluster.

New password:

BAD PASSWORD: it is based on a dictionary word

Retype new password:

passwd: all authentication tokens updated successfully.

```
$> systemctl start pcasd
```

1. □□□ □□□ (□□ □□ master or slave □ 1□□□ □)

```
$> pcs cluster auth master slave
```

Username: hacluster

Password:

master: Authorized

slave: Authorized

2. □□□ □

```
$> pcs cluster setup --name cluster master slave
```

Destroying cluster on nodes: master, slave...

master: Stopping Cluster (pacemaker)...

slave: Stopping Cluster (pacemaker)...

slave: Successfully destroyed cluster

master: Successfully destroyed cluster

Sending 'pacemaker_remote authkey' to 'master', 'slave'

slave: successful distribution of the file 'pacemaker_remote authkey'

master: successful distribution of the file 'pacemaker_remote authkey'

Sending cluster config files to the nodes...

master: Succeeded

slave: Succeeded

Synchronizing pcsd certificates on nodes master, slave...

master: Success

slave: Success

Restarting pcsd on the nodes in order to reload the certificates...

master: Success

slave: Success

3.

```
$> pcs cluster start --all
```

```
# pcs status corosync
```

Membership information

Nodeid	Votes	Name
1	1	master (local)
2	1	slave

```
#pcs property set stonith-enabled=false
```

4. ()

```
# systemctl enable pacemaker
```

```
# systemctl enable corosync
```

(crmsh)

1. crmsh OS

```
$> yum install -y python-lxml pacemaker-libs-devel asciidoc python-dateutil python-yaml --skip-broken
```

```
$> yum install python-devel python-setuptools -y
```

2. crmsh

```
$> ./autogen.sh
```

```
autoconf:      autoconf (GNU Autoconf) 2.63
```

```

automake:      automake (GNU automake) 1.11.1
aclocal
automake --add-missing --include-deps --copy
configure.ac:33: installing `./install-sh'
configure.ac:33: installing `./missing'
autoconf

Now run ./configure

># ./configure
checking for a BSD-compatible install... /usr/bin/install -c
checking whether build environment is sane... yes
checking for a thread-safe mkdir -p... /bin/mkdir -p
checking for gawk... gawk
checking whether make sets $(MAKE)... yes
checking for python... /usr/bin/python
checking for python version... 2.6
checking for python platform... linux2
checking for python script directory... ${prefix}/lib/python2.6/site-packages
checking for python extension module directory... ${exec_prefix}/lib64/python2.6/site-packages
checking for asciidoc... no
configure: creating ./config.status
config.status: creating Makefile
config.status: creating hb_report/hb_report
config.status: creating csm.conf
config.status: creating version
># make; make install
...

```

3. CRM

```
# ln -s /usr/local/lib/python2.6/site-packages/crmsh /usr/lib/python2.6/site-packages/
```

4.

```

# /etc/init.d/corosync start
># /etc/init.d/pacemaker start
># chkconfig corosync on
># chkconfig pacemaker on

```

- : Pacemaker/Corosync □ □ HA □ corosync □ □ □ □ □ .
pacemaker □ corosync □ □ □ □ .

- ① ② pacemaker → corosync ③ ④

5. ① ② ③ ④

```
$> crm_mon -1
```

6. HA ① ②

```
##### ① ② ③ ④ Auto-Failback ⑤ #####
```

```
>#crm configure
```

```
crm(configure)# property stonith-enabled=false
```

```
crm(configure)# property no-quorum-policy=ignore
```

```
crm(configure)# rsc_defaults resource-stickiness=100
```

```
crm(configure)# commit
```

```
##### HA ① VIP ② #####
```

```
crm(configure)# primitive TEST_STOR_VIP ocf:heartbeat:IPaddr2 params ip={HA VIP}
```

```
cidr_netmask=24 op monitor interval=10s
```

```
##### DRBD ① #####
```

```
crm(configure)# primitive TEST_STOR_DRBD ocf:linbit:drbd params drbd_resource="drbd0" op
```

```
monitor interval="20s" role="Master" op monitor interval="20s" role="Slave"
```

```
crm(configure)# ms MS_TEST_STOR_DRBD TEST_STOR_DRBD meta master-max="1" master-node-max="1" clone-max="2" clone-node-max="1" notify="true"
```

```
crm(configure)# primitive TEST_STOR_FS ocf:heartbeat:Filesystem params device="/dev/drbd0" directory="/data" fstype="xfs"
```

```
##### DRBD ① , ② ③ ④ ⑤ #####3
```

```
crm(configure)# group TEST_STOR_GP TEST_STOR_FS TEST_STOR_VIP meta migration-threshold="5"
```

```
crm(configure)# colocation DRBD_on_HA inf: TEST_STOR_GP MS_TEST_STOR_DRBD:Master
```

```
crm(configure)# order DRBD_after_HA inf: MS_TEST_STOR_DRBD:promote TEST_STOR_GP:start
```

```
##### ① ② ③ ④ #####
```

```
crm(configure)# commit
```

7. HA

```
#crm_mon -1
Stack: classic openais (with plugin)
Current DC: TEST-STOR#1 (version 1.1.18-3.el6-bfe4e80420) - partition with quorum
Last updated: Wed Dec 18 18:29:46 2019
Last change: Mon Sep 2 19:26:34 2019 by root via crm_resource on TEST-STOR#1

2 nodes configured (2 expected votes)
5 resources configured

Online: [ TEST-STOR#1 TEST-STOR#2 ]

Active resources:

Master/Slave Set: MS_TEST_STOR_DRBD [TEST_STOR_DRBD]
  Masters: [ TEST-STOR#1 ]
  Slaves: [ TEST-STOR#2 ]
Resource Group: TEST_STOR_GP
  TEST_STOR_FS    (ocf::heartbeat:Filesystem): Started TEST-STOR#1
  TEST_STOR_APACHE (lsb:httpd): Started TEST-STOR#1
  TEST_STOR_VIP   (ocf::heartbeat:IPaddr): Started TEST-STOR#1
```

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