

7.2 HA جمانرب نیوکت رادص إلا ، رشن و MSE

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قمدق ملا

يلاعل رفوتل ا تامدخ كرحم جمانرب نم 7.2 رادص إلإ فيضي (Cisco) لقنتل ا معن (MSE) ةفاض إلاب ، رشنل او نيوكتل ا تاداشرا دنتسملا اذه مدقني . قي ضارت فال او قي دامل ا ؤزه جألا إلإ وأو قايسل ا ةاعارم تامدخ فيضت يتل ا كلتل اهحالص او تالكشملا فاشكتسأ تاحيملت إلإ نم ةدحوم (WLAN) ةيكليسال ةيلحم ةكبش إلإ ةيفي يكتل (IPS) ءاطخألا حيحصت تامدخ ييلاعل رفوتل ا ةيلباقب ةصالخا تاداشرالا حرش وه دنتسملا اذه نم ضرغل او Cisco . ةصالخا ةي ضارت فالا ةع باطلل رفوتل ا ةيلاع رشن تاهوي رانيس ريفوت و MSE ةع باطلل.

تان وكملا او MSE رش فمب ةصالخا نيوكتل ا ليصافت دنتسملا اذه مدقني ال : ظحالم درت و ، يرخأ قياث ويف تامولعملا هذه درت و MSE HA . رش فمب قلعتت ال يتل ا هب ةطبترمل ا لوح تادنتسملا ب ةمي اق ىلع لوصح ل [قلصل ا تاذ تامولع ملا](#) مسق عجار . اهنأشب عجارم wIPS نيوكت ةي طغت متت ال امك . اهمي مصت و قايسل ا ةاعارم عم لقنتل ا تامدخ نيوكت دنتسملا اذه يف فيكتملا .

قيس اس آلا تابل طتملا

تابل طتملا

دنتسملا اذهل ةصالخ تابل طتم دجوت ال .

قمدخت س ملا تان وكملا

ةنيعم ةي دام تان وكم وج مارب تارادصا ىلع دنتسملا اذه رصتقى ال .

تاجال طص إلإ

تاحالطصا لوح تامولعملانم ديزم ىلع لوصحلل ٽينقتلا Cisco تاحيملت تاحالطصا عجارتادنتسملنا.

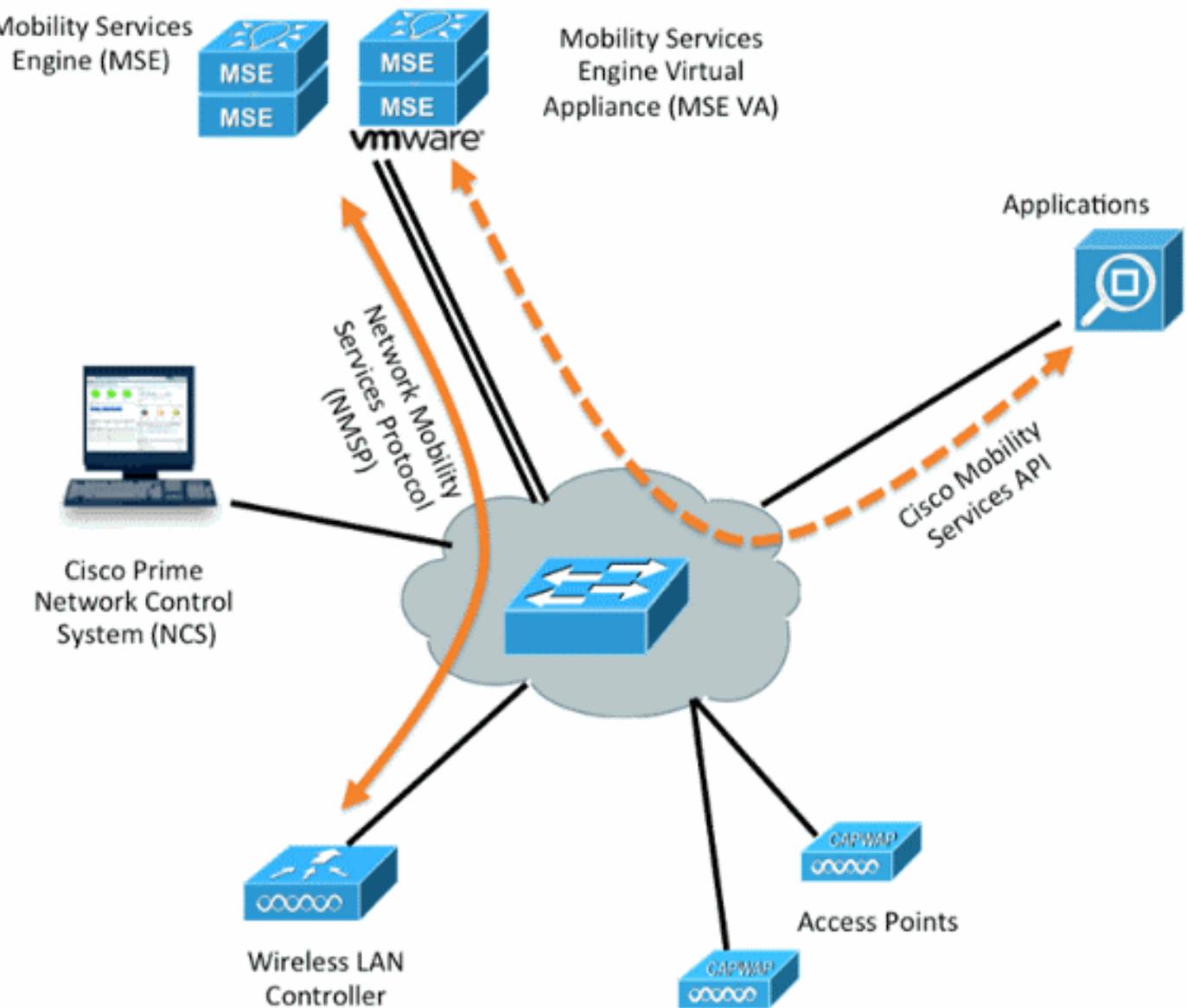
ةيسياس اسأ تامولعم

فياظو تامدخل هذه رفوت .ةطبترم ٽددعتم تامدخ ليغشت ىلع رداع يساسأ ماظن وه MSE نا يف مساح رمأ يلاعلا يحصلنا نيمأتلل رابتعالا عاليإ ناف ،كلذل و يوتسملنا ٽيلاع ٽمدخ ٽمدخلنا يف ٽقثلا نم يوتسنم ىلعاً ىلع ٽظفاحملنا.

زاهج MSE مدقق .رخآ طشن ريغ ليثم ٽطساوب طشن لك معدمتي ، HA نيكمت عم ظافحلا متوي .يلاعلا رفوتلا دادعإ ٽبقارم و ٽرادإ او ٽئيهتب هي ف موقعي يذلا ٽحصلنا ٽبقارم "ٽيامحلا بقارم" دعي .يوناثللاو يساسألا فرصلرا راعسأ رشوفم نيب بلقلالا تاضبن ىلع MSE لشفى امدنع .قيبطتللا ٽبقارم و تافلملا خسن و تانايبللا ٽدعاق دادعإ نع الروفسم يساسألا MSE ب صالحلا يرهاظلا ناوعلالا ليدبتمتي ، يوناثللا ريدملالا ملسستيو يساسألا فافش لكشب.

كرحم نمضتت يتلا Cisco نم ٽيجذومنلا WLAN ٽكبش رشن (1 لكشلا عجار) دادعإلا اذه حضوي رفوتني .ٽيلاع رفوت ٽيناكما ىلع لوصحلل هنيكمت مت يذلا Cisco نم (MSE) لقنتلا تامدخل MSE-3310 و MSE-3350/3355 ىلع يرهاظلا زاهجل او ESXi.

ٽريبك ٽجردب ٽرفوتم (MSE) مجحلا ٽطسوتم ٽمدخ رشن .1 لكشلا



دوی قول او ۋەيچەجوتلار ئىداب ملا

مەن بىر لوح تامولۇم يىلى امىيف MSE HA:

- طقىف راتكى 1:1 غلېبت ۋەحاسىم MSE يەراظلالا زاھىجلا معدى.
- رەظنا نىيىس اسألا MSE يەحلىصىم ىلى لىصى ام يۇناثىلا MSE رشۇم معدى نأ نەكمى 2 و 3 نالكىشىلار HA طبىر ئەفوفىسىم.
- رشىاب ملا لاصتالا او ۋەكىپىشىلار لىصىوت HA معدى.
- IP و ۋەحىسىلا بىقارىمب صاخىلار IP نىم لىك نوکىي نأ بىچى. طقىف MSE-2 ۋەحىسىلا بىقارىمب صاخىلار IP نىم لىك نوکىي نأ بىچى.
- نىيىلەت خەم يەراظلالا IP و Health Monitor بىقارىمب صاخىلار IP نوکىي نأ بىچى.
- اىئاقلىت و أىودى لىش فىلار زواجىت مادختىسى كەنەكمى.

- ايئاقلت وأ ايودي لاطعألا عاجرا اما مادختس اكنكمي.
- جمانربلا رادصا سفن يلع يوناثل او يساسألا MSE نم لك نوكى نأ بجي.
- راعسأ رشوفم حبصي ال .رخآ طشن ريع ليثمب طشن يسسأ MSE رشوفم لك مععد متى لشفل زواجت عارج ا عدب دعب ال اطشن يوناثل (MSE) فرصلا.
- ايئاقلت وأ ايودي لشفل زواجت عارج ا نوكى نأ نكمي.
- لجسم يسسأ MSE لكل تانايبل دعاوقة جماربلل دح او ليثم دجوي.

مععد ئفوفصم 2. لكش MSE HA

Primary Server Type	Secondary 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

نارتقا ئفوفصم 3. لكش MSE HA N:1

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) MSE يرهاظلا زاهجلل HA نيوكت ويرانيس ةكبشلاب

اده ، ويرانيس اذه ل .(لكش لـ 4) عجاـن) يرهاظلا زاهجلل HA نـيوكـت لـ اـثـمـلـا اـذـه حـضـوـي : تـلـكـشـ دـادـعـا ئـيـلـمـعـ

- MSE VA:

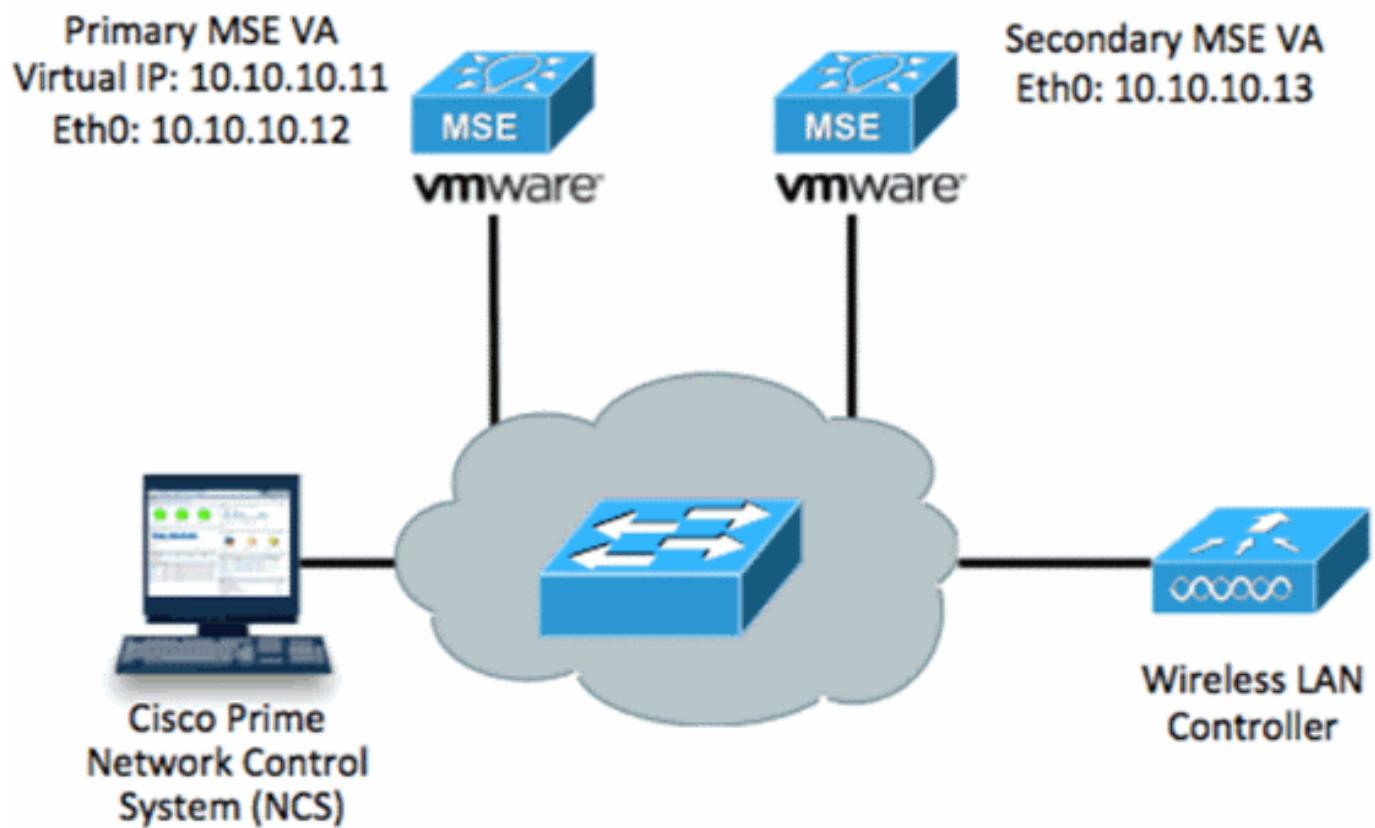
- IP [10.10.10.11] - يرهاظلا
- (ETH0) [10.10.10.12] - بقarming ڈھجاو

- MSE VA:

- IP [] - يرهاظلا
- (ETH0) [10.10.10.13] - بقarming ڈھجاو

نيوكتل بولطم اذه لکل (L-MSE-7.0-K9) طيشنت صيخرت ىلع لوصحلا مزلي: ظحالم HA ل VA.

يf MSE يرهاظلا زاهجلا 4. لکشل



تامولعل نم ديزم ىلع لوصحلل MSE يرهاظلا زاهجلا ىلع Cisco Prime Network Control System (NCS).

وماعلا تاوطخلا يلي اميf:

1. كبسلا تاداعا عيمج عافيتسا نم ققحتو VA ل MSE تيبثت لمكأ.

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. لاؤل وخدلا ليجست دنع دادعلا جلاعه ادبأ.

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. ةوطخلا يف "معن" لخأدأ. (كـلـذـىـلـاـ اـمـوـ،ـلـاجـمـلـاـوـفـيـضـمـلـاـ مـسـاـ) ةـبـولـطـمـلـاـ تـالـاخـدـلـاـ لـخـأدـأـ.
يـلاـعـلـاـ رـفـوـتـلـاـ نـيـوـكـتـلـاـ.

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

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

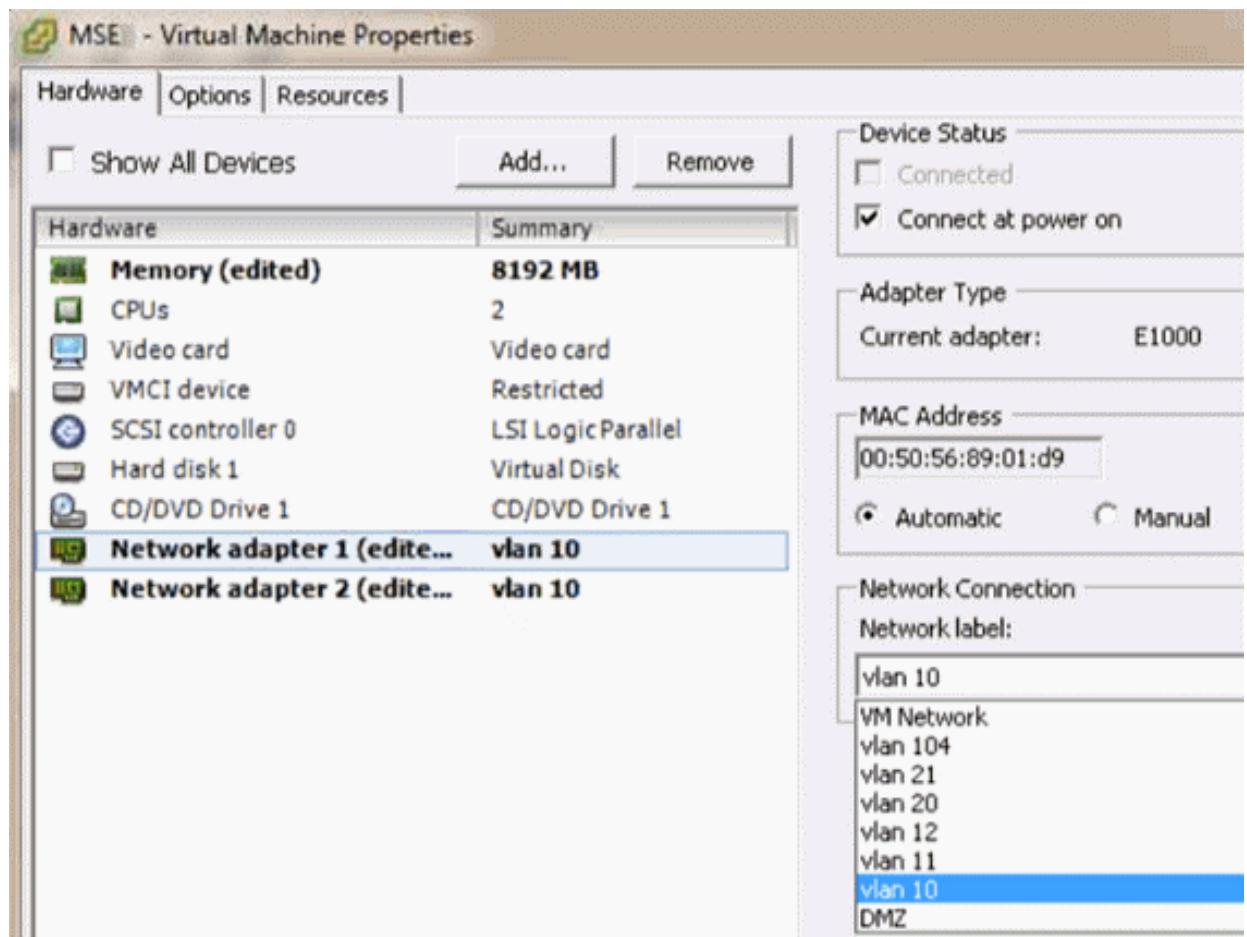
Current domain=[]
Configure domain name? (Y)es/(S)kip/(U)se default [Yes]: s

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

4. لخدا ام یلی؟

- a. [eth0] * - ةحصـلـا ئـقـارـمـ ةـجـاوـ
 - b. [1] - رـودـ دـيـ دـحـتـ.

* (اش اش طقل ئىنلىك عجاڭا) 1 ئەكپىشلار لوحىم يلىع ئەنى عملا ئەكپىشلار تادادعإ



```

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. رشاب مل الاصت الـ ٥٥ ج او ددح - [none].

```

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. يلي ام لخدا:

- a. يرهاظل IP ناونع [10.10.10.11]
- b. ةكبش لاعانق [255.255.255.0]
- c. دادرتس الـ MSE ليعشت عدب []

```

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. يلي ام لخدا:

- a. نيوكت ETH0 - [معن]
- b. ناونع لخداً TH0 IP- [10.10.10.12]
- c. ةكبشلا عانق - [255.255.255.0]
- d. ةيصلارتفالا ةبأوبلا - [10.10.10.1]

```

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 | ةهجاو مادختسإ متى ال.

[ي طختل] - ةهجاو 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. دادع إلأ جلاعم لالخ نم ئعباتملأا.

- a. ئعاسلا ئنمازم لجأ نم NTP م داخ نيكمت مهملأا نم.
- b. قسنملأا يملاعلا تيقوتلاب يه ئلضفملأا ئيئمزلا ئقطنملا.

```
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
```

يـرهاـظـلـا زـاهـجـلـلـ يـسـاسـأـلـا دـادـعـإـلـا صـخـلـيـ اـذـهـوـ

```
-----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-----
```

10. دادع إلـا تـامـوـلـعـم عـيـمـجـ قـحـصـ نـم دـكـأـتـلـلـ [YES] لـخـدـأـ.

```

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. دادع إلأ دعب ليغشتلا ةداعاب يصوّي.

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

12. ورأوا /etc/init.d/msed ليعغشت عدب رمأوا مادختساب تامدخ أدبا، ليغشتلا ةداع| دعب الـ مدخلـا.

```

[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. رمأـا مـادـختـسـابـ حـيـحـصـ لـكـشـبـ لـمـعـتـ MSEـ تـامـدـخـ نـأـ نـمـ دـكـأـتـ، تـامـدـخـ لـعـيـمـجـ عـدـبـ دـعـبـ getServerInfoـ.

يوجي up. لاح رهظت نأب جي

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

يوناثل MSE VA دادع! نم عزج يه تاو طخل ا هذ:

يلى ام لخدأ. دادع إل جل اع ميف يل وآل لوح دل ا لي جس ست أدب ي، ديدج ل ا تى ب ثتل ا دعب.

a. معن [- يل اعل رفوتل ا نيوكت]

b. يوناث رو دى ل ا رى شى ي ذل [2] - رو دى دجت.

c. يس اس ألا لثم [eth0] - ة حصل ا بقارم ة هج او.

```
Current hostname=[mse1]
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 [mse1]: 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. يلي ام لخدا:

- a. عيش ال - رشابم لاصتا
- b. ناونع IP th0 - [10.10.10.13]
- c. عانق - ةكبشل ا [255.255.255.0]
- d. ةيضرافتالا ةبأوبلا - [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. يطختل [] - ةهج او نيوكت ETH1

```
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. ةينمزلا ةقطنملا نيعت - [UTC]

```
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. مدادخ نیکمتب 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 دادعالا تامولعم ديڪأتو "دادعالا جلاعم" نم ڦيقيبتملما تاوطلخالا لامڪاب مق. نيوكتلما.

```

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. ل ۆقباسلا تاوطلخا سفنب تامدخل لیغشت عدبولیغشتلا ۆداعاب مق. يساسألا.

```

[root@mse2 ~]# /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@mse2 ~]#

```

تاقاطب ىلإ يوناثلاوي ساسألا VA MSE لوحم ۆفاضا ۆي فيك ۆيلاتلا تاوطلخا رهظت ۆدعاسمى دشرم ليكشتلا تيار NCS ىلإ MSE فيضي نأ ۆداع ۆيلمعلان تزجنأ. ۆكبشلى.

1. لقنتلا تامدخل تاكرح رتخد او Systems > Mobility Services نم.

The screenshot shows the Cisco Prime Network Control System interface. The top navigation bar includes the Cisco logo, 'Cisco Prime', 'Network Control System', and 'Virtual Do'. Below the navigation bar is a secondary menu with 'Home', 'Monitor ▾', 'Configure ▾', 'Services ▾', 'Reports ▾', and 'Administrat'. A dropdown menu for 'Services' is open, showing options: 'Mobility Services' (selected), 'Mobility Services Engines' (underlined and being clicked by a cursor), 'Synchronize Services', 'Synchronization History', 'High Availability', 'Context Aware Notifications', and 'MSAP'. Below this is another dropdown menu for 'Identity Services'.

آمُدْق يِصْمُلَا قَوْف رَقْنَا مَث Add Mobility Services Engine. رَتْخَأ، قَلْدَسْنَمْلَا َقَمْئاْقَلَا نَمْ 2.

The screenshot shows a software interface for managing a Mobility Services Engine. At the top, there's a header bar with 'ROOT-DOMAIN', 'root', 'Log Out', a search bar, and a navigation arrow. Below the header is a toolbar with icons for file operations. A main content area features a large, semi-transparent blue button labeled 'Add Mobility Services Engine'. Overlaid on this button is a dropdown menu box containing the following options: '-- Select a command --', 'Add Location Server', 'Add Mobility Services Engine' (which is highlighted with a blue selection bar and has a white cursor arrow pointing to its right), 'Delete Service(s)', 'Synchronize Services', 'Synchronization History', and 'Edit Configuration'. The 'Add Mobility Services Engine' option is clearly the intended target for the user's action.

3: يه ميقولا، دنتسملا اذه ويرانيس يف. MSE ل NCS نيوكت جلadium عبتا.

- a. ل.ث م - زاهجلا مسا لخدأ [MSE1]
 - b. IP ناونع - {10.10.10.12}
 - c. (يـلـوـأ دادـعـ إـلـكـل) رورـمـلـا ةـمـلـكـو مـدـخـتـسـمـلـا مـسـا
 - d. يـلـاتـلـا Next قـوـفـ رـقـنـا.



Add Mobility Services Engine

Add MSE Configuration

Licensing

Select Service

Tracking

Assign Maps

Device Name

mse1

IP Address

10.10.10.12

Contact Name

Username^①

admin

Password^②

HTTP^③ EnableDelete synchronized service assignments (Network designs, controllers, wired switches, etc.)

● Selecting Delete synchronized service assignments permanently removes all service assignments from the MSE. Existing location history data is retained, however you must use manual service assignments to re-assign services.

يـالـاتـلـا قـوـفـ رـقـنـا مـثـ، ةـرـفـوـتـمـلـا صـيـخـارـتـلـا عـيـمـجـ ةـفـاضـابـ مـقـ.



MSE License Summary

Edit MSE Configuration

Licensing

Select Service

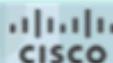
Tracking

Assign Maps

● 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-bd0e)				
	CAS	2000	CAS Elements	100
	wIPS	2000	wIPS Monitor Mode APs	10
			wIPS Local Mode APs	10
	MSAP	2000	Service Advertisement Clicks	1000

يـالـاتـلـا قـوـفـ رـقـنـا مـثـ، تـامـدـخـ دـدـحـ.



Edit MSE Configuration

Licensing

Select Service

Tracking

Assign Maps

Select Mobility Service

- Context Aware Service
- Cisco Context-Aware Engine for Clients and Tags
- Partner Tag Engine ⓘ
- Wireless Intrusion Protection Service
- MSAP Service

6. يلاتلا قوف رقنا مث ، بقعتلا تاملمع نيكمنتب مق.



Edit MSE Configuration

Licensing

Select Service

Tracking

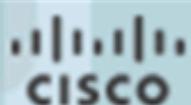
Assign Maps

Select Tracking & History Parameters.

Tracking

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

7. ةفاضا لامك إل مت قوف رقنا. تامدخ ةنمازم و طئارخلا نيعت يراريتخالا نم MSE نلا NCS.



Cisco Prime Network Control System

Edit MSE Configuration

Licensing

Select Service

Tracking

Assign Maps

Name

The page at <https://10.10.10.20> says:



Your MSE Settings have been saved.

OK

اذه تمت ،نآل .ةيساسألا MSE VA ةفاضا تمت هنأ ئيلاتلا ةشاشلا ةطقل حضوت
order to va: يوناثلا تفضأ MSE

1. نيوكتلل طابترالا قوف رقنا مث ،"يوناثلا مداخلا" دومع عقوم ددح.

The screenshot shows the Cisco Prime Network Control System interface. The top navigation bar includes Home, Monitor, Configure, Services, Reports, and Administration. The Services dropdown is expanded to show 'Mobility Services Engines'. The main content area displays a table of MSE configurations. One row is selected, showing details for an MSE named 'mse1'.

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. ويرانيسلا اذه يف نيوكتللا مادختساب ئيوناثلا MSE VA ةفاضا:

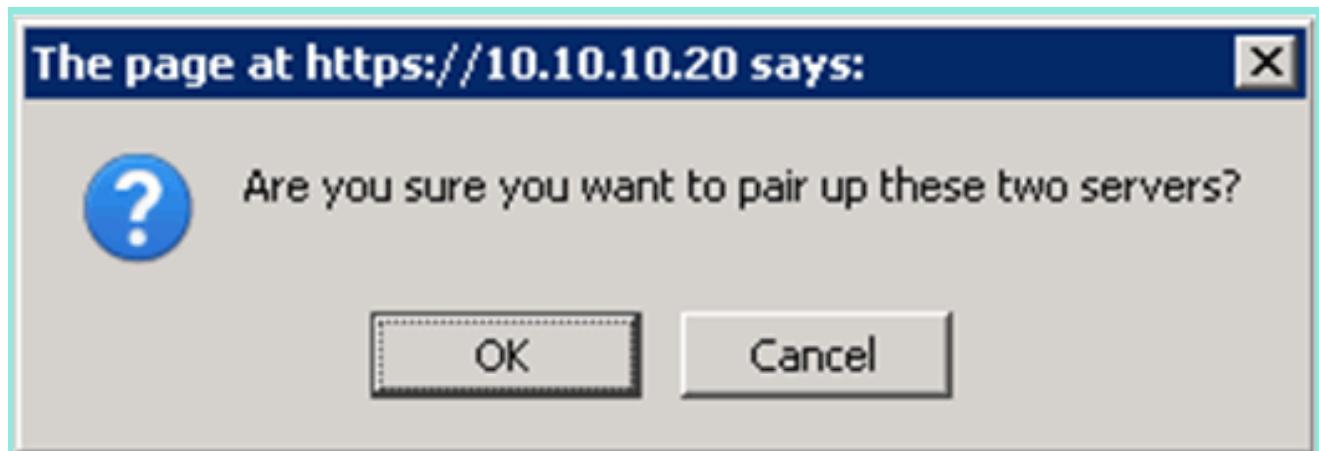
- a. - يونا ثلا زاهجلا مسا [MSE2]
- b. - يونا ثلا IP ناونع [10.10.10.13]
- c. [يصنلا دادع إلأ جمانرب نم وأ يضارتفالا] - *يُونا ثلا رورملأا ةملك
- d. [يودي وأ يئاقلت] - *لشفلأا زواجت عون.
- e. يطايتحا عون*
- f. لاطعلأا ىلع بلغتلل ليوط راظتنا*
- g. ظفح قوف رقنا.
- *رمألا مزل اذا MSE قئاثو لىا عجرا وأ تامولعملأا زمر 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
<input type="button" value="Save"/>	

3. نانث إلأ جوازي نأ بلططي NCS لـ MSEs.

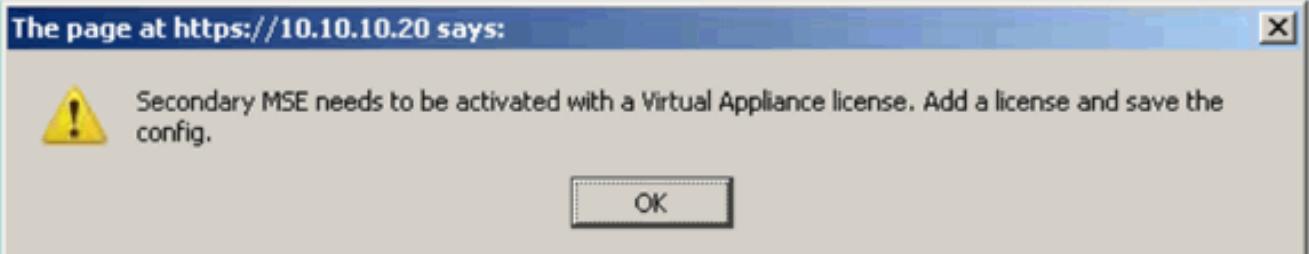


IJ NCS ذخايم a few يناث قلخي تلا.

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



طيشنت صيخرت بليطتت ئيوناثلا MSE VA تناك ازا NCS بلياطتس.



4. طيشنتل صيخرتلا فلم عقوم ددح وقف اوم قوف رقنا.

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-b1b1-0050566
Secondary Activation Status	Not Activated
Activate Secondary with License	<input type="text"/> <input type="button" value="Browse..."/>
Failover Type ⓘ	Automatic <input type="button" value="▼"/>
Fallback Type ⓘ	Manual <input type="button" value="▼"/>
Long Failover Wait ⓘ	10 <input type="text"/> seconds

5. درجمب طفح قوف رقنا، ئيوناثلا MSE VA طيشنت لامك إل.

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:

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

يونا ثلا مدخل دومعلا يف يونا ثلا MSE رهظت ثيح ۆشاشلا ھذه NCS ضرعت

Mobility Services Engines							Select a command ...			Go
	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	Enabled	Up	
							wIPS Service	Disabled	Down	
							MSAP Service	Disabled	Down	

7. يلاعل رفوتللا > تامدخل > NCS ىلإ لقتنا ، يلاعل رفوتللا ئەلا ضرعل.

Cisco Prime Network Control System

Home Monitor Configure Services Reports Administration

Mobility Services Engines Services > High Availability

Secondary Server Name	Secondary HM IP Address	Version
mse2	10.10.10.13	7.2.10

Mobility Services

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

Identity Services

جۈز ئەتساوب ئېلاچىلا ثادحألى او ئەلاچىلا ئىئر كىنكمى، HA ئەلاچىف.

Cisco Prime Network Control System

Virtual Domain: ROOT-DOMAIN root Log Out

System HA Configuration : mse1
Services > Mobility Services Engine > 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

NCS رفوت. قىاقىد عضب لىثامتمىلا تانايىبلار خىسن و ئېلۋالا ئەنممازىملا دادعى قرغۇتسىي دق حضۇم وە امك لماك لىكشىب اطاشن HA جۈز نوکىي ئىتھ مدققتىلىل ئىۋىملا ئېسنىلا ئەراشىۋالىغا.

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

حصوي. وهو HA قلعتي اميf 7.2 رادص الا جمانرب عم ممدي دقت مت ديدج رمأ كانه يوانا ثلا وي ساسألا جارخ الا اذه:

<#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  
-----
```

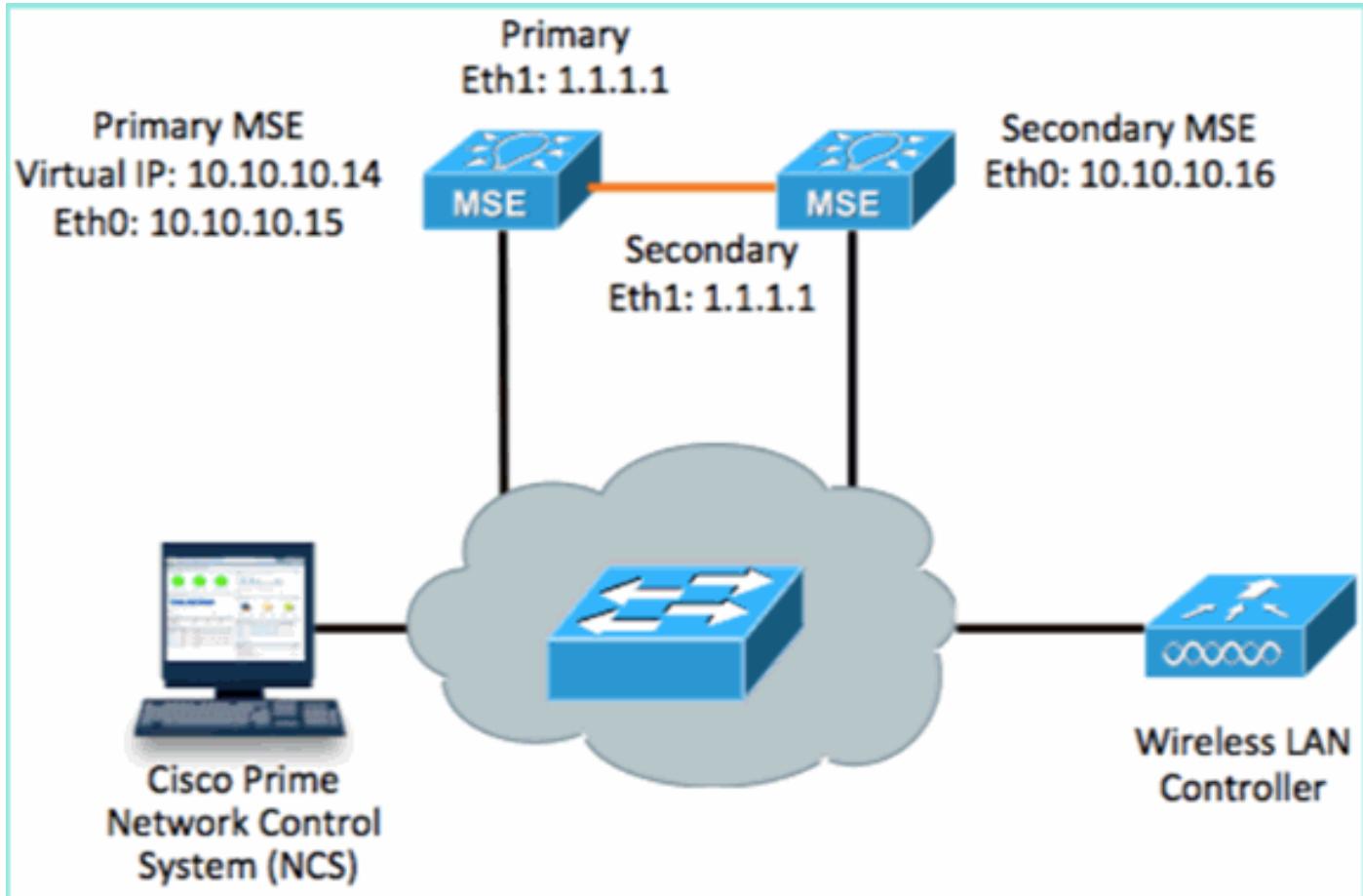
Server role: Secondary
Health Monitor IP Address: 10.10.10.13
Virtual IP Address: Not Applicable for a secondary
Version: 7.2.103.0
UDI: AIR-MSE-VA-K9:V01:mse2
Number of paired peers: 1

```
-----  
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. (دشرم ليڪشت تلحٽا وَ، قباس لاثم عجاو) NCS لـا يـسـاسـاـ لـا تـفـضـاـ.

Cisco Prime Network Control System		Virtual Domain: ROOT-DOMAIN		root ▾ Log Out		
	Home	Monitor ▾	Configure ▾	Services ▾	Reports ▾	Administration ▾
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	N/A (Click here to configure)

يوناثلا مداخلا نیوک > NCS نم یوناثلا MSE دادعاب مق.

- a. يونا ثلا زاه جلا مسا لخ دا [MSE3355-2]
 - b. يونا ثلا IP ناونع [10.10.10.16]
 - c. ظفح قوف رقنا و ةي قب تملا تام لعمل ا 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

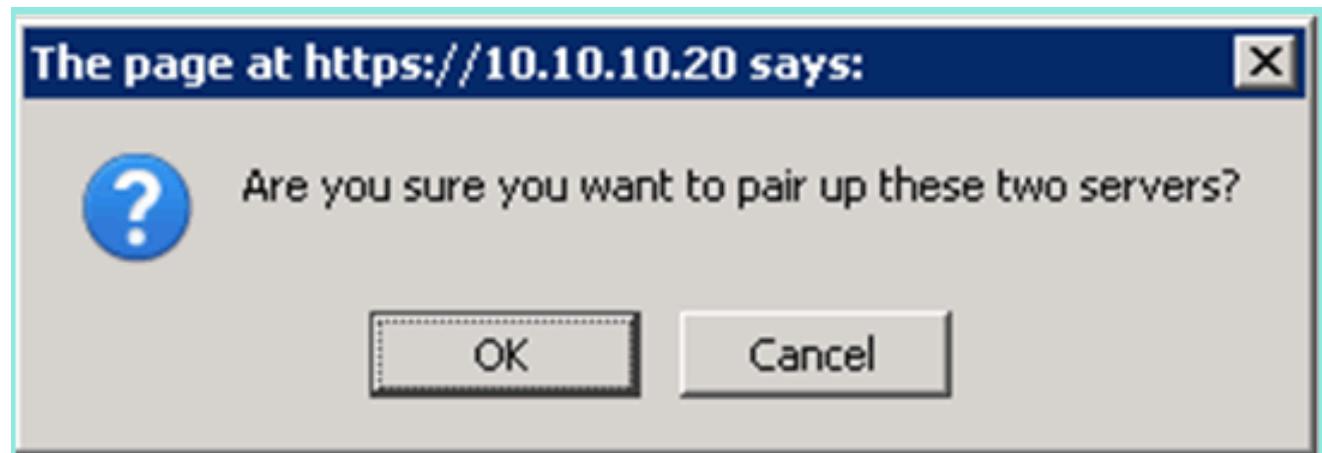
HA Configuration : mse3355-1
Services > Mobility Services Engines > System > Services High Availability

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. نانثإلا نيب نمازتل دكؤي نأ ok ٰقطق ط.



يوناثلا مدخل نيكوت ةفاض إل ةظحل NCS قرغتسى.

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

• • • • •

6. ظفح قوف رقنا. HA تاملمع يلىع تارييغت يأ عارجاب مق ،لامتكالا دنع.

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

7. دیجلا جو زل يلعفلاتقولا يف مدقتلل HA ۋە لاح ضرع.

CISCO Network Control System

Virtual Domain: ROOT-DOMAIN root Log Out

Home Monitor Configure Services Reports Administration

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	-

8. ئەفاضا نم دكأت، لقنتلى تامدخ تاكىرىم > لقنتلى تامدخ > تامدخ > NCS نم (رشابملا لاصتالا) HA ىلى 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
-----

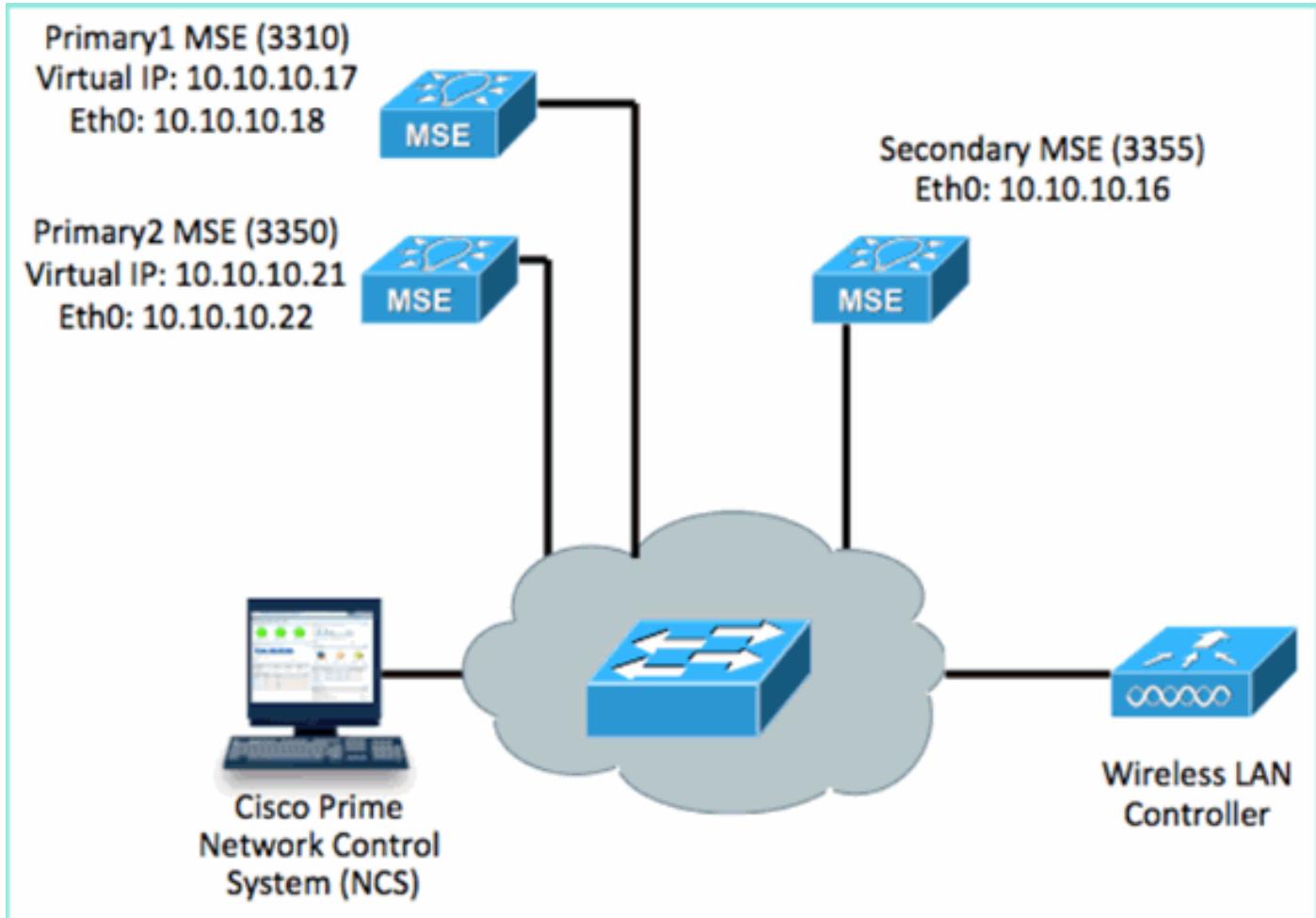
Server role: Secondary
Health Monitor IP Address: 10.10.10.16
Virtual IP Address: Not Applicable for a secondary
Version: 7.2.103.0
UDI: AIR-MSE-3355-K9:V01:KQ45xx
Number of paired peers: 1

-----
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 لـاصـتـالـا قـبـطـنـيـ اـلـ MSE-3310 و MSE-3350. معـديـ نـأـ نـكـمـيـ ، يـونـاـثـلـا عـضـولـا يـفـ يـذـلـاوـ ، ويـرـانـيـسـلـا اـذـهـ يـفـ رـشـابـمـلـاـ.



1. ويرانيس حيضوتل هذه MSE ۆمەخ نم دحاو لک نیوکت ب مق.

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. ئەكشىل اۆھجاتقا طابلى Primary1 و Primary2 ئەكشىل ئەنچەپ نىوكت دىب (NCS).

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. MSEs نم دح اوپ أدبا. (ةقباسلا ةلثملأا يف حضوم وه امك) يوناثلا مداخلا نيوكتل رقنا. ئيساسلأا.

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. يوナثلا IP ناونع [10.10.10.16]

c. ئيقبتىملا تامىلۇملا لمكأ.

d. 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

Buttons: Save, Delete, Switchover

5. لەۋە يوナثلا لاخىدا نىيوكت مەتى يىتح ۋېزىج و ئەظحل رەظننە.

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

• • • •

6. لەۋە يساسىڭ MSE ىلى يوナثلا مىداخىلا ۋەفااضا نەم دەكأت.

Mobility Services Engines

Services > Mobility Services Engines

	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. يوナثلا يساسىڭ MSE لىچا نەم 6 ىلى 3 نەم تاوطخلە ررک.

Mobility Services Engines						
Services > Mobility Services Engines						
	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"/>	mse3310	Cisco 3310 Mobility Services Engine	10.10.10.18	7.2.103.0	Reachable	N/A (Click here to configure)

8. يناثل ايس اس اول ا HA تارجع م عاهن.

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"/>	

تارادع إالا ظفحب مق.

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-
Failover Type ⓘ	Manual
Fallback Type ⓘ	Manual
Long Failover Wait ⓘ	10 seconds

10. يسأساً اولاً MSE نم لـ مدقت ةلاح نم ققحت.

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

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

11. يوناثلـا MSE مـادختـساـب Primary2 وـيـسـاسـاـولاـ نـمـ دـكـأـتـ.

	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. ةيلاحلا ةحاتلا رتخا، لقنتلا تامدخ > تامدخل NCS نم.

The screenshot shows the Cisco Prime Network Control System interface. The top navigation bar includes links for Home, Monitor, Configure, Services, Reports, and Adminis. A dropdown menu under the Services link is open, showing options: Mobility Services, Mobility Services Engines, Synchronize Services, Synchronization History, High Availability (with a cursor icon pointing to it), Context Awareness, Notifications, MSAP, and Identity Services.

زارطلل ايوناث هرابتعاب MSE-3355 زارطلل ةبسنلاب 2:1 ديكت مث هنأ ظحال و MSE-3350.

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
```

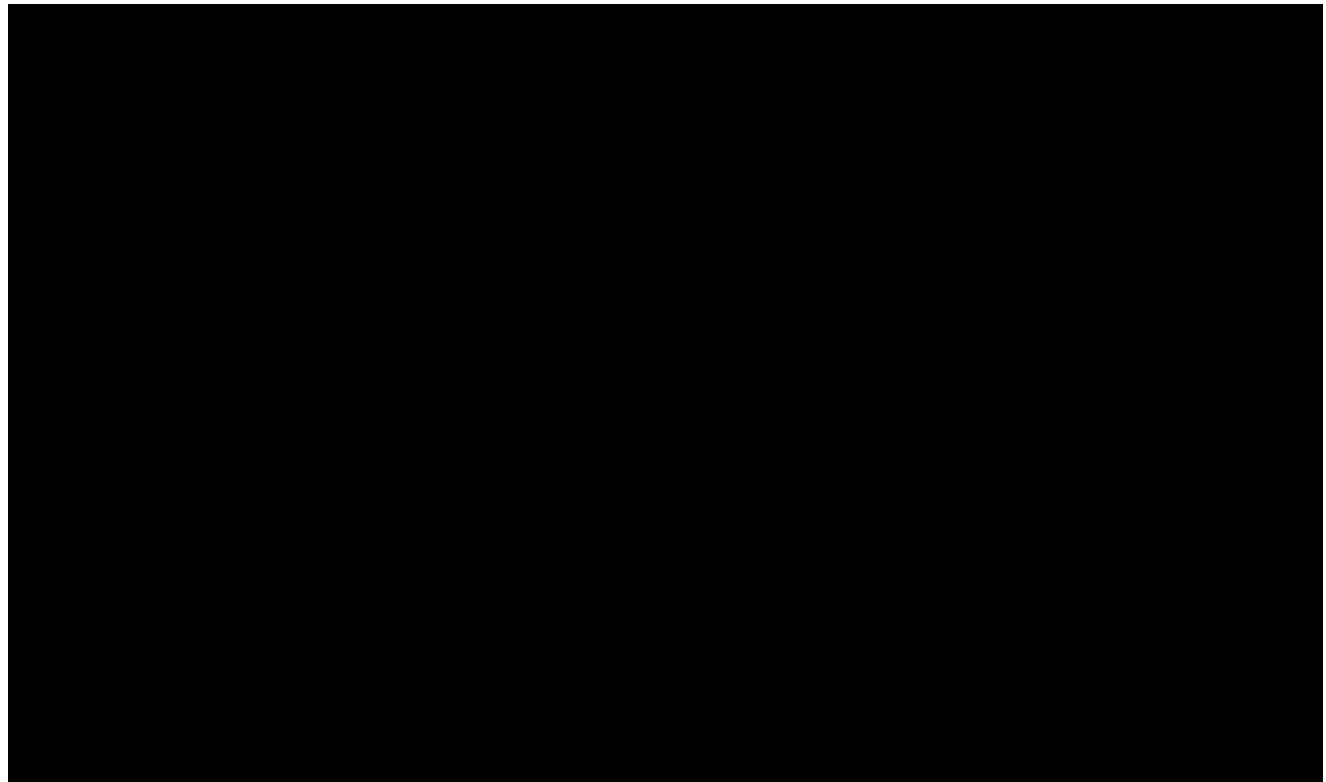
```
-----  
Peer configuration#: 1  
-----
```

```
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

نم لکل لملاك طاشنك ۋە ئەنلا قىچتلى HA يف NCS رەھظى ئەلەچىلار مەئەنلا MSE-3310 و MSE-3350.



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

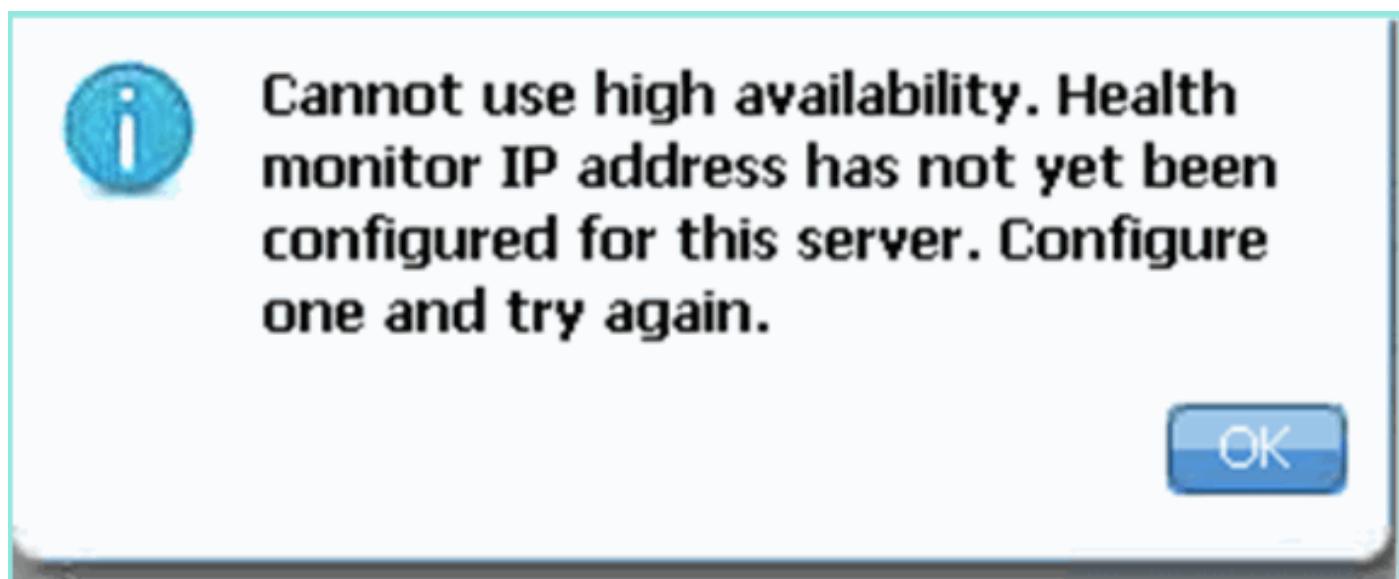
Status	Active
Heartbeats	Up
Data Replication	Up
Mean Heartbeat Response Time	4 millsec

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

يـف ةـيسـاسـأـلـا لـكـاشـمـلـا لـحـ MSE HA

لـثـم ةـبـلـاطـم ةـدـهـاـشـم كـنـكـمـي ،ـيـونـاثـلـا MSE رـشـفـاضـا دـنـعـ:

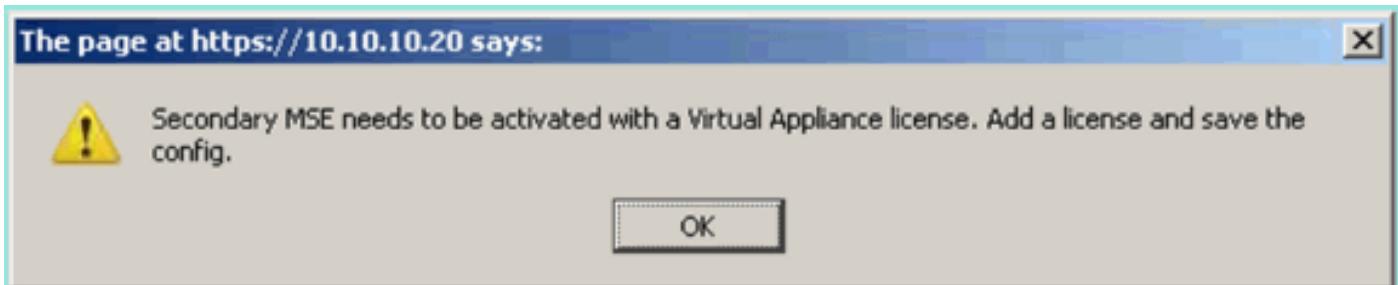


يـصـنـلـا دـادـعـإـلـا جـمـانـرـبـ عـانـثـأـ ةـلـكـشـمـ كـانـهـ نـأـ لـمـتـحـمـلـا نـمـ.

- ةـبـسـانـمـلـا ةـكـبـشـلـا تـادـادـعـا نـمـ قـقـحـتـلـلـ getServerInfo رـمـأـلـا لـيـغـشـتـبـ مـقـ.
- ةـبـسـانـمـلـا ةـكـبـشـلـا تـادـادـعـا نـمـ قـقـحـتـلـلـ /init.d/msed start رـمـأـلـا لـيـغـشـتـبـ مـقـ.
- ابـولـطـمـ نـاـكـ اـذـاـ يـرـخـأـ ةـرـمـ يـصـنـلـا دـادـعـإـلـا جـمـانـرـبـ لـالـخـ نـمـ لـيـغـشـتـلـابـ مـقـ.
ةـيـاهـنـلـا يـفـ ظـفـحـلـاـوـ (/mse/setup/setup.sh).

طـيـشـنـتـ صـيـخـرـتـ (MSE) دـدـعـتـمـلـا مـعـدـلـا ةـمـدـلـا يـرـهـاـظـلـا زـاهـجـلـا بـلـطـتـيـ اـمـكـ.

صاخلا طيشنللا صيخرت ىلع لوصحلا يوナثلا MSE لوحم ةفاضا دنع كبلاطت اهناف ، ال او هتفاضا او ب MSE VA ب



فاقيءاب مق ، كل ذل . لم اك لكشب تامدخل فاقيءاب نم دكأت ، MSE ىلع HA رود ليديبت ةلاح يف
ىرخأ ئرم يصنللا دادعإلا جمانرب ليغشتب مق مث ، /init.d/mse stop ، رمألا مادختساب تامدخل
(/mse/setup/setup.sh).

```
Applying High Availability configuration
*** User has switched roles for this MSE. MSE must be stopped before switching roles.
*** 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 setup]#
```

تامولعم اذه رفوبي MSE. ىلع يلاعلا رفوتلا تامولعم ىلع لوصحلل gethainfo رمألا مادختسا
اهتبقارم وأ احالص او اهرييغتو HA ةلاح ءاطخأ فاشكتسا يف ئدiform

```
<#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

```

ىلע لوصح لـ NCS ئارادا ئادا يه NCS ل يلاعلا رفوتلا ضرع ۋقىرط ناف، كىل ذىل ئافاصلاب لجأ نم HA دادع إل ئيۇر ئيناك مە.

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

ةلص تاذ تامولعم

- (يىداملى او يىرها ئازىچىلا) MSE نىيوكتلىرىلىد

- رفاوتلا يلایع نیوکتلار MSE
- بلط
- - تادنتس مل اوینقتلا معدلار Cisco Systems

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).