

رادص إل MSE جمانربل رشنل او نيوكتل ا ليلد رفوتل ا يلاع 8.0

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قمدقملا

فـاشـكـتسـاـ تـاحـيـمـلـتـ ئـلـاـ ئـفـاصـ إـلـاـبـ ،ـرـشـنـلـ اوـ نـيـوـكـتـلـاـ تـادـاشـرـاـ دـنـتـسـمـلـاـ اـذـهـ فـصـيـ
لـقـنـتـلـاـ تـامـدـخـ كـرـحـمـلـ (HA) يـلـاعـلـاـ رـفـوتـلـاـ ئـزـيمـ فـيـضـتـ يـتـلـاـ كـلـتـلـ اـهـحـالـصـ اوـ تـالـكـشـمـلـاـ
لـقـنـتـلـاـ ئـدـابـمـلـاـ حـرـشـ وـهـ دـنـتـسـمـلـاـ اـذـهـ نـمـ ضـرـغـلـاوـ .ـCiscoـ (WLAN)ـ نـمـ ئـدـحـوـمـلـاـ ئـيـكـلـسـالـلـاـ
رـشـنـ تـاهـوـيـرـانـيـسـ رـيـفـوتـوـ ئـراـوـطـلـاـ ئـلـاحـ نـعـ يـبـطـلـاـ فـشـكـلـابـ ئـقـلـعـتـمـلـاـ
ئـراـوـطـلـاـ تـالـاحـ يـفـ ئـراـوـطـلـاـ ئـلـاحـ نـعـ فـشـكـلـاـ.

 [رشـفـمـلـاوـ MSEـ رـشـفـمـبـ ئـصـاخـلـاـ نـيـوـكـتـلـاـ لـيـصـافـتـ دـنـتـسـمـلـاـ اـذـهـ مـدـقـيـ الـ ئـظـاحـالـمـ](#)
[درـتـ وـ ئـرـخـأـ قـئـاثـوـ يـفـ تـامـوـلـعـمـلـاـ هـذـهـ درـتـ وـ MSEـ HAـ رـشـفـمـبـ قـلـعـتـتـ الـ يـتـلـاـ ئـطـبـتـرـمـلـاـ](#)
[دـنـتـسـمـلـاـ اـذـهـ يـفـ فـيـكـتـمـلـاـ wIPSـ نـيـوـكـتـ ئـيـطـغـتـ مـتـتـ الـ اـمـكـ .ـاهـنـأـشـبـ عـجـارـمـ](#)

قيس اس ا تامولعم

فـيـاـظـوـ تـامـدـخـلـاـ هـذـهـ رـفـوتـ .ـ ئـطـبـتـرـمـ ئـدـدـعـتـمـ تـامـدـخـ لـيـغـشـتـ ئـلـعـ رـدـاقـ يـسـاسـاـ مـاـظـنـ وـهـ MSEـ نـاـ
ئـيـمـهـأـلـاـ غـلـابـ رـمـأـ يـلـاعـلـاـ يـحـصـلـاـ نـيـمـأـتـلـلـ رـابـتـعـالـاـ ئـالـيـاـ نـإـفـ ،ـكـلـذـلـوـ .ـيـوـتـسـمـلـاـ ئـيـلـاعـ قـمـدـخـ

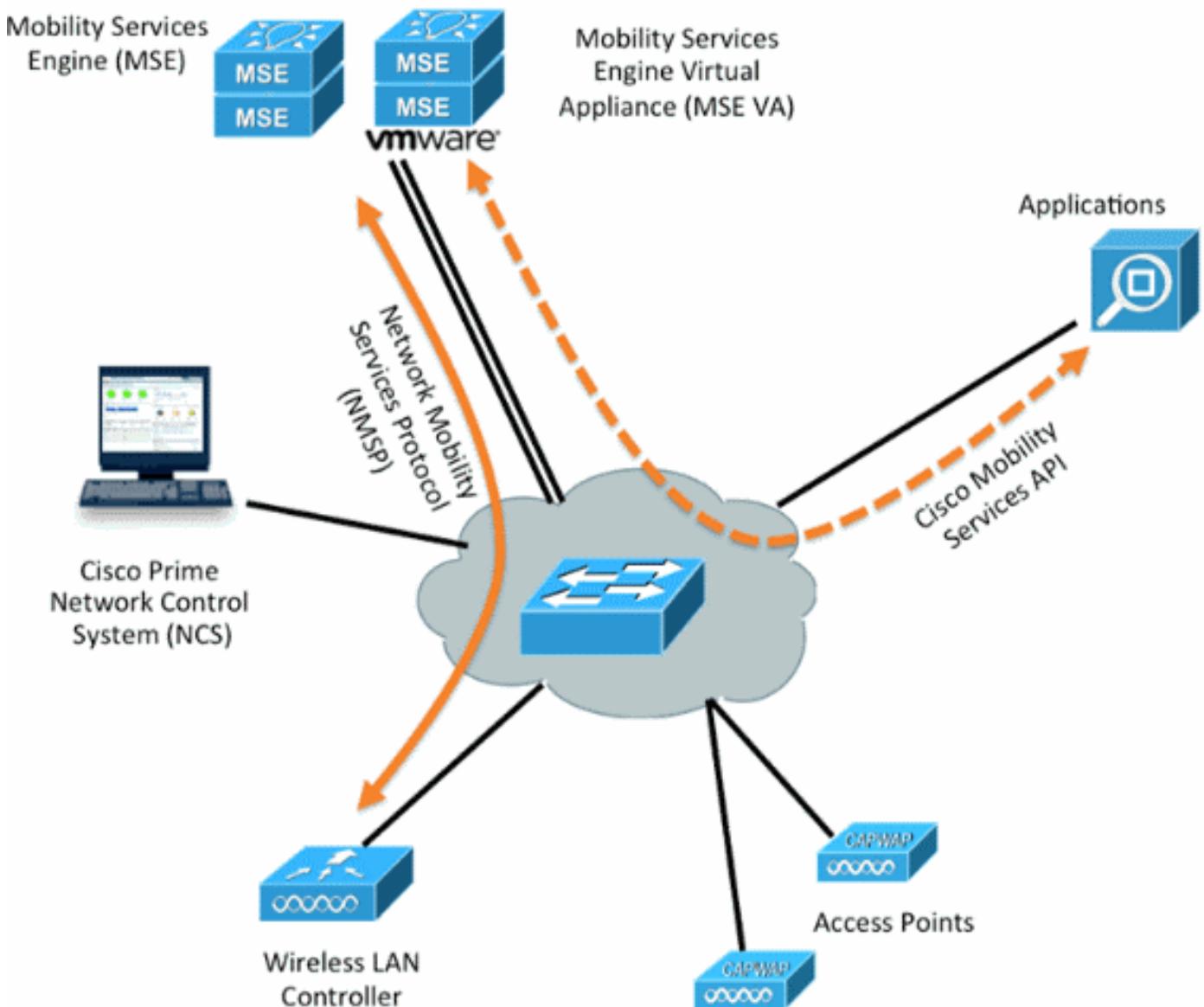
ةمدخلـا يـف ظـافـحـلـا لـجـأـ نـمـ.

زـاهـجـ مـدـقـيـ .ـرـخـآـ طـشـنـ رـيـغـ لـيـثـ مـطـسـاـبـ طـشـنـ لـكـ مـعـ دـمـتـيـ ،ـHـAـ نـيـكـمـتـ عـ ظـافـحـلـا مـتـيـ وـ .ـيـلـاعـلـا رـفـوـتـلـا دـادـعـا ةـبـقـارـمـ وـ ةـرـادـاـوـ ةـيـهـتـبـ هـيـفـ مـوـقـيـ يـذـلـا ةـحـصـلـا ةـبـقـارـمـ "ـيـامـحـلـا بـقـارـمـ"ـ دـعـيـ .ـيـونـاـثـلـاـوـ يـسـاسـأـلـا فـرـصـلـا رـاعـسـأـ رـشـفـمـ نـيـبـ بـلـقـلـا تـاضـبـنـ ئـلـعـ لـشـفـيـ اـمـدـنـعـ .ـقـيـبـطـتـلـا ةـبـقـارـمـ وـ تـاـفـلـمـلـا خـسـنـوـ تـاـنـاـيـبـلـا دـادـعـاـقـ دـاعـاـقـ دـاعـاـقـ نـعـ الـوـفـسـمـ يـسـاسـأـلـا MSEـ بـ صـاـخـلـا يـرـهـاـظـلـا نـاـوـنـعـلـا لـيـدـبـتـ مـتـيـ ،ـيـونـاـثـلـا رـيـدـمـلـا مـلـسـتـيـوـ يـسـاسـأـلـا فـافـشـ لـكـشـبـ.

Cisco MSE نـيـكـمـتـ نـمـضـتـيـ Ciscoـ نـمـ يـجـذـوـمـنـ WLANـ رـشـنـ (ـ1ـ لـكـشـلـا عـجـاـ) دـادـعـاـلـا اـذـهـ حـضـوـيـ HAـ.

ىـلـعـ يـرـهـاـظـلـا زـاهـجـلـاـوـ 3365ـ وـ 3360ـ وـ MSEـ3350ـ/3355ـ ةـيـلـامـلـا تـامـدـخـلـا رـشـنـ - 1ـ لـكـشـلـا ESXiـ.

ةـحـصـلـا لـاجـمـ يـفـ تـامـدـخـلـا ةـدـدـعـتـمـلـا ةـيـلـامـلـا تـامـدـخـلـا رـشـنـ - 1ـ لـكـشـلـا



دوـيـقـلـاـوـ ةـيـهـجـوـتـلـا ئـدـابـمـلـا

ملا عوامی تا نه نبین می MSE HA:

- طقف راتکه MSE 1:1 يرهاظللا زاهجلا معدي
 - رظننا .نويسيس اسألا MSE يحصلص مىلا لصي ام يوناثلا MSE رشوفم معدي نأ نكمي 3 و 2 نالكشلا) HA طبرة فوفصم
 - رشا بملا لاصتالا او ةكبشلا ليصوت HA معدي
 - IP و وحصـلـا بـقـارـمـبـ صـاخـلـاـ IPـ نـمـ لـكـ نـوـكـيـ نـأـ بـجـيـ .ـطـقـفـ ـMSEـ2ـ ـةـقـبـطـ رـارـكـتـ مـعـدـ مـتـيـ 3ـ ـةـقـبـطـلـاـ رـارـكـتـ نـمـ هـيـلـاـ لـوـصـولـاـ نـوـكـيـ نـأـ اوـهـسـفـنـ ـةـيـعـرـفـلـاـ ةـكـبـشـلـاـ يـلـعـ يـرـهـاـظـلـاـ مـوـعـدـ رـيـغـ (NCSـ)ـ ةـكـبـشـلـاـ يـفـ مـكـحـتـلـاـ مـاظـنـلـ
 - نـيـفـلـتـخـمـ يـرـهـاـظـلـاـ IPـ وـ Health~Monitorـ بـ صـاخـلـاـ IPـ نـوـكـيـ نـأـ بـجـيـ
 - ايـئـاقـلـتـ وـأـ ايـوـدـيـ لـشـفـلـاـ زـواـجـتـ مـادـخـتـسـ اـكـنـكـمـيـ
 - ايـئـاقـلـتـ وـأـ ايـوـدـيـ لـاطـعـأـلـاـ عـاجـراـ اـمـاـ مـادـخـتـسـ اـكـنـكـمـيـ
 - جـمانـربـلـاـ رـادـصـاـ سـفـنـ يـلـعـ يـوـنـاـثـلـاـوـيـسـاسـأـلـاـ MSEـ نـمـ لـكـ نـوـكـيـ نـأـ بـجـيـ
 - راعـسـأـ رـشـوفـمـ حـبـصـيـ الـ .ـرـخـآـ طـشـنـ رـيـغـ لـيـثـمـبـ طـشـنـ يـسـاسـأـ MSEـ رـشـوفـمـ لـكـ مـعـدـ مـتـيـ لـشـفـلـاـ زـواـجـتـ عـارـجـاـ عـدـبـ دـعـبـ الـ اـطـشـنـ يـوـنـاـثـلـاـ (MSEـ)ـ فـرـصـلـاـ
 - ايـئـاقـلـتـ وـأـ ايـوـدـيـ لـشـفـلـاـ زـواـجـتـ عـارـجـاـ نـوـكـيـ نـأـ نـكـمـيـ
 - لـجـسـمـ يـسـاسـأـ MSEـ لـكـلـ تـانـايـبـلـاـ دـعـاـوـقـوـجـمـارـبـلـلـ دـحـاوـ لـيـثـمـ دـجـوـيـ

مودة فوفص 2. لكش MSE HA

	Secondary Server Type					
Primary Server Type	3310	3350	3355	VA-Low	VA-Standard	VA-High
3310	Y	Y	Y	N	N	N
3350	N	Y	Y	N	N	N
3355	N	Y	Y	N	N	N
VA-Low	N	N	N	Y	Y	Y
VA-Standard	N	N	N	N	Y	Y
VA-High	N	N	N	N	N	Y

تافصاوم امئاد هل نوكى نأ بجي يوناثلا لېيڭىملا نأ وە ئەفوفمىمىلا ھذەل يساسەللا طخلا
ۋە ئەپارتفا ئەزەجأ وە ئەزەجأ تىنەك ئاوس، يساسەللا نم ئەلىع وە ئەۋاسىم.

می کنم نکار می خواهد طبقاً MSE-3365 عزمی مل می تدید رخ آرخاب را در معادل کردن.

MSE HA N:1 میں فوپوسم 3 لکھ نارتقا ہے۔

Secondary Server	Primary Server
3310	N:1 not supported
3350	Two 3310 servers are supported
3355	Two 3310 servers are supported
3355	Two 3350 servers are supported
3355	One 3310 and one 3350 are supported

لصتملا) يرهاظلا زاهجلل HA نيوكت ويرانيس ةكبشلا

اذه ، ويرانيس اذه ل (VA) يرهاظلا زاهجلل HA نيوكت لاثمل ا اذه حضوي:
تلکش دادع | ةيلمع

- MSE VA:

Virtual IP – [10.10.10.11]

Health Monitor interface (Eth0) – [10.10.10.12]

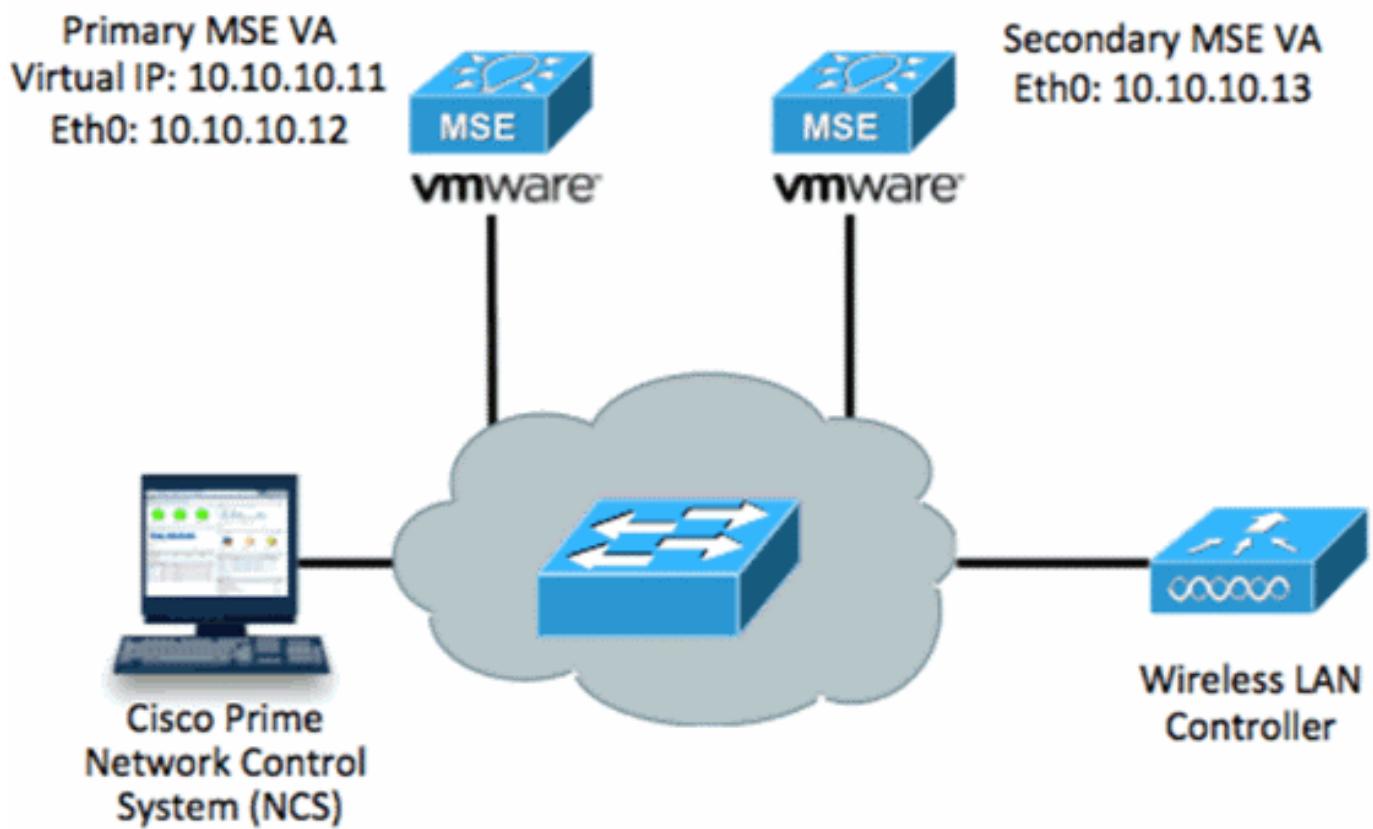
- MSE VA:

Virtual IP – [None]

Health Monitor interface (Eth0) – [10.10.10.13]

 ل HA نيوكتل بولطم اذه ل كل VA. طيشنت صيخرت بولطم: ظحالم VA.

ي ف MSE يرهاظلا زاهجللا 4. لکشلا



تامولعمل نم ديزم ىلע لوصح لـ [Cisco MSE](#) يرهاظلا زاهجلاء مىل عجارت.

ةماعل ا تاوطلخا يلي امييف:

يف حضوم وه امك ةكبشلا تادادعإ عيمج عافيتسا نم ققحتو لـ MSE VA تيبيثت لمكأ. روصلـا.

MSE1 on kft-fx

File View VM

to complete.
Preparing to install...
Extracting the JRE from the installer archive...
Unpacking the JRE...
Extracting the installation resources from the installer archive...
Configuring the installer for this system's environment...
Launching installer...
Preparing SILENT Mode Installation...
=====
Cisco Mobility Services Engine (created with InstallAnywhere by Macrovision)
=====
Command.run(): process completed before monitors could start.
=====
Installing...
=====

2. يف حضوم وه امك الـأـلـوـخـدـلـاـ لـيـجـسـتـ دـنـعـ "ـدـادـعـ إـلـاـ جـلـاعـمـ"ـ لـالـخـ نـمـ تـامـلـعـمـلـاـ دـادـعـابـ مـقـ.ـةـ رـوـصـلـاـ.

Cisco Mobility Service Engine

mse login: root
Password:
Last login: Mon Feb 13 17:31:37 on tty1

Enter whether you would like to set up the initial parameters manually or via the setup wizard.

Setup parameters via Setup Wizard (yes/no) [yes]: _

3. يف معن لـخـدـأـ.ـ(ـكـلـذـىـلـاـ اـمـوـ،ـلـاجـمـلـاـوـفـيـضـمـلـاـ مـسـاـ)ـ ةـبـولـطـمـلـاـ تـالـاخـدـلـاـ لـخـدـأـ.
ـيـلـاعـلـاـ رـفـوـتـلـاـ نـيـوـكـتـلـاـ.

```

Current hostname=[mse]
Configure hostname? (Y)es/(S)kip/(U)se default [Yes]: Y

The host name should be a unique name that can identify
the device on the network. The hostname should start with
a letter, end with a letter or number, and contain only
letters, numbers, and dashes.

Enter a host name [mse]: mse1

Current domain=[]
Configure domain name? (Y)es/(S)kip/(U)se default [Yes]: S

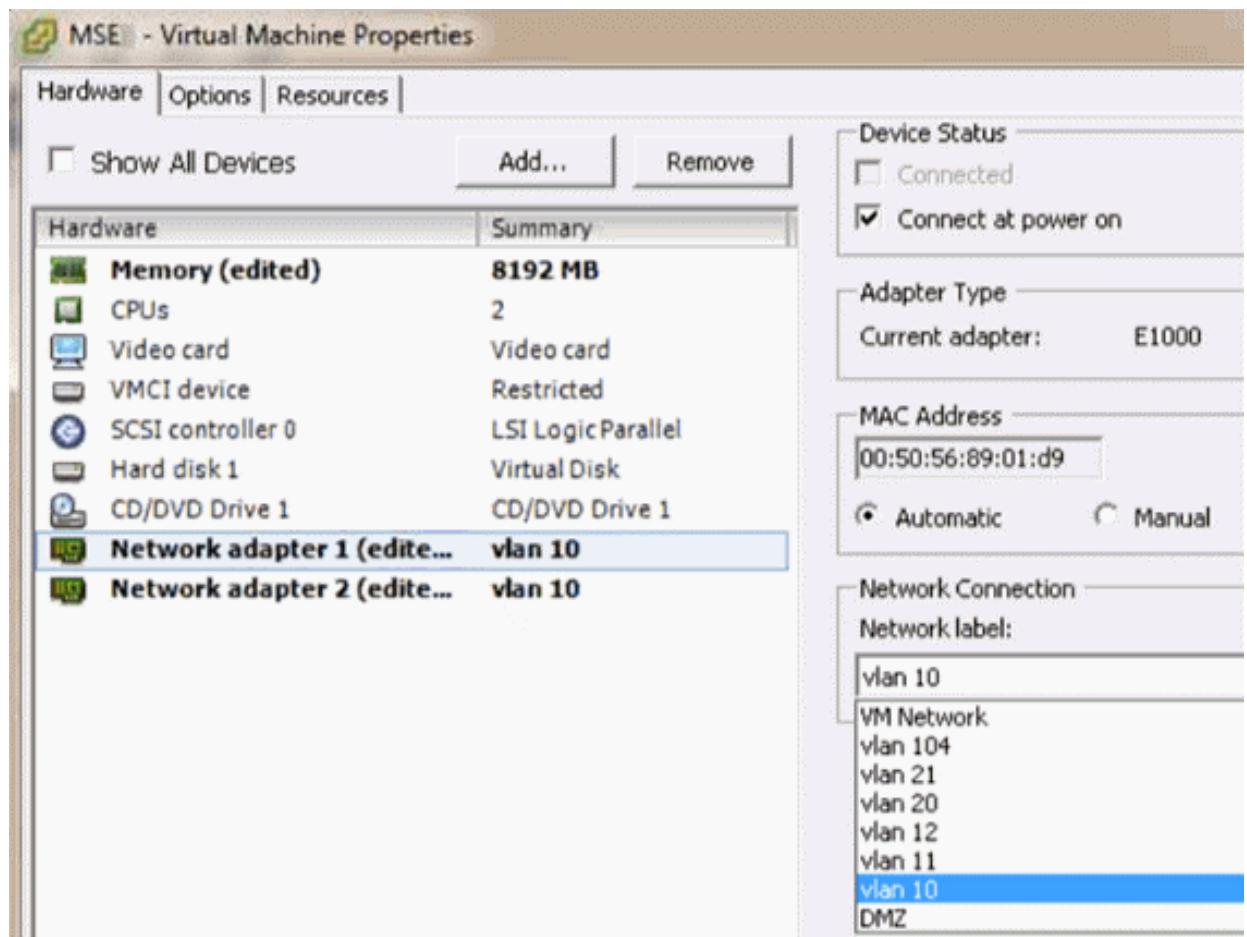
Current role=[Primary]
Configure High Availability? (Y)es/(S)kip/(U)se default [Yes]: U

```

روصلایف حضوم وہ امک تامولعملیا ہذہ لاخداپ مق.

- یس اس اول [1] - رود دیدھت.
- - ڈھصلائے قارم ڈھج او [eth0]^{*}

^{*} ڈکبشن لائوحہ میلے ڈنیع عملیا ڈکبشن لائاداع



```

Enter a host name [mse]: mse1

Current domain=[]
Configure domain name? (Y)es/(S)kip/(U)se default [Yes]: s

Current role=[Primary]
Configure High Availability? (Y)es/(S)kip/(U)se default [Yes]: 

High availability role for this MSE (Primary/Secondary)

Select role [1 for Primary, 2 for Secondary] [1]: 

Health monitor interface holds physical IP address of this MSE server.
This IP address is used by Secondary, Primary MSE servers and WCS to communicate
among themselves

Select Health Monitor Interface [eth0/eth1] [eth0]: 

```

5. ةروصلـا يـف حـضـوم وـه اـمـك [none] رـشـابـمـلـا لـاصـتـالـا ـةـهـجـاوـدـحـ.

```

Health monitor interface holds physical IP address of this MSE server.
This IP address is used by Secondary, Primary MSE servers and WCS to communicate
among themselves

Select Health Monitor Interface [eth0/eth1] [eth0]: 

-----

Direct connect configuration facilitates use of a direct cable connection between
the primary and secondary MSE servers.
This can help reduce latencies in heartbeat response times, data replication and
failure detection times.
Please choose a network interface that you wish to use for direct connect. You s
hould appropriately configure the respective interfaces.
\"none\" implies you do not wish to use direct connect configuration.

-----

Select direct connect interface [eth0/eth1/none] [none]: 

```

6. ةروصلـا يـف حـضـوم وـه اـمـك تـامـولـعـمـلـا هـذـه لـخـداـ:

- - يـرهـاظـلـا IP نـاـونـعـ [10.10.10.11]
- - ةـكـبـشـلـا عـانـقـ [255.255.255.0]
- - دـادـرـتـسـالـا عـضـوـيـفـ لـيـغـشـتـ عـدـبـ [J] -

```

Select direct connect interface [eth0/eth1/none] [none]: 

Enter a Virtual IP address for first this primary MSE server
Enter Virtual IP address [1.1.1.1]: 10.10.10.11

Enter the network mask for IP address 10.10.10.11.

Enter network mask [1.1.1.1]: 255.255.255.0

Choose to start the server in recovery mode.
You should choose yes only if this primary was paired earlier and you have now l
ost the configuration from this box.
And, now you want to restore the configuration from Secondary via NCS
Do you wish to start this MSE in HA recovery mode ?: (yes/no): no_

```

7. ةروصلـا يـف حـضـوم وـه اـمـك تـامـولـعـمـلـا هـذـه لـخـداـ:

- نيوكت ETH0 - [معن]
- TH0 IP- [10.10.10.12]
- [255.255.255.0] - ةكبشلا عانق
- [10.10.10.1] - ةيصلارتفا الابا

```
Current IP address=[1.1.1.10]
Current eth0 netmask=[255.255.255.0]
Current gateway address=[1.1.1.1]
Configure eth0 interface parameters? (Y)es/(S)kip/(U)se default [Yes]

Enter an IP address for first ethernet interface of this machine.

Enter eth0 IP address [1.1.1.10]: 10.10.10.12

Enter the network mask for IP address 10.10.10.12.

Enter network mask [255.255.255.0]:

Enter an default gateway address for this machine.

Note that the default gateway must be reachable from
the first ethernet interface.

Enter default gateway address [1.1.1.1]: 10.10.10.1
```

8. ةيناثلا تئرثي اوهج او مادختس ا متى ال (ETH1).

ةروصلالا يف حضوم وه امك [يقطخل] - ةهنج او نيوكت.

```
The second ethernet interface is currently disabled for this machine.
Configure eth1 interface parameters? (Y)es/(S)kip/(U)se default [Yes]: s
```

9. روصلالا يف حضوم وه امك "دادع الال جلاعم" لالخ نم عبات.

- ةعاسلا ةنمازم لجأ نم NTP م داخ نيكمت مهملانم.
- قسنملالا يملاعلا تيقوتلا يه ةلصفملالا ةينمزلا ةقطنملا.

```
Domain Name Service (DNS) Setup
DNS is currently enabled.
No DNS servers currently defined
Configure DNS related parameters? (Y)es/(S)kip/(U)se default [Yes]: s

Current timezone=[America/New_York]
Configure timezone? (Y)es/(S)kip/(U)se default [Yes]: 

Enter the current date and time.

Please identify a location so that time zone rules can be set correctly.
Please select a continent or ocean.

1) Africa
2) Americas
3) Antarctica
4) Arctic Ocean
5) Asia
6) Atlantic Ocean
7) Australia
8) Europe
9) Indian Ocean
10) Pacific Ocean
11) UTC - I want to use Coordinated Universal Time.
12) Return to previous setup step (^).

#? 11
```

```
Network Time Protocol (NTP) Setup.

If you choose to enable NTP, the system time will be
configured from NTP servers that you select. Otherwise,
you will be prompted to enter the current date and time.

NTP is currently disabled.
Configure NTP related parameters? (Y)es/(S)kip/(U)se default [Yes]: 

Enter whether or not you would like to set up the
Network Time Protocol (NTP) for this machine.

If you choose to enable NTP, the system time will be
configured from NTP servers that you select. Otherwise,
you will be prompted to enter the current date and time.

Enable NTP (yes/no) [no]: yes
Enter NTP server name or address: ntp.network.local
```

ل ا اذه صخلی میس اس ا MSE VA setup:

```
-----BEGIN-----
Role=1, Health Monitor Interface=eth0, Direct connect interface=none
Virtual IP Address=10.10.10.11, Virtual IP Netmask=255.255.255.0
Eth0 IP address=10.10.10.12, Eth0 network mask=255.0.0.0
Default Gateway=10.10.10.1
-----END-----
```

روصلانی ف حضووم وہ امک ڈھیحص دادع الاتام ولع عیمج نا دیکأتل معن لخدا۔ 10.

```

Please verify the following setup information.

-----BEGIN-----

Host name=mse1
    Role=1, Health Monitor Interface=eth0, Direct connect interface=none
    Virtual IP Address=10.10.10.11, Virtual IP Netmask=255.255.255.0
    Eth0 IP address=10.10.10.12, Eth0 network mask=255.255.255.0
    Default gateway=10.10.10.1
    Time zone=UTC
    Enable NTP=yes, NTP servers=10.10.10.10

-----END-----

You may enter "yes" to proceed with configuration, "no" to make
more changes, or "^" to go back to the previous step.

Configuration Changed
Is the above information correct (yes, no, or ^): yes

```

11. روصلـا يـف حـضـوم وـه اـمـك دـادـعـاـلـا دـعـبـ لـيـغـشـتـلـا ةـدـاعـاـبـ يـصـوـيـ.

```
[root@mse1 ~]# reboot
Stopping MSE Platform
```

12. ةـمـدـخـلـا وـأـ مـادـخـتـسـابـ MSE تـامـدـخـ أـدـبـاـ، لـيـغـشـتـلـا ةـدـاعـاـبـ دـعـبـ رـمـأـوـاـ مـادـخـتـسـابـ /etc/init.d/msed start

```
[root@mse1 ~]# getserverinfo
Health Monitor is not running
[root@mse1 ~]# /etc/init.d/msed start
Starting MSE Platform

ip_tables: (C) 2000-2006 Netfilter Core Team
Netfilter messages via NETLINK v0.30.
ip_conntrack version 2.4 (8192 buckets, 65536 max) - 304 bytes per conntrack
Starting Health Monitor, Waiting to check the status.
Starting Health Monitor, Waiting to check the status.
Health Monitor successfully started
Starting Admin process...
Started Admin process.
Starting database .....
Database started successfully. Starting framework and services .....
Framework and services successfully started

[root@mse1 ~]#
```

13. رـمـأـلـا مـادـخـتـسـابـ حـيـحـصـ لـكـشـبـ لـمـعـتـ MSE تـامـدـخـ نـأـ نـمـ دـكـأـتـ، تـامـدـخـلـا عـيـمـجـ عـدـبـ دـعـبـ getServerInfo.

ةروصلـا يـف حـضـوم وـه اـمـك up ةـيـلـمـعـلـا ةـلـاحـرـهـظـتـنـأ بـجـيـ.

```
Active Wired Clients: 0
Active Elements(Wireless Clients, Rogue APs, Rogue Clients, Interferers, Wired Clients, Tags) Limit: 100
Active Sessions: 0
Wireless Clients Not Tracked due to the limiting: 0
Tags Not Tracked due to the limiting: 0
Rogue APs Not Tracked due to the limiting: 0
Rogue Clients Not Tracked due to the limiting: 0
Interferers Not Tracked due to the limiting: 0
Wired Clients Not Tracked due to the limiting: 0
Total Elements(Wireless Clients, Rogue APs, Rogue Clients, Interferers, Wired Clients) Not Tracked due to the limiting: 0

-----
Context Aware Sub Services
-----

Subservice Name: Aeroscout Tag Engine
Admin Status: Disabled
Operation Status: Down

Subservice Name: Cisco Tag Engine
Admin Status: Enabled
Operation Status: Up
[roo@mse1 ~]#
```

يـونـاثـلـا MSE دـادـعـا

يـونـاثـلـا MSE VA دـادـعـا نـم عـزـجـيـه تـاوـطـخـلـا هـذـه:

تـامـوـلـعـمـلـا هـذـه لـخـدـأ . دـادـعـإـلـا جـلـاعـم يـف يـلـوـأـلـا لـوـخـدـلـا لـيـجـسـتـ أـدـبـيـ ، دـيـدـجـلـا تـيـبـثـتـلـا دـعـبـ . ةـروـصـلـا يـفـ حـضـومـ وـهـ اـمـكـ :

- [مـعـنـ] - يـلـاعـلـا رـفـوـتـلـا نـيـوـكـتـ]
- يـونـاثـ رـوـدـىـلـا رـيـشـيـ يـذـلـا [2] - رـوـدـ دـيـدـحـتـ
- ةـيـسـاسـأـلـا اـهـسـفـنـيـه [eth0] - ةـحـصـلـا ةـبـقـارـمـ ةـهـجـاـوـ

```

Current hostname=[mse]
Configure hostname? (Y)es/(S)kip/(U)se default [Yes]: yes

The host name should be a unique name that can identify
the device on the network. The hostname should start with
a letter, end with a letter or number, and contain only
letters, numbers, and dashes.

Enter a host name [mse]: mse2

Current domain=[]
Configure domain name? (Y)es/(S)kip/(U)se default [Yes]: s

Current role=[Primary]
Configure High Availability? (Y)es/(S)kip/(U)se default [Yes]:
High availability role for this MSE (Primary/Secondary)

Select role (1 for Primary, 2 for Secondary) [1]: 2

Health monitor interface holds physical IP address of this MSE server.
This IP address is used by Secondary, Primary MSE servers and WCS to communicate
among themselves

Select Health Monitor Interface [eth0/eth1] [eth0]:

```

2. روصلا يف حضوم وه امك تامولعملالا لاخداب مق.

- عيش ال [- رشابم لاصتا]
- IP th0 - [10.10.10.13]
- ةكبشلما عانق [255.255.255.0]
- ةيضرتفالا ئباوبلا [10.10.10.1]

```

-----
Select direct connect interface [eth0/eth1/none] [none]:
Current IP address=[1.1.1.10]
Current eth0 netmask=[255.255.255.0]
Current gateway address=[1.1.1.1]
Configure eth0 interface parameters? (Y)es/(S)kip/(U)se default [Yes]:
Enter an IP address for first ethernet interface of this machine.

Enter eth0 IP address [1.1.1.10]: 10.10.10.13

Enter the network mask for IP address 10.10.10.13.

Enter network mask [255.255.255.0]:

Enter an default gateway address for this machine.

Note that the default gateway must be reachable from
the first ethernet interface.

Enter default gateway address [1.1.1.1]: 10.10.10.1

```

3. روصلا يف حضوم وه امك [ي طختل] - ETH1 جاو نيوكت.

```
Configure eth0 interface parameters? (Y)es/(S)kip/(U)se default [Yes]:  
Enter an IP address for first ethernet interface of this machine.  
Enter eth0 IP address [1.1.1.10]: 10.10.10.13  
Enter the network mask for IP address 10.10.10.13.  
Enter network mask [255.255.255.0]:  
Enter an default gateway address for this machine.  
Note that the default gateway must be reachable from  
the first ethernet interface.  
Enter default gateway address [1.1.1.1]: 10.10.10.1  
The second ethernet interface is currently disabled for this machine.  
Configure eth1 interface parameters? (Y)es/(S)kip/(U)se default [Yes]: s
```

4. روصلا يف حضوم وه امك - [UTC] ةينمزلا ةقطنملا طبضا.

```
Current timezone=[America/New_York]  
Configure timezone? (Y)es/(S)kip/(U)se default [Yes]:  
Enter the current date and time.  
Please identify a location so that time zone rules can be set correctly.  
Please select a continent or ocean.  
1) Africa  
2) Americas  
3) Antarctica  
4) Arctic Ocean  
5) Asia  
6) Atlantic Ocean  
7) Australia  
8) Europe  
9) Indian Ocean  
10) Pacific Ocean  
11) UTC - I want to use Coordinated Universal Time.  
12) Return to previous setup step (^).  
#? 11_
```

5. روصلا يف حضوم وه امك NTP مداخنيكمتب مق.

```
Network Time Protocol (NTP) Setup.
```

```
If you choose to enable NTP, the system time will be  
configured from NTP servers that you select. Otherwise,  
you will be prompted to enter the current date and time.
```

```
NTP is currently disabled.
```

```
Configure NTP related parameters? (Y)es/(S)kip/(U)se default [Yes]:
```

```
Enter whether or not you would like to set up the  
Network Time Protocol (NTP) for this machine.
```

```
If you choose to enable NTP, the system time will be  
configured from NTP servers that you select. Otherwise,  
you will be prompted to enter the current date and time.
```

```
Enable NTP (yes/no) [no]: yes
```

```
Enter NTP server name or address: ntp.network.local
```

6. ظفح دادع إلأ تامولعم نم دكأت و دادع إلأ جلاعم نم ئيقبتملا تاوطلخلا لامكاب مق
ةروصلالا يف حضوم وه امك نيوكتللما

```
Please verify the following setup information.
```

```
-----BEGIN-----
```

```
Host name=mse2  
Role=2, Health Monitor Interface=eth0, Direct connect interface=none  
  
Eth0 IP address=10.10.10.13, Eth0 network mask=255.255.255.0  
Default gateway=10.10.10.1  
Time zone=UTC  
Enable NTP=yes, NTP servers=10.10.10.10
```

```
-----END-----
```

```
You may enter "yes" to proceed with configuration, "no" to make  
more changes, or "^" to go back to the previous step.
```

```
Configuration Changed
```

```
Is the above information correct (yes, no, or ^): yes
```

7. وه امك يسأسألا MSE ل ئقبا سللا تاوطلخلا سفنب تامدخل لىغشت أدب او ديهمتلا دعأ
ةروصلالا يف حضوم

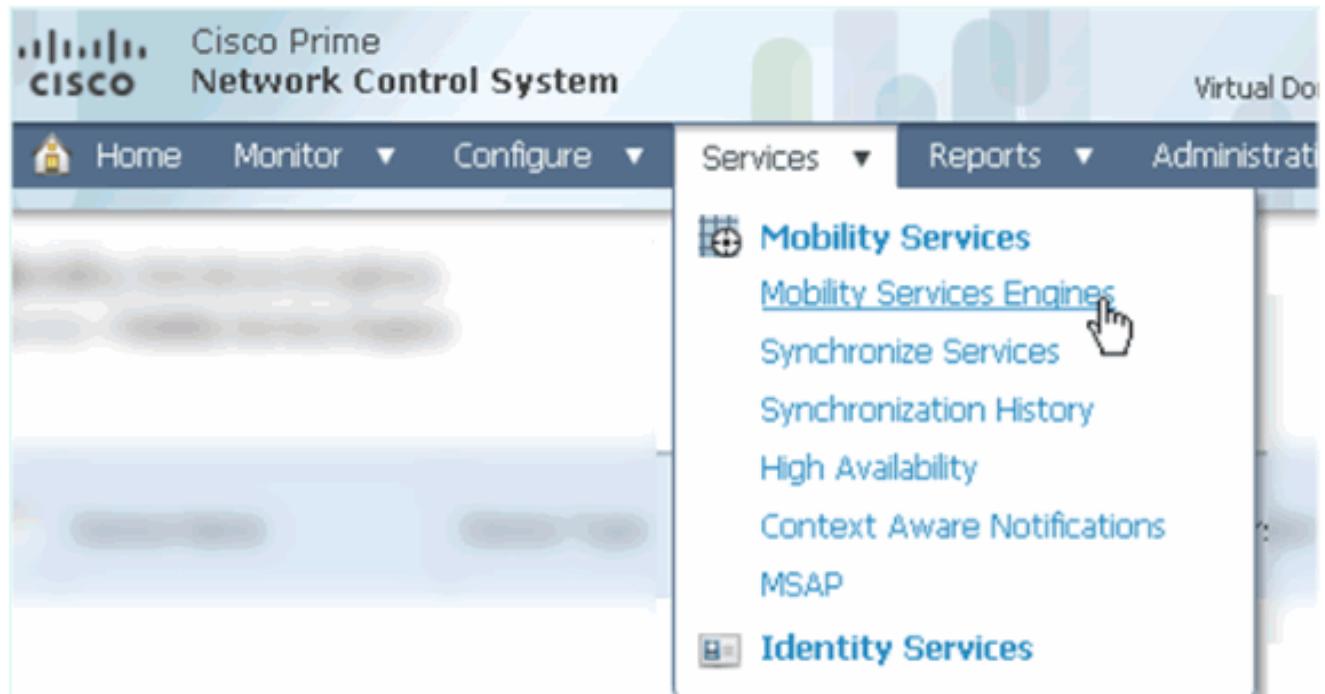
```
[root@mse2 ~]# /etc/init.d/mseed start
Starting MSE Platform

ip_tables: (C) 2000-2006 Netfilter Core Team
Netfilter messages via NETLINK v0.30.
ip_conntrack version 2.4 (8192 buckets, 65536 max) - 304 bytes per conntrack
Starting Health Monitor, Waiting to check the status.
Starting Health Monitor, Waiting to check the status.
Health Monitor successfully started
Starting Admin process...
Started Admin process.
Starting database .....
Database started successfully. Starting framework and services .....
Framework and services successfully started

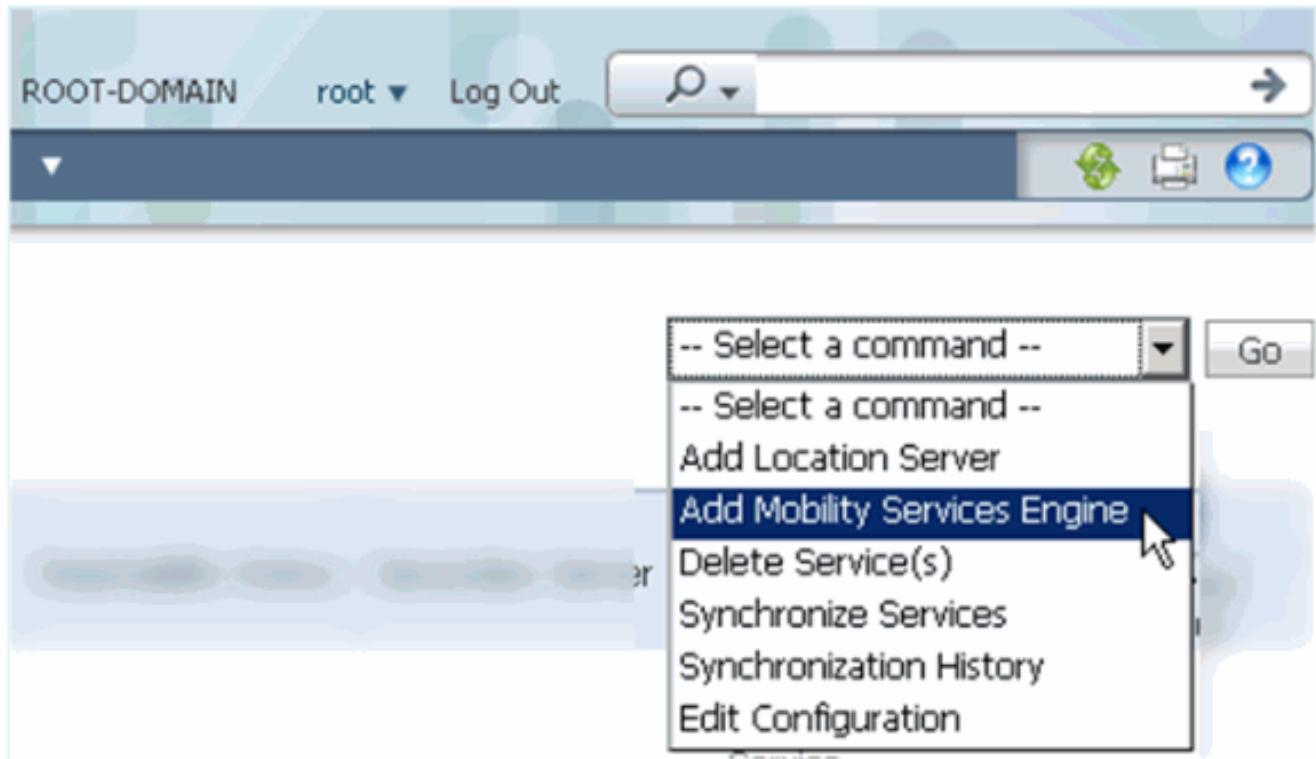
[root@mse2 ~]# _
```

Cisco Prime NCS نم مهترادا (Prime) ل ۋەيىس اس ألا ۋەيىن بىلار (Cisco Prime NCS نم مهترادا)

تامد خ تاکرح مرتخ او Systems > Mobility Services ئىللى قىتنا، (NCS) ئەكبسلى تاقا طب نم.
ةرۇصلار يەھىپ وە امك لقىنلى.



وہ امک لاقتننا قوف رقنا مٹ . لقنتلا تامدھ کرحم ۃفاضا رتھا ، ۃلدس نملہ ۃمیاقلانم 2.
ۃروصلالا یف حضوم



3. يه ميقالا، دنتسملـا اذه ويـانـيـس يـفـ لـ NCSـ نـيـوـكـتـ جـلـاعـمـ عـبـتـاـ:

- لـثـمـ - زـاهـجـلـاـ مـسـاـ لـخـداـ [MSE1]
- IPـ - نـاـونـعـ [10.10.10.12]
- يـلـوـأـ دـادـعـاـ لـكـلـ) رـوـرـمـلـاـ ةـمـلـكـوـ مـدـخـتـسـمـلـاـ مـسـاـ (
- ةـروـصـلـاـ يـفـ حـضـوـمـ وـهـ اـمـكـ كـلـذـ دـعـبـ تـقـطـقـطـ.

Cisco Prime Network Control System

Add Mobility Services Engine

Add MSE Configuration	Device Name: mse1 IP Address: 10.10.10.12 Contact Name: <input type="text"/> Username: admin Password: ***** HTTP: <input checked="" type="checkbox"/> Enable
Licensing	<input checked="" type="checkbox"/> Delete synchronized service assignments (Network designs, controllers, wired switches)
Select Service	<small>● Selecting Delete synchronized service assignments permanently removes all service assignments from the system. Existing location history data is retained, however you must use manual service assignments to reassign services.</small>
Tracking	
Assign Maps	

ةروصلـا يـف حـضـوم وـه اـمـك يـلـاتـلـا قـوـف رـقـنـا مـثـ، ةـرـفـوـتـمـلـا صـيـخـارـتـلـا عـيـمـجـ فـضـأـ.

Cisco Prime Network Control System

MSE License Summary

● Permanent licenses include installed license counts and in-built license counts.

MSE Name (UDI)	Service	Platform Limit	Type	Installed Limit
mse1 Activated (AIR-MSE-VA-K9:V01:mse1_d5972642-5696-11e1-bd0c)				
	CAS	2000	CAS Elements	100
	wIPS	2000	wIPS Monitor Mode APs	10
			wIPS Local Mode APs	10
	MSAP	2000	Service Advertisement Clicks	1000

Add License Remove License

ةروصلـا يـف حـضـوم وـه اـمـك يـلـاتـلـا قـوـف رـقـنـا مـثـ، تـامـدـخـ دـدـحـ.

Cisco Prime Network Control System

Select Mobility Service

Context Aware Service

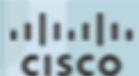
Cisco Context-Aware Engine for Clients and Tags

Partner Tag Engine ⓘ

Wireless Intrusion Protection Service

MSAP Service

ةروصلـا يـف حـضـوم وـه اـمـك يـلـاتـلـا قـوـف رـقـنـا مـثـ، بـقـعـتـلـا تـامـلـعـ نـيـكـمـتـبـ مـقـ.



Edit MSE Configuration

Licensing

Select Service

Tracking

Assign Maps

Select Tracking & History Parameters.

Tracking

- Wired Clients
- Wireless Clients
- Rogue AccessPoints
 - Exclude Adhoc Rogue APs
 - Rogue Clients
 - Interferers
- Active RFID Tags

تمت أتمتة قطع MSE. تامد خذن مازم و طىءا خلا نيعت يراري تخالا نم. 7. روصلا يف حضوم وه امك و NCS لى الى MSE.



Edit MSE Configuration

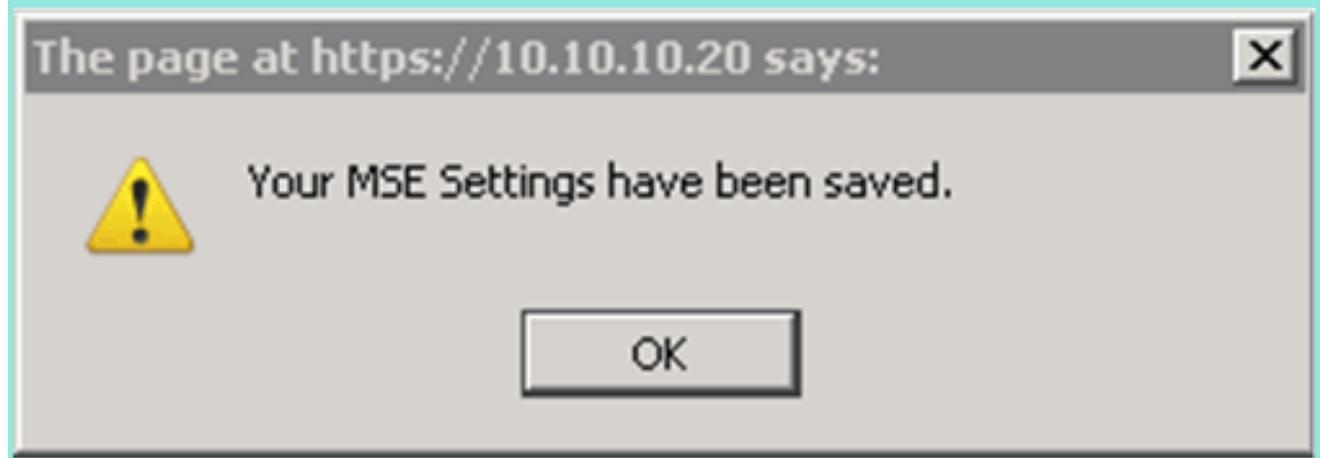
Licensing

Select Service

Tracking

Assign Maps

Name



اھنھا میوناھلیا Cisco Prime NCS

اھنھا تھم تاً نآل، اسالا MSE VA ھفاضا تھمت هنأ ئیلاتلا ۋاشاشلا ھطقل حضوت order to steps in MSE va:

1. يف حضوم وھ امك نیوکتھل طابترالا قوف رقناو، "میوناھلیا مداخلا" دومع عقوم ددھ. ھرھىھلە.

Device Name	Device Type	IP Address	Version	Reachability Status	Secondary Server	Mobility Service		
						Name	Admin Status	Service Status
mse1	Cisco Mobility Services Engine - Virtual Appliance	10.10.10.12	7.2.103.0	Reachable	N/A (Click here to configure)	Context Aware Service	Enabled	Up
						wIPS Service	Disabled	Down
						MSAP Service	Disabled	Down

2. ويرانیسلا اھنھا يف نیوکتھل عم ئیوناھلیا MSE VA ھفاضا:

- میوناھلیا زاھجلا [mse2]
- میوناھلیا IP ناونع [10.10.10.13]
- [يىچنلدا دادعىلا جمانرب نم وأ يىضارت فالا] - * ئیوناھلیا رورملا ھېملەك
- [يودى وأ يىئاقلىت] - * لشفلە زواجت عون
- يىطايتىجا عون*
- * لاطعألا ىلع بلغتھل لېوط راھتنە
- ظفح قوف رقنا.

رمألا مزلى اذا MSE، قئاھۋىلە عجرا وأ تامولۇملا زىمر قوف رقنا.

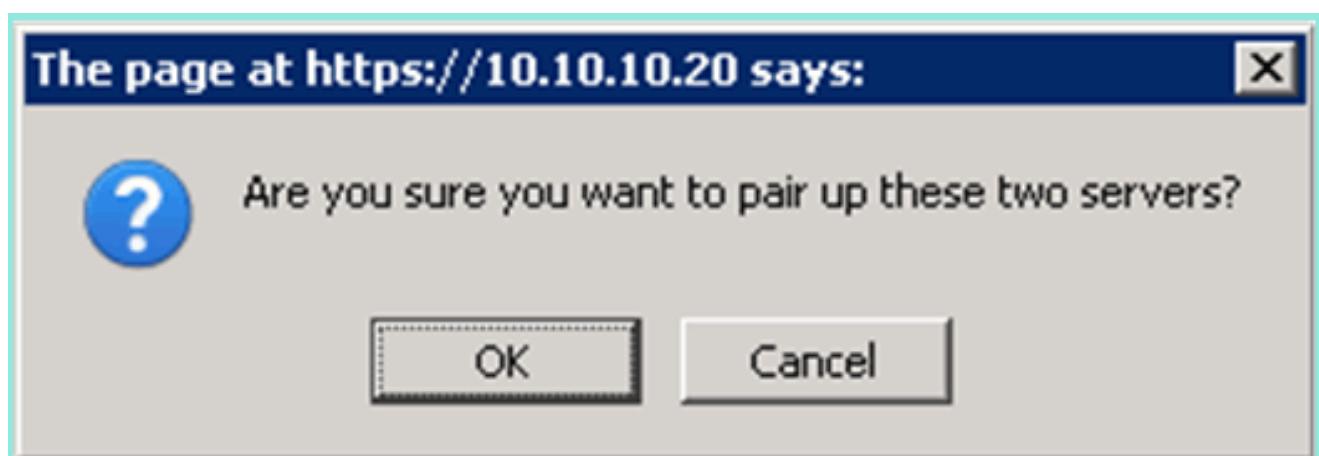
HA Configuration : mse1

Services > Mobility Services Engines > System > Services High Availability > **Configure High Availability Parameters**

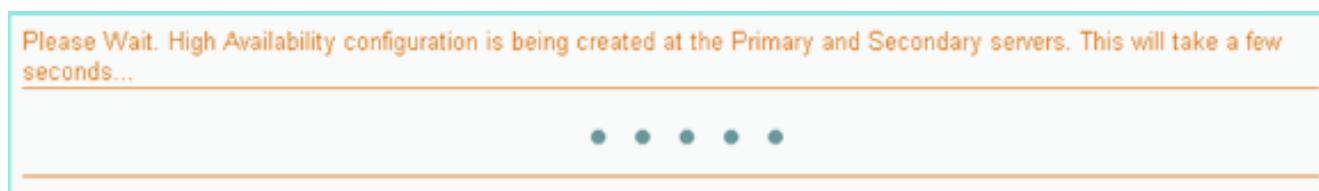
Configure High Availability Parameters

Primary Health Monitor IP	10.10.10.12
Secondary Device Name	<input type="text" value="mse2"/>
Secondary IP Address	<input type="text" value="10.10.10.13"/>
Secondary Password ⓘ	<input type="password" value="*****"/>
Failover Type ⓘ	<input type="button" value="Automatic"/>
Fallback Type ⓘ	<input type="button" value="Manual"/>
Long Failover Wait ⓘ	<input type="text" value="10"/> seconds

3. دروصل لایف حضوم وہ امک NCS نانٹا جوازی نا بلاطی ok لامدنع ۃقطق ط.



ةروصلالا يف حضوم وہ امک نیوکتل اعاشنال ناوث عضب NCS قرغتسی.



وە امك (L-MSE-7.0-K9) طيىشىت صىخىت بلطتت ئيوناڭلا MSE VA تىناك اذا NCS بلطت ئوروصىلا يې حضۇم.

The page at https://10.10.10.20 says:



Secondary MSE needs to be activated with a Virtual Appliance license. Add a license and save the config.

OK

4. يف حضوم وہ امک یوناٹلا طیشنتل صیخرتل افلم عقوم ددھو قفاوم قوف رقنا. ۃروصلالا

HA Configuration : mse1

Services > Mobility Services Engines > System > Services High Availability > Configure High Availability Parameters

Configuration

Primary Health Monitor IP 10.10.10.12

Secondary Device Name mse2

Secondary IP Address 10.10.10.13

Secondary Password ⓘ

Secondary Platform UDI AIR-MSE-VA-K9:V01:mse2_666f2046-5699-11e1-b1b1-0050568

Secondary Activation Status Not Activated

Activate Secondary with License Browse...

Failover Type ⓘ Automatic

Fallback Type ⓘ Manual

Long Failover Wait ⓘ 10 seconds

Save

Delete

5. يف حضوم وہ امک نیوکتل لامکال ظفح قوف رقنا، ۃیوناٹل MSE VA طیشنت درجمب ۃروصلالا

HA Configuration : mse1

Services > Mobility Services Engines > System > Services High Availability > Configure High Availability Parameters

Configuration

Primary Health Monitor IP	10.10.10.12
Secondary Device Name	mse2
Secondary IP Address	10.10.10.13
Secondary Password ⓘ	*****
Secondary Platform UDI	AIR-MSE-VA-K9:V01:mse2_666f2046-5699-11e1-b1b1-005
Secondary Activation Status	Activated
Delete Secondary Activation license ⓘ	<input type="checkbox"/>
Failover Type ⓘ	Automatic
Fallback Type ⓘ	Manual
Long Failover Wait ⓘ	10 seconds

Buttons:

- Save
- Delete
- Switchover

6. لقنتلا تامدخ كرحم > لقنتلا تامدخ > NCS ىلإ لقتنا.

يونا ثلا مدخل دومعلا يف يونا ثلا MSE رهظت ثيح ٽاشلا هذه NCS ضرعت

Mobility Services Engines							Select a command ...		
	Device Name	Device Type	IP Address	Version	Reachability Status	Secondary Server	Mobility Service		
							Name	Admin Status	Service Status
	mse1	Cisco Mobility Services Engine - Virtual Appliance	10.10.10.11	7.2.103.0	Reachable	mse2	Context Aware Service wIPS Service MSAP Service	Enabled Disabled Disabled	Up Down Down

7. روصلا يف حضوم وه امك ٽيلاعلا ٽحاتلا > تامدخل NCS ىلإ لقتنا، HA ٽلاح ضرعل.

Cisco Prime Network Control System

Mobility Services Engines
Services > High Availability

Secondary Server Name	Secondary HM IP Address	Version
mse2	10.10.10.13	7.2.10

Services ▾ Reports ▾ Administration ▾

Mobility Services

- Mobility Services Engines
- Synchronize Services
- Synchronization History
- High Availability** (highlighted)
- Context Aware Notifications
- MSAP

Identity Services

يُف حضوْم وَهِ امك وَ MSE جوز ظس اوْب ئيلاحل اثادحأْل اوْ لاحل ا ئيُور كنكمي، HA ئلاح يف روصلَا.

Cisco Prime Network Control System

Virtual Domain: ROOT-DOMAIN root Log Out

System HA Configuration : mse1
Services > Mobility Services Engines > System > Services High Availability > Current High Availability Status

Current High Availability Status	
Status	Active
Heartbeats	Up
Data Replication	Up
Mean Heartbeat Response Time	6 msec

Events Log

Event Description	Generated By	Timestamp	Remarks
Active	Primary	2012-Feb-14, 00:22:26 UTC	-
Heartbeats have been setup successfully	Primary	2012-Feb-14, 00:19:00 UTC	-
Primary and secondary server synchronization in progress	Primary	2012-Feb-14, 00:18:56 UTC	-
Configuration successfully created	Primary	2012-Feb-14, 00:18:56 UTC	-

Refresh Status

يُف حضوْم وَهِ امك لِماك لاب اطشن HA جوز نوكى ئىتح مدقق تلل ئيُويىملا ئبسنلَا ئراسلا روصلَا.

Current High Availability Status

Current High Availability Status	
Status	Primary and secondary server synchronization in progress (68% complete)
Heartbeats	Up
Data Replication	Setting up
Mean Heartbeat Response Time	108 msec

جاخ إلأ اذه حضوي. جمانرب عم ديدج رمأ لاخدا مت
يونا ثل او يس اس ألا:

<#root>

```
[root@mse1 ~]#
```

```
gethainfo
```

Health Monitor is running. Retrieving HA related information

```
-----  
Base high availability configuration for this server  
-----
```

Server role: Primary
Health Monitor IP Address: 10.10.10.12
Virtual IP Address: 10.10.10.11
Version: 7.2.103.0
UDI: AIR-MSE-VA-K9:V01:mse1
Number of paired peers: 1

```
-----  
Peer configuration#: 1  
-----
```

Health Monitor IP Address 10.10.10.13
Virtual IP Address: 10.10.10.11
Version: 7.2.103.0
UDI: AIR-MSE-VA-K9:V01:mse2_666f2046-5699-11e1-b1b1-0050568901d9
Failover type: Manual
Fallback type: Manual
Failover wait time (seconds): 10
Instance database name: mseos3s
Instance database port: 1624
Dataguard configuration name: dg_mse3
Primary database alias: mseop3s
Direct connect used: No
Heartbeat status: Up
Current state: PRIMARY_ACTIVE

```
[root@mse2 ~]#
```

```
gethainfo
```

Health Monitor is running. Retrieving HA related information

```
-----  
Base high availability configuration for this server  
-----
```

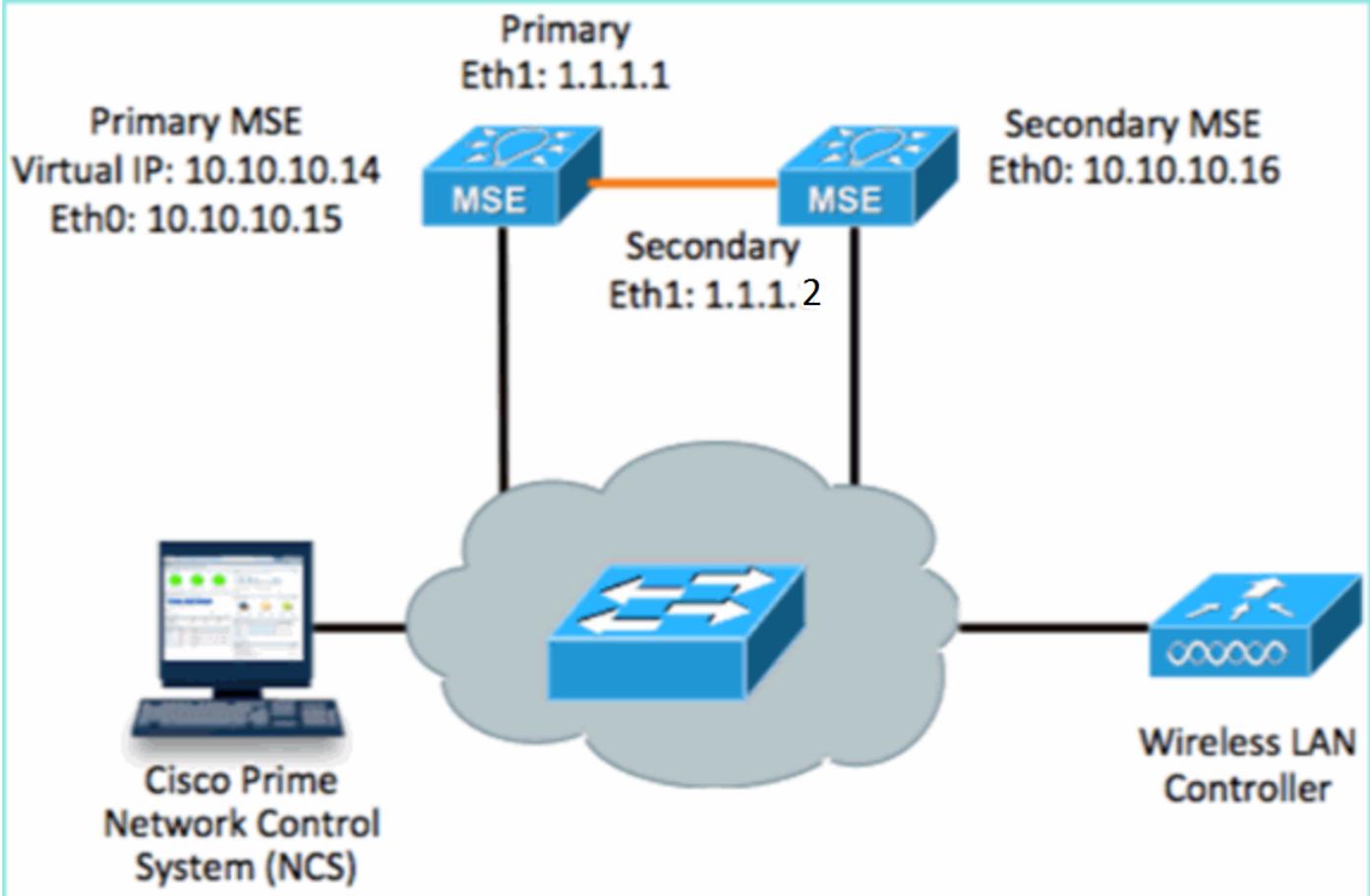
Server role: Secondary
Health Monitor IP Address: 10.10.10.13
Virtual IP Address: Not Applicable for a secondary
Version: 7.2.103.0
UDI: AIR-MSE-VA-K9:V01:mse2
Number of paired peers: 1

```
-----  
Peer configuration#: 1  
-----  
  
Health Monitor IP Address 10.10.10.12  
Virtual IP Address: 10.10.10.11  
Version: 7.2.103.0  
UDI: AIR-MSE-VA-K9:V01:mse1_d5972642-5696-11e1-bd0c-0050568901d6  
Failover type: Manual  
Fallback type: Manual  
Failover wait time (seconds): 10  
Instance database name: mseos3  
Instance database port: 1524  
Dataguard configuration name: dg_mse3  
Primary database alias: mseop3s  
Direct connect used: No  
Heartbeat status: Up  
Current state: SECONDARY_ACTIVE
```

رشابملا لاصتا ع م (HA) رفوتلا ةقئاف ٥٥ت

مادختسنا رشابملا لاصتا نويوكن لھسي نيح يف ،ةكبشلاب لصتملا MSE HA مدخلتسى ليلىقت ىلع اذه دعاسي نأ نكمي و .ةيوناثلاو ةيساسألا MSE مداوخ نيب رشابم لبک لاصتا تاقوأولثامملاتانايبلالا خسن و ةقئاف ٤عرسب ٤باجتسالا تاقوأ يف لوصولا ٤نمزا ىلع يوناث MSE رشُّفمب يلوا لا يداملا MSE لصتي ، ويرانيسلا اذه يف .لاطعألا فاشتكا رشابملا لاصتا ل ٥مادختسنا متى ETH1 نأ ظحال 5. لكشلما يف حضوم وه امك ، ٤ههجاولما ٤ههجاولكـل IP ناونع رفوت مزلي.

رشابم لاصتا ع م ٥مدخل : لكشلما



1. يس اس الـ MSE دادع.

دادع إلـلـ يـصـنـلـا جـمـانـرـبـلـا نـمـ نـيـوـكـتـلـا صـخـلـمـ:

```
-----BEGIN-----
Host name=mse3355-1
Role=1 [Primary]
Health Monitor Interface=eth0
Direct connect interface=eth1
Virtual IP Address=10.10.10.14
Virtual IP Netmask=255.255.255.0
Eth1 IP address=1.1.1.1
Eth1 network mask=255.0.0.0
Default Gateway =10.10.10.1
-----END-----
```

2. يـونـاـثـلـا MSE دادـعـ.

دادـعـ إـلـلـ يـصـنـلـا جـمـانـرـبـلـا نـمـ نـيـوـكـتـلـا صـخـلـمـ:

```
-----BEGIN-----
Host name=mse3355-2
Role=2 [Secondary]
Health Monitor Interface=eth0
```

```

Direct connect interface=eth1
Eth0 IP Address 10.10.10.16
Eth0 network mask=255.255.255.0
Default Gateway=10.10.10.1
Eth1 IP address=1.1.1.2,
Eth1 network mask=255.0.0.0
-----END-----

```

3. ةقباسلا ةلثملأا عجاف .ةروصلالا يف حضوم وه امك NCS ىلإ يسأسألا ةفاضاب مق. نيوكتلالا ليلد ىلإ عجرا وأ.

The screenshot shows the Cisco Prime Network Control System interface. The top navigation bar includes 'Cisco Prime Network Control System' with the Cisco logo, 'Virtual Domain: ROOT-DOMAIN', 'root', and 'Log Out'. Below the navigation is a search bar. The main content area is titled 'Mobility Services Engines' under 'Services > Mobility Services Engines'. A table lists a single device:

<input type="checkbox"/>	Device Name	Device Type	IP Address	Version	Reachability Status	Secondary Server
<input type="checkbox"/>	mse3355-1	Cisco 3355 Mobility Services Engine	10.10.10.14	7.2.103.0	Reachable	N/A (Click here to configure)

4. يوناثللا مداخللا نيوكت > NCS ىلإ لقتنا ،يوناثللا MSE دادعإ لجأ نم.
- يوناثللا زاهجللا مسا لخدأ [MSE3355-2]
 - يوناثللا IP ناونع [10.10.10.16]
 - .ةروصلالا يف حضوم وه امك ظفح قوف رقن او ةيقبتملا تاملعملاء لمكأ.

Cisco Prime Network Control System

Virtual Domain: ROOT-

Home Monitor ▾ Configure ▾ Services ▾ Reports ▾ Administration ▾

System

- General Properties
- Active Sessions
- Trap Destinations
- Advanced Parameters
- Logs
- Services High Availability
 - HA Configuration
 - HA Status
- Accounts
 - Users
 - Groups
- Status
 - Server Events
 - Audit Logs

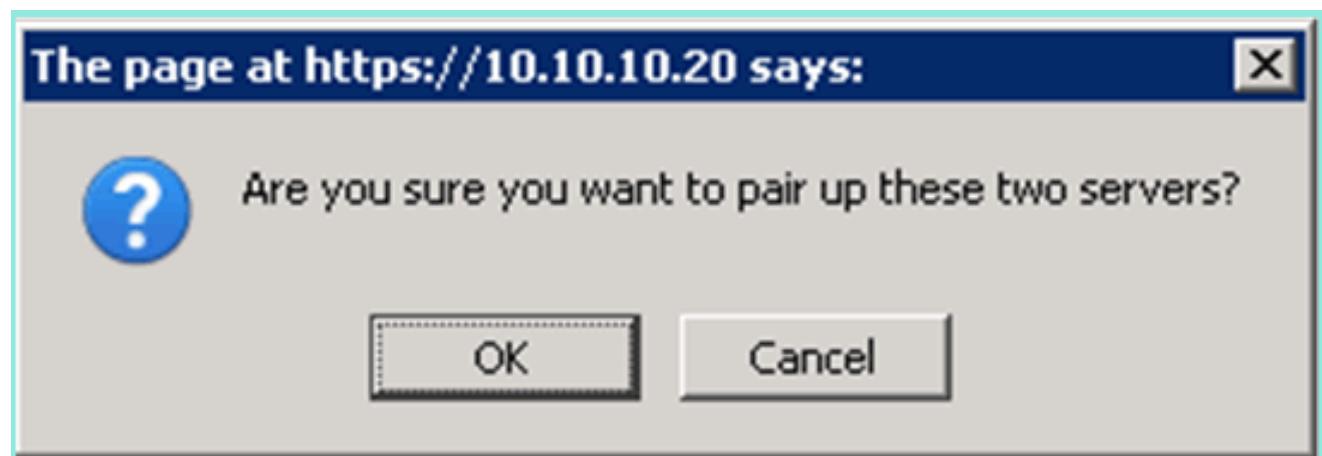
HA Configuration : mse3355-1
Services > Mobility Services Engines > System > Services High Availability

Configure High Availability Parameters

Primary Health Monitor IP	10.10.10.15
Secondary Device Name	mse3355-2
Secondary IP Address	10.10.10.16
Secondary Password	*****
Failover Type	Manual
Fallback Type	Manual
Long Failover Wait	10 seconds

[Save]

5. روصلا يف حضوم وه امك MSEs نانثإلا نم جوزلا تدكأ ٰقطق ط.



6. روصلا يف حضوم وه امك يوناثلا مداخلا نيوكت ٰفاض إل ٰطحل NCS قرغتسى.



يـف حـضـومـ وهـ اـمـكـ ظـفحـ قـوفـ رـقـنـاـ HAـ تـامـلـعـمـ يـلـعـ تـارـيـيـغـتـ يـأـ عـارـجـابـ مـقـ ،ـلـامـتـكـالـاـ دـنـعـ.

ة.روصلـا

HA Configuration : mse3355-1
Services > Mobility Services Engines > System > Services High Availability > Configure High Availability Parameters

Configuration

Primary Health Monitor IP	10.10.10.15
Secondary Device Name	mse3355-2
Secondary IP Address	10.10.10.16
Secondary Password ⓘ	*****
Secondary Platform UDI	AIR-MSE-3355-K9:V01:KQ
Failover Type ⓘ	Manual
Fallback Type ⓘ	Manual
Long Failover Wait ⓘ	10 seconds

يـف حـضـوم وـه اـمـك دـيـدـجـلـا جـوـزـلـ يـلـعـفـلـا تـقـوـلـا يـف مـدـقـتـلـلـ HA ةـلـاحـضـرـا
ةـروـصـلـا.

CISCO Network Control System

Virtual Domain: ROOT-DOMAIN root Log Out

System HA Configuration : mse3355-1 Services > Mobility Services Engines > System > Services High Availability > Current High Availability Status

Current High Availability Status

Status	Primary and secondary server synchronization in progress (66% complete)
Heartbeats	Up
Data Replication	Setting up
Mean Heartbeat Response Time	8 millisec

Events Log

Event Description	Generated By	Timestamp	Remarks
Configuration updated	Primary	2012-Feb-15, 20:10:56 UTC	Failover mode set to AUTOMATIC.
Heartbeats have been setup successfully	Primary	2012-Feb-15, 20:10:11 UTC	-
Primary and secondary server synchronization in progress	Primary	2012-Feb-15, 20:10:09 UTC	-
Configuration successfully created	Primary	2012-Feb-15, 20:10:09 UTC	-

نـم دـكـأـتـو، NCS > Services > Mobility Services > Mobility Services Engines، ةـروـصـلـا يـف حـضـوم وـه اـمـك NCS ةـفـاضـا
MSE (Direct Connect) HA ئـلـيـ NCS.

Mobility Services Engines						
Services > Mobility Services Engines						
	Device Name	Device Type	IP Address	Version	Reachability Status	Secondary Server
<input type="checkbox"/>	mse3355-1	Cisco 3355 Mobility Services Engine	10.10.10.14	7.2.103.0	Reachable	mse3355-2

9. مادختساپ ديكأتلا ظحالم اضيأ نكمي ،مكحتلا ودحو نمو.

يوناثل او يساسألا جتانلا انه:

<#root>

```
[root@mse3355-1 ~]#
```

```
gethainfo
```

Health Monitor is running. Retrieving HA related information

Base high availability configuration for this server

Server role: Primary
Health Monitor IP Address: 10.10.10.15
Virtual IP Address: 10.10.10.14
Version: 7.2.103.0
UDI: AIR-MSE-3355-K9:V01:KQ37xx
Number of paired peers: 1

Peer configuration#: 1

Health Monitor IP Address 10.10.10.16
Virtual IP Address: 10.10.10.14
Version: 7.2.103.0
UDI: AIR-MSE-3355-K9:V01:KQ45xx
Failover type: Automatic
Fallback type: Manual
Failover wait time (seconds): 10
Instance database name: mseos3s
Instance database port: 1624
Dataguard configuration name: dg_mse3
Primary database alias: mseop3s
Direct connect used: Yes
Heartbeat status: Up

```
Current state: PRIMARY_ACTIVE

[root@mse3355-2 ~]#
gethainfo

Health Monitor is running. Retrieving HA related information

-----
Base high availability configuration for this server
-----

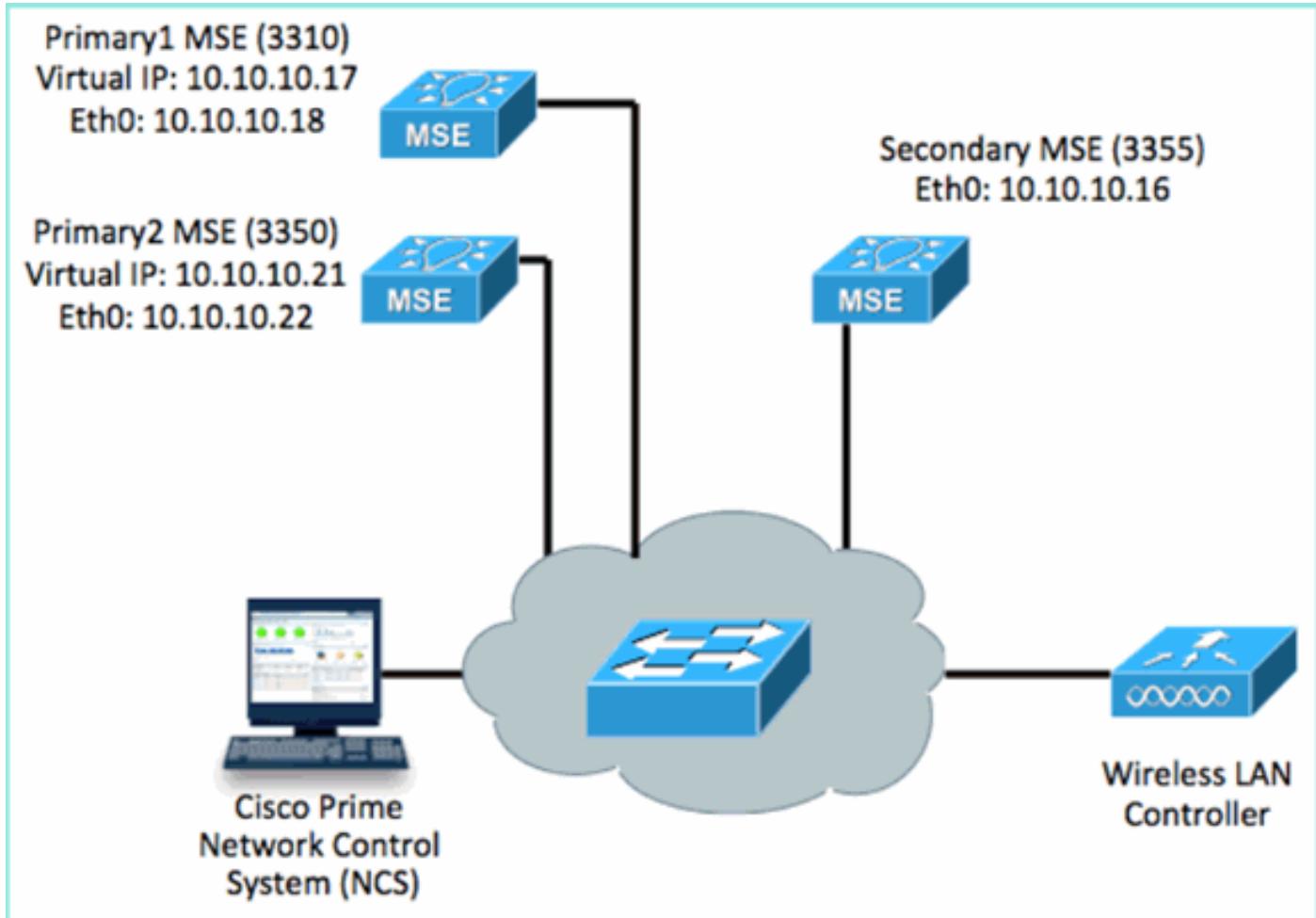
Server role: Secondary
Health Monitor IP Address: 10.10.10.16
Virtual IP Address: Not Applicable for a secondary
Version: 7.2.103.0
UDI: AIR-MSE-3355-K9:V01:KQ45xx
Number of paired peers: 1

-----
Peer configuration#: 1
-----

Health Monitor IP Address 10.10.10.15
Virtual IP Address: 10.10.10.14
Version: 7.2.103.0
UDI: AIR-MSE-3355-K9:V01:KQ37xx
Failover type: Automatic
Fallback type: Manual
Failover wait time (seconds): 10
Instance database name: mseos3
Instance database port: 1524
Dataguard configuration name: dg_mse3
Primary database alias: mseop3s
Direct connect used: Yes
Heartbeat status: Up
Current state: SECONDARY_ACTIVE
```

ي داملا زاهجلل HA ن يوكت وي رانيس

ل زوج حم اذه 2:1 و ه HA ن يوكت يف يصقـاـلا دحـلا نـإـف ، جـاـودـزـالـا ةـفـوـفـصـمـ مـىـلـاـ اـدـانـتـسـاـ لـاصـتـالـاـ قـبـطـنـيـ اـلـ MSE-3310 و MSE-3350. معـديـ نـأـ نـكـمـيـ ، يـونـاـثـلـاـ عـضـولـاـ يـفـ يـذـلـاوـ، وـيـرـانـيـسـلـاـ اـذـهـ يـفـ رـشـابـمـلـاـ.



1. ویرانیس حیضوتل هذه MSE ۋەم دح او لك نیوكتب مۇق.

MSE-3310 (Primary1)
 Server role: Primary
 Health Monitor IP Address (Eth0): 10.10.10.17
 Virtual IP Address: 10.10.10.18
 Eth1 – Not Applicable

MSE-3350 (Primary2)
 Server role: Primary
 Health Monitor IP Address: 10.10.10.22
 Virtual IP Address: 10.10.10.21
 Eth1 – Not Applicable

MSE-3355 (Secondary)
 Server role: Secondary
 Health Monitor IP Address: 10.10.10.16
 Virtual IP Address: Not Applicable for a secondary

2. وە امك تاکب شىلى Primary1 و Primary2 فۇضىا، MSE نیوكت دىب، ۋە مۆرسىلاي فەھۇم.

Cisco Prime Network Control System

Virtual Domain: ROOT-DOMAIN

Home Monitor ▾ Configure ▾ Services ▾ Reports ▾ Administration ▾

Mobility Services Engines
Services > Mobility Services Engines

<input type="checkbox"/>	Device Name	Device Type	IP Address	Version	Reachability Status	Secondary Server
<input type="checkbox"/>	mse3350	Cisco 3350 Mobility Services Engine	10.10.10.21	7.2.103.0	Reachable	N/A (Click here to configure)
<input type="checkbox"/>	mse3310	Cisco 3310 Mobility Services Engine	10.10.10.18	7.2.103.0	Reachable	N/A (Click here to configure)
<input type="checkbox"/>						

3. MSE نم يأب أدبا. (ةقباسلا ةلثملأا يف حضوم وه امك) يوناثلا مداخلا نيوكتل رقنا. روصلا يف حضوم وه امك ئيساسألا.

Reachability Status	Secondary Server
Reachable	N/A (Click here to configure)
Reachable	N/A (Click here to configure) 

4. يوناثلا MSE تاددحم لخدا:

a. ،لاثملأا ليبس ىلع :يوناثلا زاهجلا مسا [MSE-3355-2]

b. - یوناٹل IP ناونع [10.10.10.16]

c. يُقبّت ملأ تاملاً عملاً لِمَكْأَةٍ.

d. روصلا يف حضوم وه امك ظفح قوف رقنا.

HA Configuration : mse3350

Services > Mobility Services Engines > System > Services High Availability > **Configure High Availability Parameters**

Configuration

Primary Health Monitor IP	10.10.10.22
Secondary Device Name	mse3355-2
Secondary IP Address	10.10.10.16
Secondary Password ⓘ	*****
Secondary Platform UDI	AIR-MSE-3355-K9:V01:KQ4
Failover Type ⓘ	Manual
Fallback Type ⓘ	Manual
Long Failover Wait ⓘ	10 seconds

Action Buttons:

Save Delete Switchover

5. ةروصلما يف حضوم وه امك لـوـأـلـاـ يـونـاثـلـاـ لـاخـدـالـاـ نـيـوـكـتـ مـتـيـ يـتـحـ ةـزـيـجـ وـةـظـحلـ رـطـتنـاـ.

Please Wait. High Availability configuration is being created at the Primary and Secondary servers. This will take a few seconds...

• • • •

روصيلـا يـف حـضـوم وـه اـمـك يـسـاسـاً MSE لـوـأـلـيـونـاـثـلـا مـاـدـخـلـا ةـفـاضـاـ نـم دـكـأـتـ.

	Device Name	Device Type	IP Address	Version	Reachability Status	Secondary Server
<input type="checkbox"/>	mse3350	Cisco 3350 Mobility Services Engine	10.10.10.21	7.2.103.0	Reachable	mse3355-2
<input type="checkbox"/>						

7. دروصلایف حضوم وه امک ینا ثلای ساسألا MSE ل 6 یلإ 3 نم تاو طخلأ ررك.

	Device Name	Device Type	IP Address	Version	Reachability Status	Secondary Server
<input type="checkbox"/>
<input type="checkbox"/>	mse3350	Cisco 3350 Mobility Services Engine	10.10.10.21	7.2.103.0	Reachable	mse3355-2
<input type="checkbox"/>
<input type="checkbox"/>	mse3310	Cisco 3310 Mobility Services Engine	10.10.10.18	7.2.103.0	Reachable	N/A (Click here to configure)

8. روصلا يف حضوم وه امك يناثلا يساسلأا HA تاملمع مادختساب عاهنإ.

HA Configuration : mse3310

Services > Mobility Services Engines > System > Services High Availability > Configure High Availability Parameters

Configure High Availability Parameters

Primary Health Monitor IP	10.10.10.17
Secondary Device Name	<input type="text" value="mse3355-2"/>
Secondary IP Address	<input type="text" value="10.10.10.16"/>
Secondary Password ⓘ	<input type="password" value="*****"/>
Failover Type ⓘ	<input type="button" value="Manual"/>
Fallback Type ⓘ	<input type="button" value="Manual"/>
Long Failover Wait ⓘ	<input type="text" value="10"/> seconds
<input type="button" value="Save"/>	

9. روصلا يف حضوم وه امك تادادعإلا ظفحأ.

HA Configuration : mse3310

Services > Mobility Services Engines > System > Services High Availability > Configure High Availability Parameters

Configuration

Primary Health Monitor IP	10.10.10.17
Secondary Device Name	mse3355-2
Secondary IP Address	10.10.10.16
Secondary Password ⓘ	*****
Secondary Platform UDI	AIR-MSE-3355-K9:V01:KQ- [REDACTED]
Failover Type ⓘ	Manual
Fallback Type ⓘ	Manual
Long Failover Wait ⓘ	10 seconds

10. ةروصلالا يف حضوم وہ امک ئىساسلىا MSE تامدخ نم لك مدقق ئەلەخ نم قىقحت.

The screenshot shows the Cisco Prime Network Control System interface. The top navigation bar includes Home, Monitor, Configure, Services, Reports, and Administration. The left sidebar has a 'System' dropdown menu expanded, showing General Properties, Active Sessions, Trap Destinations, Advanced Parameters, Logs, Services High Availability (selected), HA Configuration, and HA Status. The main content area displays 'HA Configuration : mse3310' and 'Services > Mobility Services Engines > System > Services High Availability > Current High Availability Status'. It shows the following status information:

Status	Primary and secondary server synchronization in progress (60% complete)
Heartbeats	Up
Data Replication	Setting up
Mean Heartbeat Response Time	8 msec

Below this is an 'Events Log' table:

Event Description	Generated By	Timestamp
Heartbeats have been setup successfully	Primary	2012-Feb-17, 20:54:36 UTC
Primary and secondary server synchronization in progress	Primary	2012-Feb-17, 20:54:32 UTC
Configuration successfully created	Primary	2012-Feb-17, 20:54:32 UTC

At the bottom of the events log is a 'Refresh Status' button.

11. حضوم وہ امک يوناڭلا MSE مادختساب Primary2 و ئىساسلىا Primary1 نم دكأت. ةروصلالا يف.

	Device Name	Device Type	IP Address	Version	Reachability Status	Secondary Server
<input type="checkbox"/>
<input type="checkbox"/>	mse3350	Cisco 3350 Mobility Services Engine	10.10.10.21	7.2.103.0	Reachable	mse3355-2
<input type="checkbox"/>
<input type="checkbox"/>	mse3310	Cisco 3310 Mobility Services Engine	10.10.10.10	7.2.103.0	Reachable	mse3355-2

12. روصلا يف حضوم وہ امک لاع رفوت رتخا، لقنتلا تامدخ > تامدخل NCS یل اقتنا.

The screenshot shows the Cisco Prime Network Control System interface. The top navigation bar includes links for Home, Monitor, Configure, Services, Reports, and Adminis. The Services dropdown is open, showing options like Mobility Services, Synchronize Services, Synchronization History, High Availability (which is underlined and has a cursor icon over it), Context Awareness, Notifications, MSAP, and Identity Services.

روصلانیا میں جو MSE-3355 اور MSE-3310 میں 2:1 زارٹلیں یوناٹ لدیں گے اس کا ظھرال میں امک حضوم وہ روصلا یف.

The screenshot shows the Cisco Prime Network Control System interface. The top navigation bar includes Home, Monitor, Configure, Services, Reports, Administration, and a user dropdown for root. The main content area is titled "Mobility Services Engines" under "Services > High Availability". A table lists the HA setup for two servers:

Secondary Server Name	Secondary HM IP Address	Secondary Device Type	Version	Associated Primary Mobility Service Engines		
				Device Name	Device Type	Heartbeats
Appliance						
mse3355-2	10.10.10.16	Cisco 3355 Mobility Services Engine	7.2.103.0	mse3310 mse3350	Cisco 3310 Mobility Services Engine Cisco 3350 Mobility Services Engine	Up Up

لـا امـدـنـع ةـثـالـث لـك نـم مـكـحـتـلـل ةـيـفـرـط ةـدـحـوـلـا نـم جـاتـنـا ةـنـيـع اـنـه gethainfo تـلـمـعـتـسـا رـمـأـ:

```
<#root>
```

```
[root@mse3355-2 ~]#
```

```
gethainfo
```

```
Health Monitor is running. Retrieving HA related information
```

```
-----  
Base high availability configuration for this server  
-----
```

```
Server role: Secondary  
Health Monitor IP Address: 10.10.10.16  
Virtual IP Address: Not Applicable for a secondary  
Version: 7.2.103.0  
UDI: AIR-MSE-3355-K9:V01:KQ45xx  
Number of paired peers: 2
```

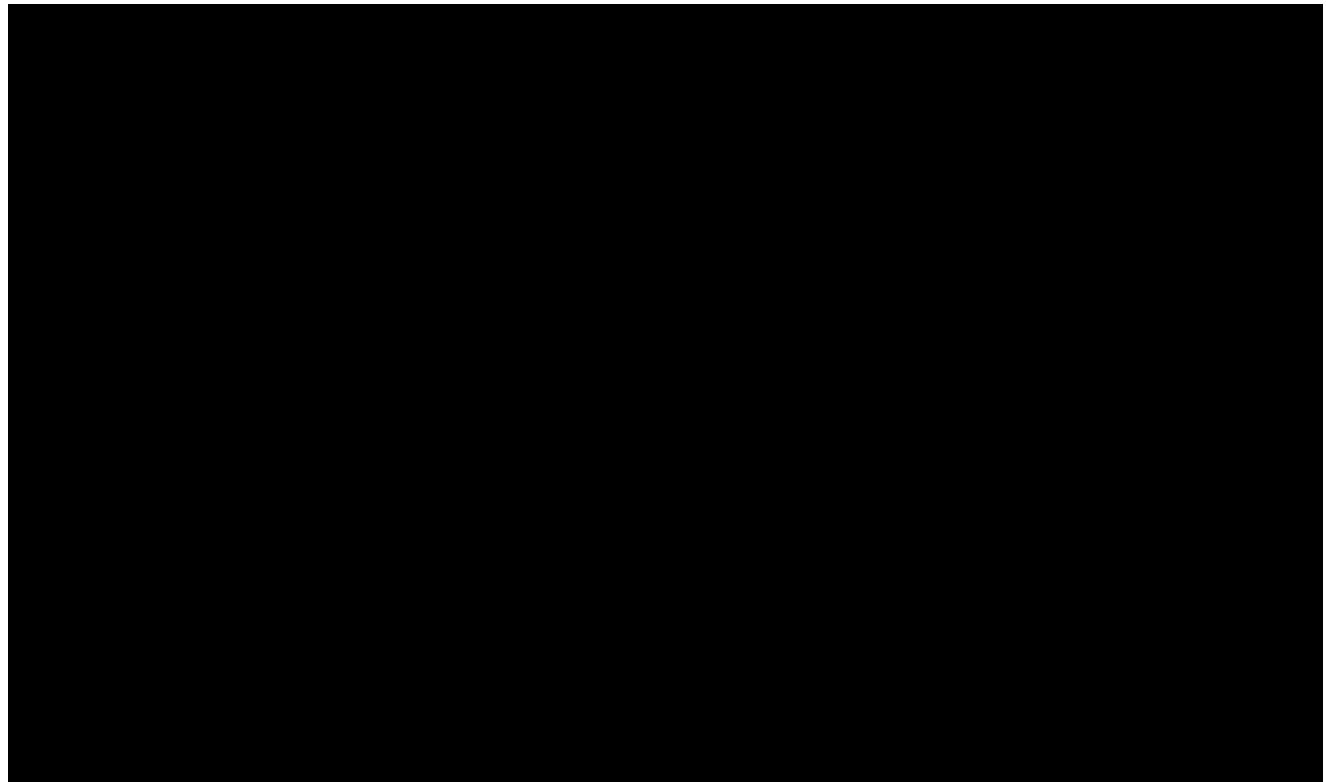
```
-----  
Peer configuration#: 1  
-----
```

```
Health Monitor IP Address 10.10.10.22  
Virtual IP Address: 10.10.10.21  
Version: 7.2.103.0  
UDI: AIR-MSE-3350-K9:V01:MXQ839xx  
Failover type: Manual  
Fallback type: Manual  
Failover wait time (seconds): 10  
Instance database name: mseos3  
Instance database port: 1524  
Dataguard configuration name: dg_mse3  
Primary database alias: mseop3s  
Direct connect used: No  
Heartbeat status: Up  
Current state: SECONDARY_ACTIVE
```

Peer configuration#: 2

Health Monitor IP Address 10.10.10.17
Virtual IP Address: 10.10.10.18
Version: 7.2.103.0
UDI: AIR-MSE-3310-K9:V01:FTX140xx
Failover type: Manual
Fallback type: Manual
Failover wait time (seconds): 10
Instance database name: mseos4
Instance database port: 1525
Dataguard configuration name: dg_mse4
Primary database alias: mseop4s
Direct connect used: No
Heartbeat status: Up
Current state: SECONDARY_ACTIVE

نەم لەکل لەماک طاشنەك ۋەلەخى رەھىي NCS يە HA لە ئەنلا قىيقدەتلى MSE-3310 و MSE-3350 دەرسىلە يە حەضۇم وە امك.



Cisco Prime Network Control System

Home Monitor ▾ Configure ▾ Services ▾ Reports ▾ Administration ▾

System

- General Properties
- Active Sessions
- Trap Destinations
- Advanced Parameters
- Logs
- Services High Availability
 - HA Configuration
 - HA Status
- Accounts
 - Users
 - Groups
- Status
 - Server Events
 - Audit Logs

HA Configuration : mse3350

Services > Mobility Services Engines > System > Services High Availability > Current High Availability Status

Current High Availability Status

Status	Active
Heartbeats	Up
Data Replication	Up
Mean Heartbeat Response Time	4 millisec

Events Log

Event Description	Generated By
Active	Primary
Heartbeats have been setup successfully	Primary
Primary and secondary server synchronization in progress	Primary
Configuration successfully created	Primary

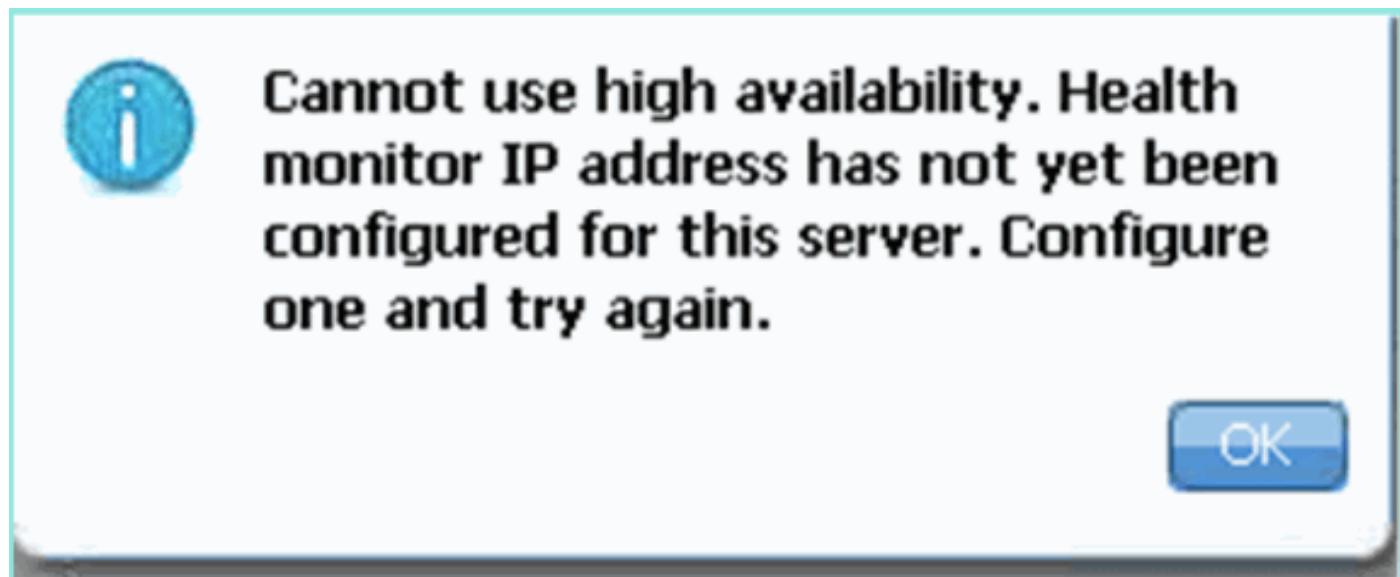
ةحصـلـا نـم قـقـحتـلـا

نیوکتل اذہ ڈھس نم ققحتل ل عارج! آیلاح دجوی ال

MSE HA لح ملا اش لك ألا ساس ئي في

اوهالص او نیوکتل اهتمام داشت سال اهتماد ختنسی کنکمی تامولع مسقله اذه رفوي.

ةروصلـا يـف حـضـوـم وـه اـمـك هـجـوـم ةـيـفـرـكـنـكـمـي ،ـيـونـاـثـلـا MSE رـشـفـاـصـا دـنـعـ.

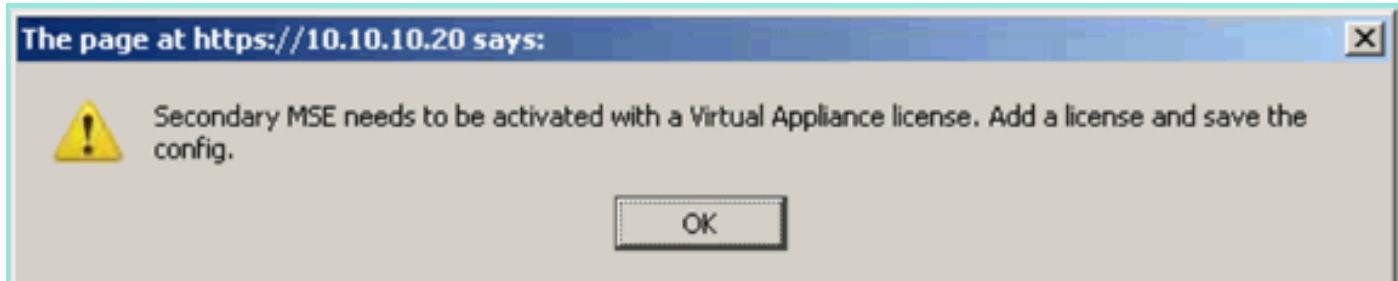


يـصـنـلـا دـادـعـإـا جـمـانـرـبـ عـانـثـأـ ةـلـكـشـمـ كـانـهـ نـاكـ ،ـنـكـمـمـلـاـ نـمـ

- ئېسانملا ۋەكپىشلا تادادعى نم قىقحتلى لىغىشتىپ مۇق getServerInfo رمأا.

- /init.d/msed start. لیغشت ب مق. دعب أدبت مل تامدخلان اضیاً لمحملان و.
 - رمألا مزل اذا خأةرم يصنلا دادعالا جمانرب لالخ نم ليغشتلاب مق. (mse/setup/setup.sh) يف ظفحلاو.

دنع NCS بلاطتف ،الاو. (L-MSE-7.0-K9) طيشنتلارا صيخرت MSE بـ صاخلا VA بلطتت امك امك هتفاض او VA بـ صاخلا طيشنتلارا صيخرت ئىلע لوصحلا .ةيوناثلارا MSE VA ةفاضا .ةروصلارا يف حضوم ووه.



فاقیاب مق، کلذل .لماک لکشب تامدخل افاقیا نم دکأت، MSE یلع HA رود لیدبٽ ۃلاح یف یرخأ ۃرم یصنلا دادع إالا جمانرب لیغشتٽب مق مث /init.d/msed stop، /رمألا مادختسٽاب تامدخل (/mse/setup/setup.sh).

```
Applying High Availability configuration

*** User has switched roles for this MSE. MSE must be stopped before switching r
oles.
*** Please stop MSE and then re-run setup.sh.

ERROR: One or more of the requested configurations was not applied.

Role=2, Health Monitor Interface=eth0, Direct connect interface=none
Success
[root@mse2 ~]#
```

ةديفم تامولعم اذه رفوی. MSE ىلع HA تامولعم ىلع لوصحلل getchaininfo رمألا ليغشت بموق اهتبقارم وأ احصالص او اهريغت و HA ٖقلح عاطخاً فاشكتسأيف

```
<#root>

[root@mse3355-2 ~]# gethainfo

Health Monitor is running. Retrieving HA related information

-----
Base high availability configuration for this server
-----

Server role: Secondary
Health Monitor IP Address: 10.10.10.16
Virtual IP Address: Not Applicable for a secondary
Version: 7.2.103.0
UDI: AIR-MSE-3355-K9:V01:KQ45xx
Number of paired peers: 2
```

Peer configuration#: 1

Health Monitor IP Address 10.10.10.22
Virtual IP Address: 10.10.10.21
Version: 7.2.103.0
UDI: AIR-MSE-3350-K9:V01:MXQ839xx
Failover type: Manual
Fallback type: Manual
Failover wait time (seconds): 10
Instance database name: mseos3
Instance database port: 1524
Dataguard configuration name: dg_mse3
Primary database alias: mseop3s
Direct connect used: No
Heartbeat status: Up
Current state: SECONDARY_ACTIVE

Peer configuration#: 2

Health Monitor IP Address 10.10.10.17
Virtual IP Address: 10.10.10.18
Version: 7.2.103.0
UDI: AIR-MSE-3310-K9:V01:FTX140xx
Failover type: Manual
Fallback type: Manual
Failover wait time (seconds): 10
Instance database name: mseos4
Instance database port: 1525
Dataguard configuration name: dg_mse4
Primary database alias: mseop4s
Direct connect used: No
Heartbeat status: Up
Current state: SECONDARY_ACTIVE

ةيُفْرَنِي ناكما ىلْعَلْوَص حللَة عئارَه راداً يه NCS HA ضرعَه قيرطَه نافَه ، كلذِي لِفاضِي إلابَه روصلا يف حضومَه وَه امكَ لجأْ نم HA دادعِيَل.

Cisco Prime Network Control System

Virtual Domain: ROOT-DOMAIN root Log Out

Home Monitor Configure Services Reports Administration

System

HA Configuration : mse3310
Services > Mobility Services Engines > System > Services High Availability > Current High Availability Status

Current High Availability Status

Status	Primary and secondary server synchronization in progress (60% complete)
Heartbeats	Up
Data Replication	Setting up
Mean Heartbeat Response Time	8 msec

Events Log

Event Description	Generated By	Timestamp
Heartbeats have been setup successfully	Primary	2012-Feb-17, 20:54:36 UTC
Primary and secondary server synchronization in progress	Primary	2012-Feb-17, 20:54:32 UTC
Configuration successfully created	Primary	2012-Feb-17, 20:54:32 UTC

Refresh Status

لاطعألا ةهجاوم/لشفل زواجت ويرانيس

مكحتلا لجأ نم ، طقف لاطعألا ةهجاوم ىلع ئوديلـا ئـرقـلـا لـاطـعـأـلا ئـهـجـاـومـ قـلـاحـ يـفـ فـقـوـمـ لـضـفـأـ لـكـشـبـ.

مالتسالـل زـهـاجـ يـونـاثـلـاوـ قـوـفـ يـسـاسـأـلا

:روصلـا يـفـ حـضـوـمـ وـهـ اـمـكـ ئـلـعـ ئـهـجـاـومـ نـيـوـكـتـ درـجـمـ

Current High Availability Status

Status	Active
Heartbeats	Up
Data Replication	Up
Mean Heartbeat Response Time	12 millisec

Events Log

Event Description	Generated By	Timestamp
Active	Primary	2015-Mar-08, 12:50:17 CET
Heartbeats have been setup successfully	Primary	2015-Mar-08, 12:39:17 CET
Primary and secondary server synchronization in progress	Primary	2015-Mar-08, 12:39:13 CET
Configuration successfully created	Primary	2015-Mar-08, 12:39:11 CET

يـسـاسـأـلا مـسـاـخـلـا بـ صـاخـلـا MSEـ وـ gـeـtـhـaـiـnـfـoـ يـلـيـ اـمـيـفـ:

```
[root@NicoMSE ~]# getserverinfo
Health Monitor is running
```

Retrieving MSE Services status.
MSE services are up, getting the status

Server Config

Product name: Cisco Mobility Service Engine
Version: 8.0.110.0
Health Monitor Ip Address: 10.48.39.238
High Availability Role: 1
Hw Version: V01
Hw Product Identifier: AIR-MSE-VA-K9
Hw Serial Number: NicoMSE_b950a7c0-b68c-11e4-99d9-005056993b63
HTTPS: null
Legacy Port: 8001
Log Modules: -1
Log Level: INFO
Days to keep events: 2
Session timeout in mins: 30
DB backup in days: 2

Services

Service Name: Context Aware Service
Service Version: 8.0.1.79
Admin Status: Disabled
Operation Status: Down

Service Name: WIPS
Service Version: 3.0.8155.0
Admin Status: Enabled
Operation Status: Up

Service Name: Mobile Concierge Service
Service Version: 5.0.1.23
Admin Status: Disabled
Operation Status: Down

Service Name: CMX Analytics
Service Version: 3.0.1.68
Admin Status: Disabled
Operation Status: Down

Service Name: CMX Connect & Engage
Service Version: 1.0.0.29
Admin Status: Disabled
Operation Status: Down

Service Name: HTTP Proxy Service
Service Version: 1.0.0.1
Admin Status: Disabled
Operation Status: Down

Server Monitor

```
Server start time: Sun Mar 08 12:40:32 CET 2015
Server current time: Sun Mar 08 14:04:30 CET 2015
Server timezone: Europe/Brussels
Server timezone offset (mins): 60
Restarts: 1
Used Memory (MB): 197
Allocated Memory (MB): 989
Max Memory (MB): 989
DB disk size (MB): 17191
```

```
-----
Active Sessions
-----
```

```
Session ID: 5672
Session User ID: 1
Session IP Address: 10.48.39.238
Session start time: Sun Mar 08 12:44:54 CET 2015
Session last access time: Sun Mar 08 14:03:46 CET 2015
```

```
-----
Default Trap Destinations
-----
```

```
Trap Destination - 1
-----
IP Address: 10.48.39.225
Last Updated: Sun Mar 08 12:34:12 CET 2015
```

```
[root@NicoMSE ~]# gethainfo
```

```
Health Monitor is running. Retrieving HA related information
```

```
-----
Base high availability configuration for this server
-----
```

```
Server role: Primary
Health Monitor IP Address: 10.48.39.238
Virtual IP Address: 10.48.39.224
Version: 8.0.110.0
UDI: AIR-MSE-VA-K9:V01:NicoMSE_b950a7c0-b68c-11e4-99d9-005056993b63
Number of paired peers: 1
```

```
-----
Peer configuration#: 1
-----
```

```
Health Monitor IP Address 10.48.39.240
Virtual IP Address: 10.48.39.224
Version: 8.0.110.0
UDI: AIR-MSE-VA-K9:V01:NicoMSE2_1c6b1940-b6a5-11e4-b017-005056993b66
Failover type: Manual
Fallback type: Manual
Failover wait time (seconds): 10
Instance database name: mseos3s
Instance database port: 1624
Dataguard configuration name: dg_mse3
Primary database alias: mseop3s
Direct connect used: No
Heartbeat status: Up
```

Current state: PRIMARY_ACTIVE

يوناچل لاجمل ئېسنلاب كېھو:

```
[root@NicoMSE2 ~]# getserverinfo
Health Monitor is running
Retrieving MSE Services status.
MSE services are up and in DORMANT mode, getting the status
```

```
-----
Server Config
-----
```

```
Product name: Cisco Mobility Service Engine
Version: 8.0.110.0
Health Monitor Ip Address: 10.48.39.240
High Availability Role: 2
Hw Version: V01
Hw Product Identifier: AIR-MSE-VA-K9
Hw Serial Number: NicoMSE2_1c6b1940-b6a5-11e4-b017-005056993b66
HTTPS: null
Legacy Port: 8001
Log Modules: -1
Log Level: INFO
Days to keep events: 2
Session timeout in mins: 30
DB backup in days: 2
```

```
-----
Services
-----
```

```
Service Name: Context Aware Service
Service Version: 8.0.1.79
Admin Status: Disabled
Operation Status: Down
```

```
Service Name: WIPS
Service Version: 3.0.8155.0
Admin Status: Enabled
Operation Status: Up
```

```
Service Name: Mobile Concierge Service
Service Version: 5.0.1.23
Admin Status: Disabled
Operation Status: Down
```

```
Service Name: CMX Analytics
Service Version: 3.0.1.68
Admin Status: Disabled
Operation Status: Down
```

```
Service Name: CMX Connect & Engage
Service Version: 1.0.0.29
Admin Status: Disabled
Operation Status: Down
```

```
Service Name: HTTP Proxy Service
Service Version: 1.0.0.1
Admin Status: Disabled
Operation Status: Down
```

```
-----
Server Monitor
-----
```

```
Server start time: Sun Mar 08 12:50:04 CET 2015
Server current time: Sun Mar 08 14:04:32 CET 2015
Server timezone: Europe/Brussels
Server timezone offset (mins): 60
Restarts: null
Used Memory (MB): 188
Allocated Memory (MB): 989
Max Memory (MB): 989
DB disk size (MB): 17191
[root@NicoMSE2 ~]# gethainfo
```

```
Health Monitor is running. Retrieving HA related information
```

```
-----
Base high availability configuration for this server
-----
```

```
Server role: Secondary
Health Monitor IP Address: 10.48.39.240
Virtual IP Address: Not Applicable for a secondary
Version: 8.0.110.0
UDI: AIR-MSE-VA-K9:V01:NicoMSE2_1c6b1940-b6a5-11e4-b017-005056993b66
Number of paired peers: 1
```

```
-----
Peer configuration#: 1
-----
```

```
Health Monitor IP Address 10.48.39.238
Virtual IP Address: 10.48.39.224
Version: 8.0.110.0
UDI: AIR-MSE-VA-K9:V01:NicoMSE_b950a7c0-b68c-11e4-99d9-005056993b63
Failover type: Manual
Failback type: Manual
Failover wait time (seconds): 10
Instance database name: mseos3
Instance database port: 1524
Dataguard configuration name: dg_mse3
Primary database alias: mseop3s
Direct connect used: No
Heartbeat status: Up
Current state: SECONDARY_ACTIVE
```

ةيوناثل اىلى لشفل

ةياسنأ ةينب prime يف ليكشت HA لىا يف تبهد تنأ ، ايودي تقلطأ in order to MSE HA switchover. تقطق طو عىل تقطق طو.

5- نوع ادتسا مت يذلـا_لـشـفـلا زـواـجـتـ إـلـا نـيـمـداـخـلـا إـلـكـ إـلـعـ GetInfo لـوـحـتـيـسـ،ـقـئـافـ ةـعـرسـبـ وـ

جیا افسوس و فنیا

```
[root@NicoMSE ~]# gethainfo

Health Monitor is running. Retrieving HA related information

-----
Base high availability configuration for this server
-----

Server role: Primary
Health Monitor IP Address: 10.48.39.238
Virtual IP Address: 10.48.39.224
Version: 8.0.110.0
UDI: AIR-MSE-VA-K9:V01:NicoMSE_b950a7c0-b68c-11e4-99d9-005056993b63
Number of paired peers: 1

-----
Peer configuration#: 1
-----

Health Monitor IP Address 10.48.39.240
Virtual IP Address: 10.48.39.224
Version: 8.0.110.0
UDI: AIR-MSE-VA-K9:V01:NicoMSE2_1c6b1940-b6a5-11e4-b017-005056993b66
Failover type: Manual
Fallback type: Manual
Failover wait time (seconds): 10
Instance database name: mseos3s
Instance database port: 1624
Dataguard configuration name: dg_mse3
Primary database alias: mseop3s
Direct connect used: No
Heartbeat status: Down
Current state: FAILOVER INVOKED
```

یوناٹل اوفنیاٹ جلا

```
[root@NicoMSE2 ~]# gethainfo

Health Monitor is running. Retrieving HA related information

-----
Base high availability configuration for this server
-----

Server role: Secondary
Health Monitor IP Address: 10.48.39.240
Virtual IP Address: Not Applicable for a secondary
Version: 8.0.110.0
UDI: AIR-MSE-VA-K9:V01:NicoMSE2_1c6b1940-b6a5-11e4-b017-005056993b66
Number of paired peers: 1
```

```
-----
Peer configuration#: 1
-----

Health Monitor IP Address 10.48.39.238
Virtual IP Address: 10.48.39.224
Version: 8.0.110.0
UDI: AIR-MSE-VA-K9:V01:NicoMSE_b950a7c0-b68c-11e4-99d9-005056993b63
Failover type: Manual
Fallback type: Manual
Failover wait time (seconds): 10
Instance database name: mseos3
Instance database port: 1524
Dataguard configuration name: dg_mse3
Primary database alias: mseop3s
Direct connect used: No
Heartbeat status: Down
Current state: FAILOVER_INVOKED
```

يُفَرِّضُ أَنَّ مُجْمَعَةَ اسْتِرْتَاتِيَّةَ زَوْاجَتْ لِمُتَكَيِّدِيَّةِ Prime:

Status

Instance is in failover active state

Events Log

Event Description	Generated By
Instance is in failover active state	Secondary
Failover invoked; starting application instance	Secondary
Failover has been invoked. Reconfiguring instance database	Secondary
Failover invoked; shutting down primary instance	Secondary

يُسَأَلُ أَنَّ مُجْمَعَةَ اسْتِرْتَاتِيَّةَ زَوْاجَتْ لِمُتَكَيِّدِيَّةِ Prime :

```
[root@NicoMSE ~]# gethainfo
```

Health Monitor is not running. Following information is from the last saved configuration

```
-----
Base high availability configuration for this server
-----
```

```
Server role: Primary
Health Monitor IP Address: 10.48.39.238
Virtual IP Address: 10.48.39.224
Version: 8.0.110.0
```

```
UDI: AIR-MSE-VA-K9:V01:NicoMSE_b950a7c0-b68c-11e4-99d9-005056993b63
Number of paired peers: 1
```

```
-----
Peer configuration#: 1
-----

Health Monitor IP Address 10.48.39.240
Virtual IP Address: 10.48.39.224
Version: 8.0.110.0
UDI: AIR-MSE-VA-K9:V01:NicoMSE2_1c6b1940-b6a5-11e4-b017-005056993b66
Failover type: Manual
Fallback type: Manual
Failover wait time (seconds): 10
Instance database name: mseos3s
Instance database port: 1624
Dataguard configuration name: dg_mse3
Primary database alias: mseop3s
Direct connect used: No
Last shutdown state: FAILOVER_ACTIVE
```

يوناثل:

```
[root@NicoMSE2 ~]# gethainfo

Health Monitor is running. Retrieving HA related information

-----
Base high availability configuration for this server
-----

Server role: Secondary
Health Monitor IP Address: 10.48.39.240
Virtual IP Address: Not Applicable for a secondary
Version: 8.0.110.0
UDI: AIR-MSE-VA-K9:V01:NicoMSE2_1c6b1940-b6a5-11e4-b017-005056993b66
Number of paired peers: 1

-----
Peer configuration#: 1
-----

Health Monitor IP Address 10.48.39.238
Virtual IP Address: 10.48.39.224
Version: 8.0.110.0
UDI: AIR-MSE-VA-K9:V01:NicoMSE_b950a7c0-b68c-11e4-99d9-005056993b63
Failover type: Manual
Fallback type: Manual
Failover wait time (seconds): 10
Instance database name: mseos3
Instance database port: 1524
Dataguard configuration name: dg_mse3
Primary database alias: mseop3s
Direct connect used: No
Heartbeat status: Down
Current state: FAILOVER_ACTIVE
```

يوناچلا MSE رش فم نوكىو هنم ءاهتنالا مث دق لشفل زواجت نوكى قل حرملا هذه يفو امامت الوبىم.

ليوح تلاب مايقلا دنع فقوت يسيئرلا MSE ىلع ڈوجوملا تامدخل نأ ىلا ڈراش إلا ردرجت (لفسأ ىلا ٥٥٥ جوت متي يذلا يساسألا MSE رش فم ليل يقيقح ثدح ڈاكاحم لجأ نم) يوديل اىعي بط رمألا لازى ال. اهتلار "ءاهنإ" متي س، ةيساسألا ڈي طايتحالا ڈخسنلا راضحاب تمق اذا رهظي و هب لومعم وه امك ايوناچ و "FailOver_Active"

يساسألا ىلا ڈوعلا يف لشفل

ىلع ألا ىلا يساسألا عاجراب موقت نأ كيلع بجي، ڈوعلا يف لشفت نأ لباق.

"ةيهدتنم" كلذ دعب اهتلار و:

```
[root@NicoMSE ~]# gethainfo

Health Monitor is running. Retrieving HA related information

-----
Base high availability configuration for this server
-----

Server role: Primary
Health Monitor IP Address: 10.48.39.238
Virtual IP Address: 10.48.39.224
Version: 8.0.110.0
UDI: AIR-MSE-VA-K9:V01:NicoMSE_b950a7c0-b68c-11e4-99d9-005056993b63
Number of paired peers: 1

-----
Peer configuration#: 1
-----

Health Monitor IP Address 10.48.39.240
Virtual IP Address: 10.48.39.224
Version: 8.0.110.0
UDI: AIR-MSE-VA-K9:V01:NicoMSE2_1c6b1940-b6a5-11e4-b017-005056993b66
Failover type: Manual
Fallback type: Manual
Failover wait time (seconds): 10
Instance database name: mseos3s
Instance database port: 1624
Dataguard configuration name: dg_mse3
Primary database alias: mseop3s
Direct connect used: No
Heartbeat status: Down
Current state: TERMINATED
```

يـو "FaultBack Active" يـف نـيمـسـقـلـا الـكـ لـاخـداـ مـتـيـ، نـمـ FailedBack Prime، ءـاعـدـتـسـاـ دـنـعـ

يـو "FailOver Active" يـف نـيمـسـقـلـا الـكـ لـاخـداـ مـتـيـ، نـمـ FaultBack Prime، ءـاعـدـتـسـاـ دـنـعـ

يـساسـأـلاـ وـفـنـيـاـثـيـجـلـاـ :

```
[root@NicoMSE ~]# gethainfo
Health Monitor is running. Retrieving HA related information
-----
Base high availability configuration for this server
-----
Server role: Primary
Health Monitor IP Address: 10.48.39.238
Virtual IP Address: 10.48.39.224
Version: 8.0.110.0
UDI: AIR-MSE-VA-K9:V01:NicoMSE_b950a7c0-b68c-11e4-99d9-005056993b63
Number of paired peers: 1
-----
Peer configuration#: 1
-----
Health Monitor IP Address 10.48.39.240
Virtual IP Address: 10.48.39.224
Version: 8.0.110.0
UDI: AIR-MSE-VA-K9:V01:NicoMSE2_1c6b1940-b6a5-11e4-b017-005056993b66
Failover type: Manual
Fallback type: Manual
Failover wait time (seconds): 10
Instance database name: mseos3s
Instance database port: 1624
Dataguard configuration name: dg_mse3
Primary database alias: mseop3s
Direct connect used: No
Heartbeat status: Down
Current state: FAILBACK_ACTIVE
```

يُناثلًا وفنيًا ثُمَّ:

```
[root@NicoMSE2 ~]# gethainfo
Health Monitor is running. Retrieving HA related information
-----
Base high availability configuration for this server
-----
Server role: Secondary
Health Monitor IP Address: 10.48.39.240
Virtual IP Address: Not Applicable for a secondary
Version: 8.0.110.0
UDI: AIR-MSE-VA-K9:V01:NicoMSE2_1c6b1940-b6a5-11e4-b017-005056993b66
Number of paired peers: 1
-----
Peer configuration#: 1
-----
Health Monitor IP Address 10.48.39.238
```

```

Virtual IP Address: 10.48.39.224
Version: 8.0.110.0
UDI: AIR-MSE-VA-K9:V01:NicoMSE_b950a7c0-b68c-11e4-99d9-005056993b63
Failover type: Manual
Fallback type: Manual
Failover wait time (seconds): 10
Instance database name: mseos3
Instance database port: 1524
Dataguard configuration name: dg_mse3
Primary database alias: mseop3s
Direct connect used: No
Heartbeat status: Down
Current state: FAILBACK_ACTIVE

```

ةروصلـا هـذـه ضـرعـي Prime:

Event Description	Generated By
Fallback in progress; starting primary database instance	Secondary

ىـلـا ئـرـخـأـ ئـرـمـ تـانـايـبـلـا لـقـنـبـ الـوـغـشـمـ لـازـيـ الـيـونـاـثـلـا نـكـلـوـلـ اـطـعـأـلـا عـاجـراـ ئـيـلـمـ مـامـتـ دـنـعـ: يـسـاسـأـلـا رـهـظـيـ، يـسـاسـأـلـا:

gethainfo

```
Health Monitor is running. Retrieving HA related information
```

```
-----
Base high availability configuration for this server
-----
```

```

Server role: Primary
Health Monitor IP Address: 10.48.39.238
Virtual IP Address: 10.48.39.224
Version: 8.0.110.0
UDI: AIR-MSE-VA-K9:V01:NicoMSE_b950a7c0-b68c-11e4-99d9-005056993b63
Number of paired peers: 1
-----
```

```

Peer configuration#: 1
-----

Health Monitor IP Address 10.48.39.240
Virtual IP Address: 10.48.39.224
Version: 8.0.110.0
UDI: AIR-MSE-VA-K9:V01:NicoMSE2_1c6b1940-b6a5-11e4-b017-005056993b66
Failover type: Manual
Fallback type: Manual
Failover wait time (seconds): 10
Instance database name: mseos3s
Instance database port: 1624
Dataguard configuration name: dg_mse3
Primary database alias: mseop3s
Direct connect used: No
```

```
Heartbeat status: Up
Current state: FAILBACK_COMPLETE
```

يوناثل اضرعل:

```
[root@NicoMSE2 ~]# gethainfo
Health Monitor is running. Retrieving HA related information
-----
Base high availability configuration for this server
-----
Server role: Secondary
Health Monitor IP Address: 10.48.39.240
Virtual IP Address: Not Applicable for a secondary
Version: 8.0.110.0
UDI: AIR-MSE-VA-K9:V01:NicoMSE2_1c6b1940-b6a5-11e4-b017-005056993b66
Number of paired peers: 1
-----
Peer configuration#: 1
-----
Health Monitor IP Address 10.48.39.238
Virtual IP Address: 10.48.39.224
Version: 8.0.110.0
UDI: AIR-MSE-VA-K9:V01:NicoMSE_b950a7c0-b68c-11e4-99d9-005056993b63
Failover type: Manual
Fallback type: Manual
Failover wait time (seconds): 10
Instance database name: mseos3
Instance database port: 1524
Dataguard configuration name: dg_mse3
Primary database alias: mseop3s
Direct connect used: No
Heartbeat status: Up
Current state: SECONDARY_ALONE
```

ةروصل ايف حضوم وہ امک ۃلحرملا ہذہ یف:

Current High Availability Status

Status	Primary instance is not synchronized with the secondary server. In progress.
Heartbeats	Up
Data Replication	Up
Mean Heartbeat Response Time	13 msec

Events Log

Event Description	Generated By
Heartbeats have been setup successfully	Primary

HA State Matrix

Primary_Active	ةيسيئر نوكت ام دنع ئيساسألا (MSE) مجحلا ةطسوتم ةمدخ ةلاح ماري ام ىلع عيش لكو ةلوفسم نوكتو
طشن يوناث	سيل نكلو ةجاحلا دنع يمويلا ةماقلالا لدبلا ئيوناثلا ةلاحلا ةجاحلا دنع ةممملالا يلوتل زهاج (دعب وھ يساسألا) لوفسملا
مت يذلا_لشفلالا زجاجت ھؤاعدتسا	ي، لشفلا زجاجت ثودح دنع ليغشتلا يتدقع الک يف حضوم وھ امك تانايىب ۋەداعق ليمحتل اهتمامدح ليغشت أدب ت ئيوناثلا MSE نأ ئيساسألا
طشنلار_لشفلالا زجاجت	فرصلار راعسأ رشۇم ربتعى. لشفلا زجاجت ئاهنلار ةلاحلا راعسأ رشۇم نوكىي امنىيىب "ليغشتلل ازهاج" يوناثلا يحصلار ضفخنا دق يساسألا يحصلار فرصلار
ھؤاهنإ مت	ال ام دنعوا ئلەطعىم اهنوك دعب تامدخلالا عم دوعت يتلار MSE ۋەداعق ةلاح ئيساسألا ئلەح نوكت نأ نكمىي كىلذل) ئلوفسملا ۋەدقىعلا يه نوكت يف مكحتلىا يطعىي PI لازى الو تامدخلالا ليغشت ۋەداعدا دنعوا ئيغشتلا دىق نوكىي ال دق HA طبار نأ اضىيأ يىنعمىي اذھو. (يوناثلا وأ لاثملا ليبس ىلع ليغشتلا ۋەداعاب موقىي MSE ۋەزھجأ دحأ ناك اذى) (بجس نكمىي ال ۋەطاسىپب
FailedBack_Active	ۋەجاؤم نم ۋەریخالا ئلەح رەنملا يه ھەذە تسىل، لشفلالا زجاجت سىكع ىلع مەتىي. ايلەح ثدھي ھنأو عجارتلار ئاعادتسا مەت ھنأ يىنعمىي اذھو. لشفلالا "ئيساسألا" يوناث "نەم تانايىبلالا ۋەداعق خسنى آلا"
FailedBack_Complete	ال اهنكلو ئلوفسملا عضو ىلار دوعت ام دنعوا ئيساسألا ۋەدقىعلا ئلەح يوناثلا MSE نەم تانايىبلالا ۋەداعق ليمحتب ئلەوغشم لازت
دھو_يوناثلا	ئارجا دنعوا ئيوناثلا (MSE) مجحلا ةطسوتم ۋەرادىلا ةمدخ ئلەح ئارجا دنعوا ئيوناثلا دىق يساسألا نوكىي و لاطعألا دادرتسا ئېلىممع

	تانا ايبلالا ليجشت يف رارمتسالا
عئار ليجشت فاقيا	اهفاقيا وأيودي تامدخل ديهمت ةداعاب تميق اذا ئللاحلا ليجشت متي اذهو. ايئاقلت لاطاعألا عاجرا/لاطاعألا زواجت ئللاح يف رخآلما MSE ئيلع فقوتلاتقوهيرحت مت هنأ ارظن ةمهملما ئيلوتت نل اهنأ ينعي ايودي

HA نع ةمم عئاق وو تاظحالم

- مامتا دعب اروف لشفلل هيچوت ةداعا ئيلمع ثودح يف ببسنلا مدع ئياغلل مهمملانم تي بثتل ةقىقد 30 ئىلا تانا ايبلالا دعاوق جاتحت .جيحص سكعلاو لشفلال زواجت ئيلمع
- ي ه HA ئي base-ha-config.properties in /opt/mse/health-monitor/resources/config/، مدخلتساً) ايودي اهريحةت متى نأ اب دصقى مل كىلذ عموم، (كىلذ نم الدب setup.sh كشلا ئللاح يف اهارت نأ كىنكمى نكل و
- ي ه كىلذب مايقلل ةديحوللا ئقيرطلالا .ايودي HA رسك ضرتفملا نم نكى مل يف setup.sh ئلجهشت) ئرخا ئقيرط يأ .هاندأ Prime نم ئيوناثلا قوسلا راعسأ رشوفم فذح زاهجوتانا ايبلالا دعاوق رسكتس (... ip رئيغت ،تىبىثت ئلازا ،يساسأ هلعجل يوناثلا نم الك تىبىثت ةداعا ئىلا جاتحت نأ لمتحملانمو ئللاحلا MSE

اھحالص او HA فاشكتسا

نوكى.* ئحصىلا ئبقارم عم /opt/mse/log/hm ئيلدنمض HA ئلصلالا تاذ تالجسلالا ظفح متى يساسألا لجسلالا فلم وە لجسلالا

(غامدىلا ماسقنا ئللاح) ناطشن يوناثلارا يساسألا نم لك : ئلكلشم ملا

1. نوكىس . ئيوناثلا ئيلع (VIP) ئيرهاظلالا IP ئهجاو ليجشت فاقىاب مق. ifconfig th0:1 down

2. يوناثلا يف تامدخلالا ليجشت ةداعا MSE

ةمدخلالا ليجشت فاقىا

ةمدخلالا جذومن ليجشت عدب

نم يساسألا رادصىلا عم ئرخا ئرم ئنممازملا يف أدب دق يوناثلا جمانربلا ناك اذا امم ققحت .3. ل ئيوناثلا ئيلع ئوناثلا ئلحرملالا يف ئمدخلالا فقوأ.

ةليوط ئدملى دنع ئقلالع HA ل يساسألا عم ئيوناثلا ئنممازم : ئلكلشم ملا

1. ئيوناثلا ئلحرملالا يف ئمدخلالا فقوأ

ةمدخلالا ليجشت فاقىا

2. /opt/mse/health-monitor/resources/config/advance-cconfig-<ip-address-of-primary>.properties ئيوناثلا ئيلع فلم

3. مدع ئللا لصو دق نوكى نأ نكمى هناف ، HA ئاشنإ يف لكاشم كانه لازت ال تناناك اذا . ئيوناثلا ئلحرملالا يف "تانا ايبلالا" ئيلد راطا يف ئيش لك ئللازما ئينيلع نيعتى ثيحب قفاوت

مادختساب RM -rf /opt/data/*

عدبليسس اسألا ىلـ Prime Infrastructure نـم هـتـفـاـصـاـبـ مـقـ .ـيـونـاـثـلـاـ ةـلـجـرـمـلـاـ لـيـغـشـتـ دـعـأـ .ـيـرـخـأـ ةـرـمـ HA.

هـيـلـاـ لـوـصـوـلـاـ رـذـعـتـ دـعـبـ PIـ نـمـ يـونـاـثـلـاـ مـدـاخـلـاـ فـذـحـ رـذـعـتـيـ :ـةـلـكـشـمـلـاـ

يـسـاسـأـلاـ يـفـ ةـمـدـخـلـاـ فـاقـيـاـبـ مـقـ .ـ1ـ

يـسـاسـأـلاـ يـفـ /ـoـp~t/mse/health-monitor/resources/config/advance-cconfig-<ip-address-of-primary>.propertiesـ ةـلـاـزـاـبـ مـقـ .ـ2ـ

يـسـاسـأـلاـ يـلـعـ ةـمـدـخـلـاـ لـيـغـشـتـ ةـدـاعـاـبـ مـقـ .ـ3ـ

هـتـفـاـصـاـ دـعـأـوـ PIـ نـمـ يـسـاسـأـلاـ MSEـ فـذـحـاـ .ـ4ـ

هـ لـ وـ لـ جـ رـ تـ لـ اـ هـ ذـ هـ

ةـ يـ لـ آـ لـ اـ تـ اـ يـ نـ قـ تـ لـ اـ نـ مـ مـ جـ مـ وـ عـ مـ اـ دـ خـ تـ سـ اـ بـ دـ نـ تـ سـ مـ لـ اـ اـ ذـ هـ تـ مـ جـ رـ تـ
لـ اـ عـ لـ اـ ءـ اـ حـ نـ اـ عـ يـ مـ جـ يـ فـ نـ يـ مـ دـ خـ تـ سـ مـ لـ لـ مـ عـ دـ ئـ وـ تـ حـ مـ يـ دـ قـ تـ لـ ةـ يـ رـ شـ بـ لـ اـ وـ
اـ مـ كـ ةـ قـ يـ قـ دـ نـ وـ كـ تـ نـ لـ ةـ يـ لـ آـ ةـ مـ جـ رـ تـ لـ ضـ فـ اـ نـ اـ ةـ ظـ حـ اـ لـ مـ ئـ جـ رـ يـ .ـ صـ اـ خـ لـ اـ مـ هـ تـ غـ لـ بـ
يـ لـ خـ تـ .ـ فـ رـ تـ حـ مـ مـ جـ رـ تـ مـ اـ هـ دـ قـ يـ يـ تـ لـ اـ ةـ يـ فـ اـ رـ تـ حـ اـ لـ اـ ةـ مـ جـ رـ تـ لـ اـ عـ مـ لـ اـ حـ لـ اـ وـ
ىـ لـ إـ أـ مـ ئـ اـ دـ عـ وـ جـ رـ لـ اـ بـ يـ صـ وـ تـ وـ تـ اـ مـ جـ رـ تـ لـ اـ هـ ذـ هـ ةـ قـ دـ نـ عـ اـ هـ تـ يـ لـ وـ ئـ سـ مـ
(رـ فـ وـ تـ مـ طـ بـ اـ رـ لـ اـ)ـ يـ لـ صـ أـ لـ اـ يـ زـ يـ لـ جـ نـ إـ لـ اـ دـ نـ تـ سـ مـ لـ اـ).