MP:

Đường dẫn:

Cài đặt:

/u01/mp

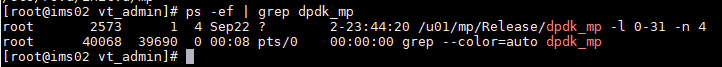
Log: /var/log/1M/mp

Binary:

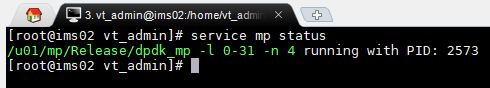
/u01/mp/platforms/bin

Script: /u01/mp/script

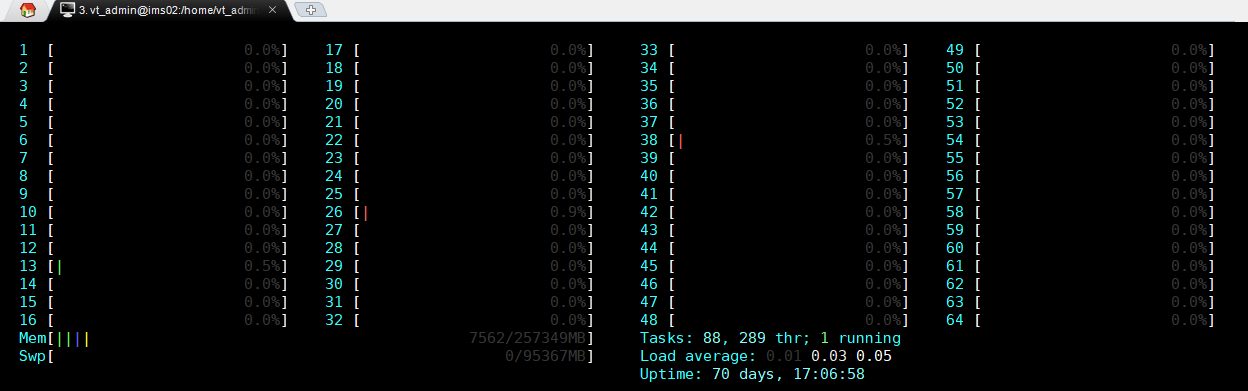
Tiến trình MP:



Status MP:

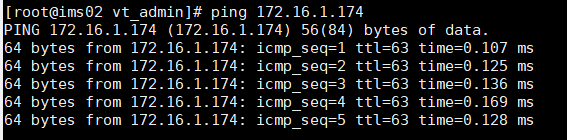


Htop MP:



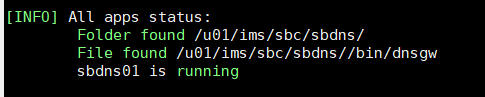
172.16.1.158:10000

Ping :



**STATUS:**

ENUM/DNS



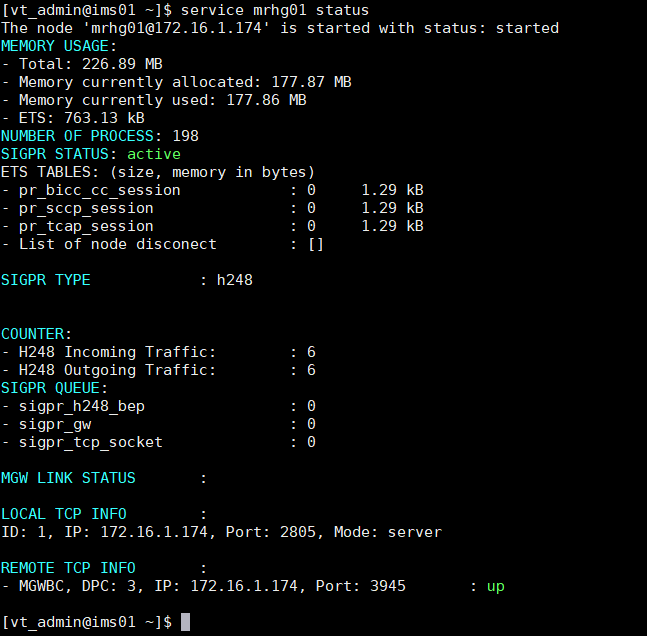
[INFO] All apps status:

Folder found /u01/ims/sbc/sbdns/

File found /u01/ims/sbc/sbdns//bin/dnsgw

sbdns01 is running

H.248:



Đường dẫn:

1. Modul LOGIC

1.1. IMS CORE

Cai dat: /u01/ims/imscore/logic

Log: /u01/ims/imscore/logs

Binary: /u01/ims/imscore/logic/bin

1.2 SBC

Cai dat: /u01/ims/sbc/sblg

Log: /u01/ims/sbc/log

Binary: /u01/ims/sbc/sblg/bin

1.3 MMTEL

Cai dat: /u01/ims/vims/vims\_mmtel\_logic/

Log: /u01/ims/vims/logs

Bin: /u01/ims/vims/vims\_mmtel\_logic/bin

1.4 MRF

Cai dat: /u01/ims/mrf/mrlg

Log: /u01/ims/mrf/mrlg/log

Bin: /u01/ims/mrf/mrlg/bin

2. Modul diameter

Cai dat:

SBC: /u01/ims/sbc/sbdia

IMSCORE: /u01/ims/imscore/diagw

MMTEL: /u01/ims/vims/diagw

Log:

Sbc: /u01/ims/sbc/log

Imscore: /u01/ims/imscore/logs

Mmtel: /u01/ims/vims/logs

Bin:

SBC: /u01/ims/sbc/sbdia/bin

IMSCORE: /u01/ims/imscore/diagw/bin

MMTEL: /u01/ims/vims/diagw/bin

3. Modul ENUM/DNS

Cài đặt:

IMSCORE, MMTEL: /u01/ims/imscore/dnsgw/

SBC: /u01/ims/sbc/sbdns

Log:

IMSCORE, MMTEL: /u01/ims/imscore/logs

SBC: /u01/ims/sbc/log

Binary:

IMSCORE, MMTEL: /u01/ims/imscore/dnsgw/bin

SBC: /u01/ims/sbc/sbdns/bin

4. Modul H.248

Cài đặt:

MRF: /u01/ims/mrf/mrhg

SBC: /u01/ims/sbc/sbhg

Log:

MRF: /u01/ims/mrf/mrhg/log

SBC: /u01/ims/sbc/sbhg/log

Binary:

MRF: /u01/ims/mrf/mrhg/bin

SBC: /u01/ims/sbc/sbhg/bin

5. Modul SipGW

Cài đặt: /u01/ims/sipgw

Log: /u01/ims/sipgw/log

Binary: /u01/ims/sipgw/bin

Service sblg01 remote\_console

Ets: info()

6. database

IMS, MMTEL:

Cài đặt: /u01/ims/imscore/dbgw

Log: /u01/ims/imscore/logs

Binary: /u01/ims/imscore/dbgw/bin

SBC:

Cài đặt: /u01/ims/sbc/sbdb

Log: /u01/ims/sbc/log

Binary: /u01/ims/sbc/sbdb/bin

7.MGW

Cài đặt: /u01/ims/vims/mgw

Log: /u01/ims/vims/mgw/logs

Binary: /u01/ims/vims/mgw/bin

8. vCCF 1

Cài đặt: /u01/ims/vims/ccf

Log: /u01/ims/vims/ccf/logs

Binary: /u01/ims/vims/ccf/bin

9. OAM

OAM1:

Cài đặt: /u01/ims/vims/oam

Log: /u01/ims/vims/oam/log

Bianry: /u01/ims/vims/oam/bin

Ha\_framework1:

Cài đặt: /u01/ims/vims/ha\_framework

Log: /u01/ims/vims/ha\_framework/log

Bianry: /u01/ims/vims/ha\_framework/bin

Mysql:

Cài đặt: /u01/ims/mysql

Log: /u01/ims/mysql/data

Binary: /u01/ims/mysql/bin

**Confd:**

Cài đặt: /opt/confd/current

Log: /opt/confd/current/var/confd/log

Binary: /opt/confd/current/bin

**EMS\_AGENT@172.16.1.174:**

Cài đặt: /u01/ims/vims/ems\_agent

Log: /u01/ims/vims/ems\_agent/log

Binary: /u01/ims/vims/ems\_agent/bin

**STATUS SIPGW**

II. GIÁM SÁT HỆ THỐNG EMS

III. Cauas hinh qua CLI

**Init mode:**

Config

Ext-config

Exit

Show

**Extern-config**

Backup confd name backup\_oam

Changepwd

changuerpwd

Dis, enable; [csdia01@172.16.1.174](mailto:csdia01@172.16.1.174) cs\_dia44

Exit

Get

No: subcri, alarm, alarm\_severity, SS

alarm :delete alarm

alarm\_severity :no alarm\_severity

alarm\_user\_mapping :alarm user mapping sms

ftpserver :ftp server

subcriber :Delete user subcribe on system

user :delete user from IMS system

pushCDR

restart

restore

Set

alarm :get alarm information

alarm\_severity :add/mod alarm severity

alarm\_user\_mapping :alarm user mapping sms

ftpserver :ftp server

user :add/mod user into IMS system

show

alarm :get alarm information

alarm\_current :get alarm information log

alarm\_history :get alarm history

alarm\_severity :show severity

alarm\_terminated :Get alarm terminated

alarm\_user\_mapping :alarm user mapping sms

confd-backup-dir :Netconfig Backup Directories

ftpserver :ftp server

history :Command history

kpi :show kpi value

permission :User permission of IMS system

user :get information user in IMS system

start

ethcard :start ethcard server :get server status

stop

ethcard :start ethcard server :get server status

**MMTEL:**

**MTDNS:**

**Mtdns02**

* export SERVICE\_NAME="mtdns02"
* export NODE\_NAME="mtdns02"
* export IP="172.16.1.102"
* export HOME=/u01/ims/imscore/dnsgw
* export RUNNER\_LOG\_DIR=/u01/ims/imscore/logs
* export CONF\_DIR=/u01/ims/imscore/etc/
* export VMARGS\_PATH=$CONF\_DIR/$SERVICE\_NAME.args
* export RELX\_CONFIG\_PATH=$CONF\_DIR/$SERVICE\_NAME.config

**mtdns02.args:**

-name [mtdns02@172.16.1.102](mailto:mtdns02@172.16.1.102)

**Mtdns.config:**

{file, "mtdns02.error.log"}

{file, "mtdns02.log"}

{crash\_log, "mtdns02.crash.log"}

{confd\_addresses,[{{172,16,1,174},4565}, {{172,16,1,102},4565}]}

{ha\_nodes, [{'ha\_framework@172.16.1.174', vIMS}, {'ha\_framework2@172.16.1.102', vIMS}]}

{dns\_servers, ["0:172.16.1.174:53", "1:172.16.1.102:54"]}

**MTLG:**

**Mtlg02:**

export HOME=/u01/ims/vims/vims\_mmtel\_logic

export RUNNER\_LOG\_DIR=/u01/ims/vims/logs

export VMARGS\_PATH="$HOME/releases/1.0/vm\_02.args"

export RELX\_CONFIG\_PATH="$HOME/releases/1.0/sys\_02.config"

$HOME/bin/vMMTEL\_release-1.0 $1 $2 $3

**Vm\_02.args**

-name mtlg02@172.16.1.102

**Sys\_02.config**

{file, "mmtel2.error.log"}

{file, "mmtel2.console.log"}

{crash\_log, "mmtel2.crash.log"}

{confd\_addresses, [{{172,16,1,174}, 4565}, {{172,16,1,102}, 4565}]}

{confd\_scale, {['ha\_framework2@172.16.1.102'], app\_request\_handler, vIMS}}

{server\_name, "sip:mmtel2@10.70.66.12:5065"}

{dns\_local, {{10, 70, 66, 12}, 8889}}

**MTSIP:**

**Mtsip02:**

export HOME=/u01/ims/sipgw/

export RUNNER\_LOG\_DIR=/u01/ims/sipgw/log

export VMARGS\_PATH="/u01/ims/sipgw/rel/mtsip02.arg"

export RELX\_CONFIG\_PATH="/u01/ims/sipgw/rel/mtsip02.config"

export LOCAL\_ADDR\_NUM=1

export LOCAL\_ADDR\_IP1=172.16.1.102

export LOCAL\_ADDR\_PORT1=8060

export LOCAL\_ADDR\_PROTOCOL1=udp

export LOCAL\_ADDR\_ACCESS\_NUM=0

**mtsip02.arg**

-name mtsip02@172.16.1.102

**Mtsip02.config**

{file, "mtsip02.error.log"}

{file, "mtsip02.console.log"}

{crash\_log, "mtsip02.crash.log"}

{confd\_addresses,[{"172.16.1.174",4565},{"172.16.1.102",4566}]}

**MRF**

**Mrhg02:**

export HOME=/u01/ims

MSSCTL\_PATH="/u01/ims/mrf/mrhg/releases/1/mssctl"

SIGPR\_SCRIPT\_PATH="/u01/ims/mrf/mrhg/releases/1/sigprservice"

ERL\_PATH="/usr/local/bin/erl"

MSSNG\_LOG="/u01/ims/mrf/mrhg/log"

MSSNG\_DB="/u01/ims/mrf/mrhg/bin/db"

COOKIE=vIMS

SIGPR\_NODE\_NAME="mrhg02@172.16.1.102"

SIGPR\_INST=2

Tao 2 file **mssctl** va **sigprservice** trong **/u01/ims/mrf/mrhg/releases/1/**

**MRLG:**

MSSCTL\_PATH="/u01/ims/mrf/mrlg/releases/1/mssctl"

MSS\_SCRIPT\_PATH="/u01/ims/mrf/mrlg/releases/1/mrcservice"

ERL\_PATH="/usr/local/bin/erl"

MSSNG\_LOG="/u01/ims/mrf/mrlg/log"

MSSNG\_DB="/u01/ims/mrf/mrlg/bin/db"

COOKIE=vIMS

MSS\_NODE\_NAME="mrlg02@172.16.1.102"

MSS\_INST=2

Tao 2 file **mssctl** va **mrcservice**trong **/u01/ims/mrf/mrlg/releases/1/**

**MRSIP:**

**Mrsip02:**

export HOME=/u01/ims/sipgw/

export RUNNER\_LOG\_DIR=/u01/ims/sipgw/log

export VMARGS\_PATH="/u01/ims/sipgw/rel/mrsip02.arg"

export RELX\_CONFIG\_PATH="/u01/ims/sipgw/rel/mrsip02.config"

export LOCAL\_ADDR\_NUM=1

export LOCAL\_ADDR\_IP1=172.16.1.102

export LOCAL\_ADDR\_PORT1=9060

export LOCAL\_ADDR\_PROTOCOL1=udp

export LOCAL\_ADDR\_ACCESS\_NUM=0

**Mrsip02.arg**

-name mrsip02@172.16.1.102

**Mrsip02.config**

mrsip02.error.log

mrsip02.console.log

mrsip02.crash.log

{confd\_addresses,[{"172.16.1.174",4565},{"172.16.1.102",4566}]}

**MEDIA:**

Mgw02:

export HOME=/u01/ims/vims/mgw

export RUNNER\_LOG\_DIR=$HOME/logs/

export VMARGS\_PATH="$HOME/etc/mgw02.args"

export RELX\_CONFIG\_PATH="$HOME/etc/mgw02.config"

export MGW\_TCP\_INFO="172.16.1.102:3945"

export MGW\_PC=3

export MGW\_SYS\_NAME="MGW\_IMS"

$HOME/bin/vmgw\_release $1

Tạo file **vmgw\_release.rel** tại /u01/ims/vims/mgw/releases/

Mgw02.args

-name mgw02@172.16.1.102

Mgw02.config

{file, "mgw02.error.log"}

{file, "mgw02.console.log"}

{crash\_log, "mgw02.crash.log"}

{confd\_addresses,[{{172,16,1,174},4565}, {172,16,1,102},4566}]}

{config\_file,"/u01/ims/vims/mgw/etc/mgw02.cfg"}

**MP:**

**Mp02:**

**OAM:**

**Oam**

**oam2:**

export HOME=/u01/ims/vims/oam

export RUNNER\_LOG\_DIR=$HOME/log

export VMARGS\_PATH="$HOME/releases/1/vm.args"

export RELX\_CONFIG\_PATH="$HOME/releases/1/sys.config"

$HOME/bin/oam $1

**vm.args:**

-name [oam2@172.16.1.102](mailto:oam2@172.16.1.102)

**sys.config:**

{file, "oam2.error.log"}

{file, "oam02.log"}

{crash\_log, "oam2.crash.log"}

{oam\_server, 1000, ['oam1@172.16.1.174', {'oam2@172.16.1.102'}]}]

{sync\_nodes\_optional, ['oam2@172.16.1.102']}

{confd\_addresses, [{{172,16,1,102}, 4565}, {{172,16,1,102}, 4566}]}

{db\_ip\_1, "172.16.1.174"}

{db\_ip\_2, "172.16.1.102"}

**Ha:**

**Ha\_framework2:**

export HOME=/u01/ims/vims/ha\_framework

export RUNNER\_LOG\_DIR=$HOME/log

export VMARGS\_PATH="$HOME/releases/1/vm.args"

export RELX\_CONFIG\_PATH="$HOME/releases/1/sys.config"

$HOME/bin/ha\_framework $1

**vm.args**

-name [ha\_framework2@172.16.1.102](mailto:ha_framework2@172.16.1.102)

**sys.config**

{file, "./log/error.log"}

{file, "./log/console.log"}

{ha\_framework, 1000, ['ha\_framework1@172.16.1.174', {'ha\_framework2@172.16.1.102'}

{sync\_nodes\_optional, ['ha\_framework2@172.16.1.102']}

{master, {{172, 16, 1, 174}, 4565}},

{slave, {{172, 16, 1, 102}, 4566}}

Mysql:

ls -lrt /u01/ims/mysql/

yum -y install cmake make gcc gcc-c++ bison ncurses ncurses-devel

---tải mysql-boost-5.7.28.tar.gz từ google rồi coppy vào server

tar -zxvf mysql-boost-5.7.28.tar.gz

cd mysql-5.7.23/

mkdir configure

cd configure

cmake .. -DWITH\_BOOST=../boost/boost\_1\_59\_0/ -DWITH\_EMBEDDED\_SERVER=OFF -DMYSQL\_DATADIR=/u01/ims/mysql/data/ -DCMAKE\_INSTALL\_PREFIX=/u01/ims/mysql

make && make install

groupadd mysql

useradd -g mysql mysql

chown -R mysql:mysql /u01/ims/mysql

cd /u01/ims/mysql/bin

./mysqld --initialize --user=mysql

cd /u01/ims/mysql/support-files

cp mysql.server /etc/init.d/mysql

ln -s /u01/ims/mysql/bin/mysql /usr/bin

Confd:

1. Install 1 số gói liên quan:

# Install python environment

su

yum install python

# Install libcrypto.so.1.0.0

# Check as if libcrypto.so is installed already or not

ls -l /usr/lib64 | grep libcrypto

# If not have libcrypto.so.1.0.0 --> Fake install version 1.0.0 from 1.0.2k

ln /usr/lib64/libcrypto.so.1.0.2k /usr/lib64/libcrypto.so.1.0.0

1. Install NETCONF server

Coppy file **confd** vào /opt/

Thay đổi IP, port in :

<ip>172.16.1.102</ip>

<port>4566</port>

1. Run server

/opt/confd/current/bin/confd -c /opt/confd/current/etc/confd/confd.conf

**Ems\_agent:**

**Ems\_agent02:**

export HOME=/u01/ims/vims/ems\_agent

export RUNNER\_LOG\_DIR=$HOME/log

export VMARGS\_PATH="$HOME/etc/vm.args"

export RELX\_CONFIG\_PATH="$HOME/etc/sys.config"

$HOME/bin/ems\_agent $1

**Vm.args**

-name ems\_agent02@172.16.1.102

**Sys.config**

{file, "error.log"}

{file, "ems.log"}

{crash\_log, "crash.log"}

{ip\_ems\_oam\_connect, "172.16.1.102"}

{oam\_node\_list, ['oam1@172.16.1.174', 'oam02@172.16.1.102']}

**Ssh\_config:**

**Ssh\_config:**

export HOME=/u01/ims/vims/ssh\_config

export RUNNER\_LOG\_DIR=$HOME/log

export VMARGS\_PATH="$HOME/releases/1/vm.args"

export RELX\_CONFIG\_PATH="$HOME/releases/1/sys.config"

$HOME/bin/ssh\_config $1

**vm.args**

-name [ssh\_config02@172.16.1.102](mailto:ssh_config02@172.16.1.102)

**Sys.config**

**{file, "ssh\_config02.log"}**

{file, "ssh.log"}

{crash\_log, "crash.log"}

{ssh\_config, 1000, ['ssh\_config1@172.16.1.174', {'ssh\_config2@172.16.1.102'}]}

CP: vht\_ipsec.nif.so vào /usr/local/lib/

/u01/ims/sipgw/bin/vsipgw

Confd\_cli

**Config**

**280**

**SSH vào ssh\_config: *ssh*** [***admin@10.70.66.10***](mailto:admin@10.70.66.10) ***–p8822* với pass:1; Đẻ set thông tin liên kết với cổng logic**

**[**vIMS]> config

\*\*IMS configure mode\*\*

**SBC:**

[vIMS](CONFIG)> sbc

\*\*Enter sbc mode \*\*

[vIMS](CONFIG/sbc/)>logic

**SBSIPA:**

**Show**: show full-config logic sipgw\_access\_info

**Thiết lập**: set logic sipgw\_access\_info sbsipa02@172.16.1.102 address\_info ip 172.16.2.62 unprotected\_port 5060 port\_s 5061 port\_c 5062 port\_tls 5063

**SBSIPC:**

**Show:** show full-config logic sipgw\_core\_node\_list

**Thiết lập:** set logic sipgw\_core\_node\_list [sbsipc02@172.16.1.102](mailto:sbsipc02@172.16.1.102)

**DIA: down**

**DB:**

**DNS:**

**IMSCORE:**

**CSSIPI:**

**CSSIPS:**

**MTSIP**

**MRSIP**

set diagw map\_connection\_server scscf\_3142\_2 cont\_value status active interface [ cxdx ] server\_name server\_A1

show full-config diagw diameter\_gw\_config

Ktra:

service mmtel1 remote\_console

ets:tab2list(node\_active).

rx\_203\_81\_2 local\_port 3868 app\_id [ 16777236 ] interface\_id [ rx ] proto tcp remote\_ip 172.16.1.126 remote\_port 3868 origin\_host pcscf.ims.mnc004.mcc452.3gppnetwork.org destination\_realm epc.ims.mnc004.mcc452.3gppnetwork.org node\_name [sbdia02@172.16.1.102](mailto:sbdia02@172.16.1.102)

mmtel\_sh\_2 local\_port 4022 app\_id [ 16777217 ] interface\_id [ sh ] proto sctp remote\_ip 172.16.1.134 remote\_port 3868 origin\_host mtelsh2.ims.mnc004.mcc452.3gppnetwork.org destination\_realm epc.ims.mnc004.mcc452.3gppnetwork.org node\_name mtdia02@172.16.1.102

mmtel\_ro\_2 local\_port 3873 app\_id [ 4 ] interface\_id [ ro ] proto tcp remote\_ip 172.16.1.126 remote\_port 3868 origin\_host mmtelro2.ims.mnc004.mcc452.3gppnetwork.org destination\_realm epc.ims.mnc004.mcc452.3gppnetwork.org node\_name [mtdia02@172.16.1.102](mailto:mtdia02@172.16.1.102)

rem\_mgc\_tcp\_info

mgw\_udp\_info

rem\_mp\_udp\_info

mgc\_tcp\_connections

mp\_udp\_connections

CCF:

**Ccf02:**

export HOME=/u01/ims/vims/ccf

export RUNNER\_LOG\_DIR=$HOME/logs

export RELX\_CONFIG\_PATH=$HOME/etc/sys2.config

export VMARGS\_PATH=$HOME/etc/vm2.args

$HOME/bin/vCCF\_release-1 $1 $2 $3

**vm2.args**

-name [vCCF02@172.16.1.102](mailto:vCCF02@172.16.1.102)

**Sys2.config**

{file, "ccf2.error.log"}

{file, "ccf2.console.log"}

{crash\_log, "ccf2.crash.log"}

{confd\_addresses, [{{172,16,1,174}, 4565}, {{172,16,1,102}, 4566}]}