

SSM OnPrem 8.X High Availability Cluster Werken

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Inleiding

Dit document beschrijft hoe de Smart Software Manager (SSM) On-Prem-accountsynchronisatie en de Registratie van productinstantie werken op de SSM On-Prem server die op het moment van failover en terugvalscenario's als een High Availability (HA) Cluster wordt uitgevoerd.

Voorwaarden

Vereisten

Cisco raadt kennis van de volgende onderwerpen aan:

- SSM on-prem
- HA

Gebruikte componenten

De informatie in dit document is gebaseerd op SSM On-Prem 8 en hoger.

De informatie in dit document is gebaseerd op de apparaten in een specifieke laboratoriumomgeving. Alle apparaten die in dit document worden beschreven, hadden een opgeschoonde (standaard)configuratie. Als uw netwerk levend is, zorg er dan voor dat u de

mogelijke impact van om het even welke opdracht begrijpt.

Achtergrondinformatie

Dit zijn de referentiedocumenten die informatie geven over HA.

- https://www.cisco.com/web/software/286285517/151968/Smart_Software_Manager_On-Prem_8_Console_Guide.pdf
- https://www.cisco.com/web/software/286285517/152313/Smart_Software_Manager_On-Prem_8-202006_Installation_Guide.pdf

SSM On-Prem accountsynchrone tijdens failover en failover

HA tussen twee SSM On-Prem servers moet met behulp van deze gids worden ingesteld:

De HA-cluster implementeren:

https://www.cisco.com/web/software/286285517/152313/Smart_Software_Manager_On-Prem_8-202006_Installation_Guide.pdf

Gebruik in deze demonstratie:

0,5 - IP-adres van primaire server

0,10 - IP-adres van de secundaire server

4.12 - virtueel IP-adres

Hoge beschikbaarheid

1. De succesvolle configuratie van de HA laat de primaire server (.5) zien als actieve, secundaire server (.10) als stand-by en VIP (.12) sd in de afbeelding.

High Availability

Host

Event Logs

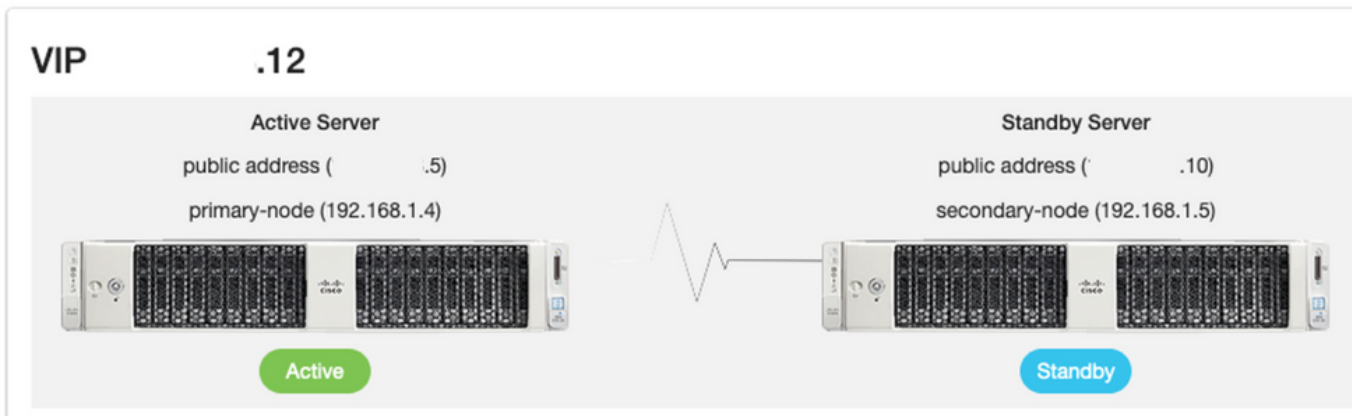


Normal

The status of the high availability cluster is normal.

Heartbeat

Connection status: **Connected**



2. De synchronisatie van SSM On-Prem met Cisco Software Central is voltooid vanaf de Primaire/Actieve server zoals in de afbeelding weergegeven.

Smart Software Manager On-Prem

System Health: **Good** Your machine is working well

Server Name: CentOS
Version: 8-202006
Uptime: 1 day

Resource Monitor Percentage: CPU, RAM, DISK

Recent Alerts

Connected Users: admin 00:06:1

Name	Satellite Name	Last Synchronization	Synchro
annanr-ssm-on-prem-8-202006	annanr-ssm-on-...	2020-Sep-01 14:13:44	2020-C

Account	Requested By	Cisco Smart Account	Cisco Virtual Account	Account Status	Actions
annanr-ssm-on-prem-8-202006	annanr@cisco.com	.com	annanr-SSM-On-Prem-8-202006	Active	Actions

3. Cluster HA-status laat zien dat de database van de primaire server (replicatie-Master) op de linkerreplicatie-replicatie naar de database van de secundaire server (replicatieslave) rechts zoals in het beeld wordt verwacht.

```
psql: postgres@192.168.1.4:5034:
Last login: Tue Sep 1 14:48:57 UTC 2020 on pts/0
Database Replication Status:
Database is currently the replication master - Replicating to secondary-node (192.168.1.5)
Replication to slave:
 client_addr | backend_start | state | write_lag | flush_lag | replay_lag
-----+-----+-----+-----+-----+-----
 192.168.1.5 | 2020-09-01 07:50:45.628722+00 | streaming | 0 | 0 | 0
(1 row)
Replication from master:
 pg_last_xlog_replay_location
-----
 0/53CDB68
(1 row)

psql: postgres@192.168.1.5:5034:
Last login: Tue Sep 1 14:48:57 UTC 2020 on pts/0
Database Replication Status:
Database is currently the replication slave - Replicating from primary-node (192.168.1.4)
Replication to slave:
 client_addr | backend_start | state | write_lag | flush_lag | replay_lag
-----+-----+-----+-----+-----+-----
(0 rows)
Replication from master:
 pg_last_xlog_replay_location
-----
 0/53CDB68
(1 row)
>>
>>
>>
>>
```

failover

1. Stop het HA-cluster op primaire server zoals in de afbeelding getoond.

```
[>>
[>> ha_cluster_stop
Last login: Tue Sep  1 14:45:59 UTC 2020 on pts/0
Stopping Cluster (pacemaker)...

Stopping Cluster (corosync)...
```

2. Primair|Secundair zoals in de afbeelding weergegeven.

```
pcsd: active/enabled
Last login: Tue Sep  1 14:45:57 UTC 2020 on pts/0

=====
Database Replication Status:
=====
Database is currently the replication master - Replicating to secondary-node (.10)

Replication to slave:
client_addr | backend_start | state | write_lag | flush_lag | replay_lag
-----
192.168.1.5 | 2020-09-01 07:58:45.628722+00 | streaming | 0 | 0 | 0
(1 row)

Replication from master:
pg_last_xlog_replay_location
-----
(1 row)
>>
>> ha_cluster_stop
Last login: Tue Sep  1 14:45:59 UTC 2020 on pts/0
Stopping Cluster (pacemaker)...

Stopping Cluster (corosync)...
>>

Failed Actions:
* db_monitor_30000 on secondary-node 'not running' (7): call=50, status=complete, exitreason='',
last-rc-change='Tue Sep  1 08:01:46 2020', queued=0ms, exec=0ms

PCSD Status:
secondary-node: Online
primary-node: Online

Daemon Status:
corosync: active/enabled
pacemaker: active/enabled
pcsd: active/enabled
Last login: Tue Sep  1 15:10:40 UTC 2020 on pts/0

=====
Database Replication Status:
=====
Database is currently the replication slave - Replicating from primary-node (.5)

Replication to slave:
client_addr | backend_start | state | write_lag | flush_lag | replay_lag
-----
(0 rows)

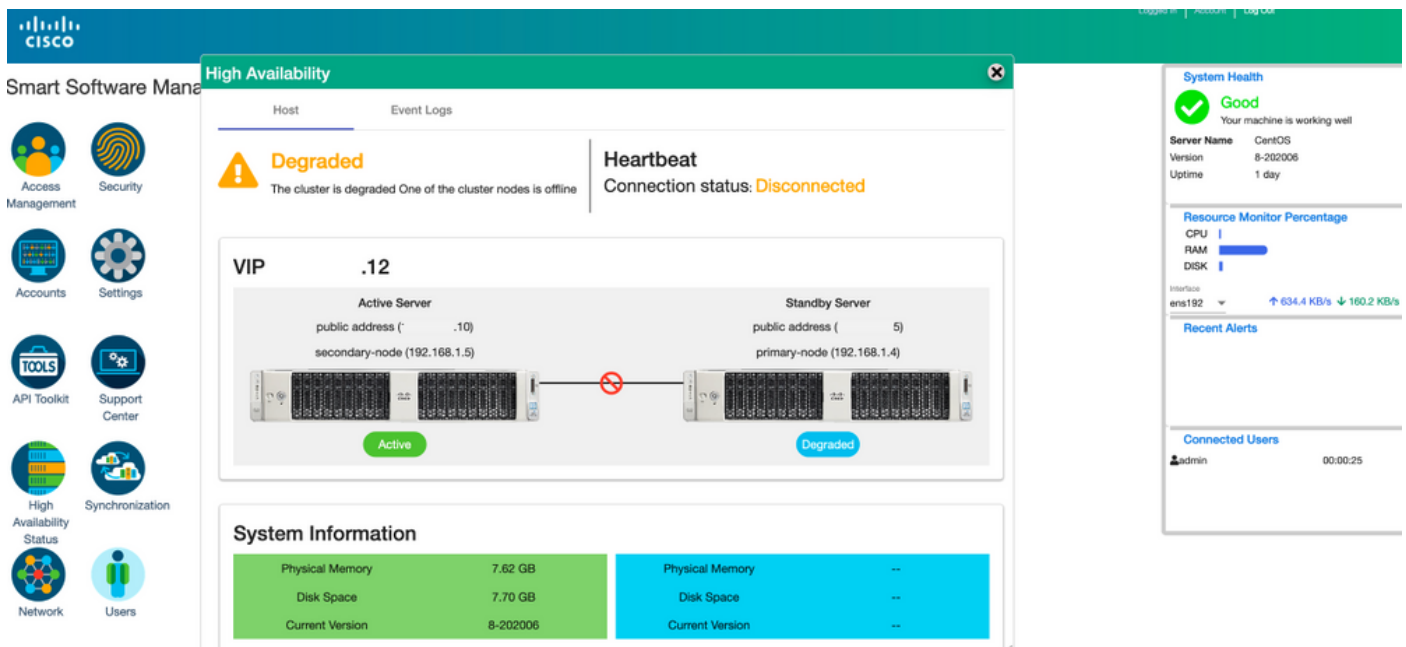
Replication from master:
pg_last_xlog_replay_location
-----
0/53C0C60
(1 row)
```

3. Gelogd in de SSM On-Prem GUI met behulp van VIP en de primaire GUI is defect.

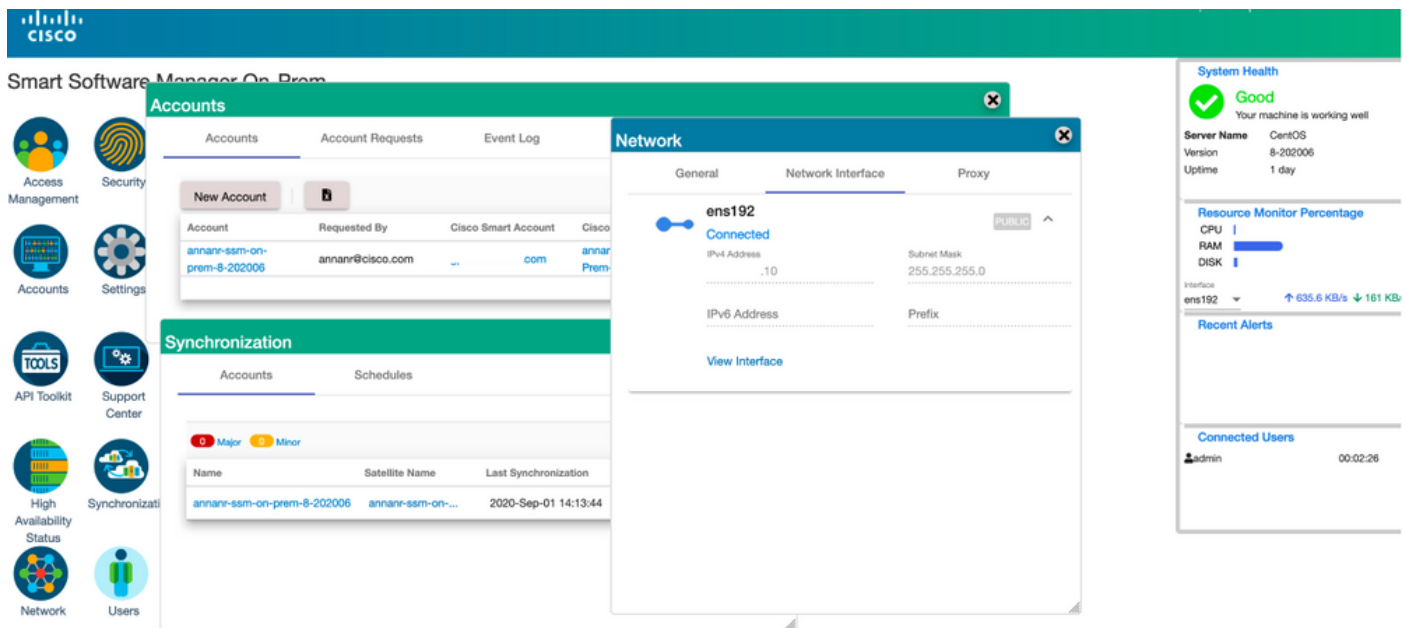
4. De secundaire server (.10) wordt als actieve server weergegeven.

5. De hartslag is losgekoppeld.

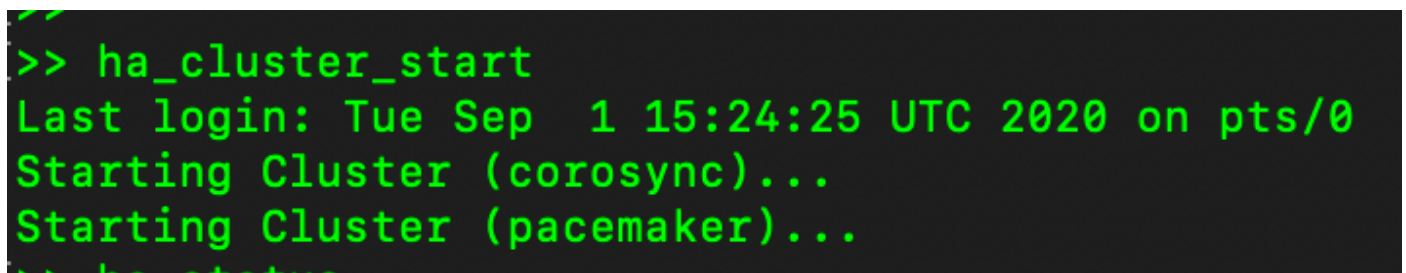
6. Primaire server (4.5) verplaatst naar de Standby-stand.



7. De synchronisatie van SSM On-Prem-account met Cisco Software Central kan met succes worden gezien vanaf de Secundaire/Actieve server GUI zoals in de afbeelding weergegeven.



8. Start het HA-cluster op de Primaire server zoals in de afbeelding wordt getoond.



9. De HA-clusterstatus toont aan dat de primaire database wordt gerepliceerd uit de secundaire database.

10. Primair|Secundair zoals in de afbeelding weergegeven.

```

last-rc-change: Tue Sep  1 18:26:24 2020; questions, execute

PCSD Status:
primary-node: Online
secondary-node: Online

Daemon Status:
corosync: active/enabled
pacemaker: active/enabled
pcsd: active/enabled
Last login: Wed Sep  2 08:52:24 UTC 2020 on pts/0

Database Replication Status:
=====
Database is currently the replication slave - Replicating from secondary-node (:.....18)

Replication to slave:
client_addr | backend_start | state | write_lag | flush_lag | replay_lag
-----
(0 rows)

Replication from master:
pg_last_xlog_replay_location
-----
0/7879718
(1 row)

secondary-node: Online
primary-node: Online

Daemon Status:
corosync: active/enabled
pacemaker: active/enabled
pcsd: active/enabled
Last login: Wed Sep  2 09:03:23 UTC 2020 on pts/0

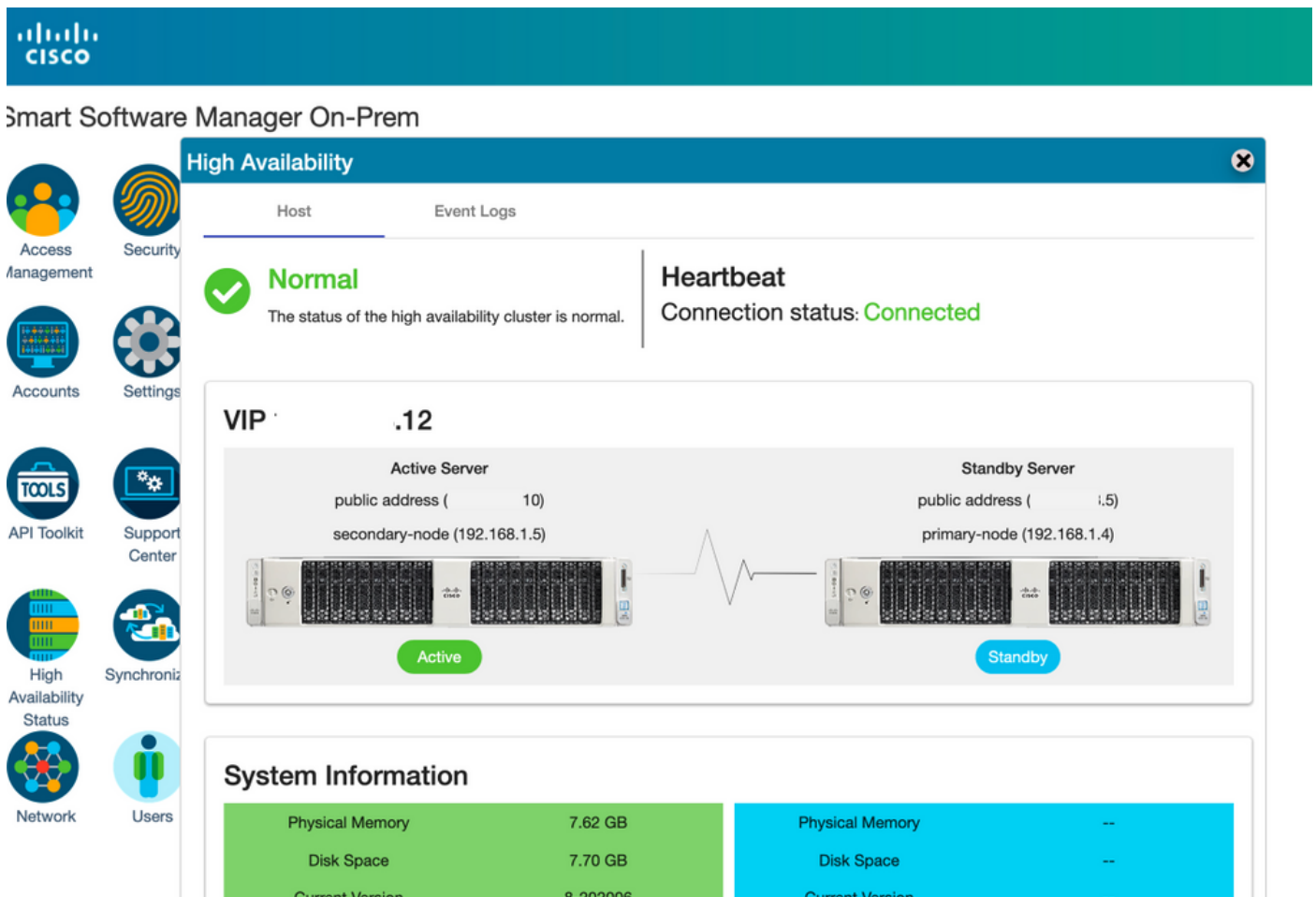
Database Replication Status:
=====
Database is currently the replication master - Replicating to primary-node (:.....6)

Replication to slave:
client_addr | backend_start | state | write_lag | flush_lag
-----
192.168.1.4 | 2020-09-01 15:36:33.602635+00 | streaming | 0 | 0
(1 row)

Replication from master:
pg_last_xlog_replay_location
-----
0/53C0C48
(1 row)

```

1. GUI toont hartslag als verbonden, secundair in actieve toestand en Primair in stand-by toestand zoals in de afbeelding.



12. Maak een nieuwe TEST-account en activeer het op actieve stand-by. (.10) server.

13. Primaire (1.5) GUI is in dit stadium niet toegankelijk.

Accounts

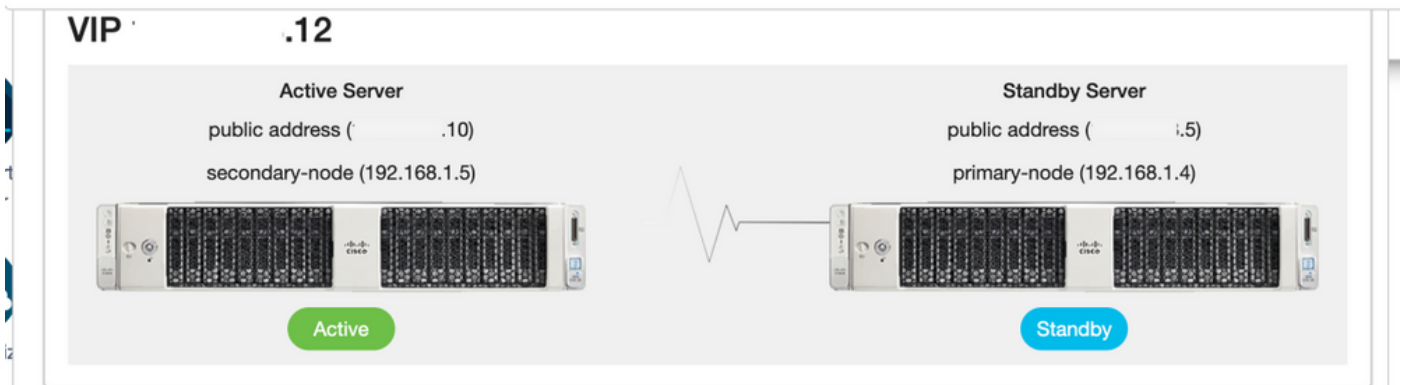
Accounts

Account Requests

Event Log

Account	Requested By	Cisco Smart Account	Cisco Virtual Account	Account Status	Actions
annanr-ssm-on-prem-8-202006	annanr@cisco.com	.com	annanr-SSM-On-Prem-8-202006	Active	Actions
TEST	annanr@cisco.com	.com	TEST123	Active	Actions

Showing All 2 Records



valzijde

1. Ophouden van Ha_cluster in de seconden zoals in de afbeelding weergegeven.

```
[>> ha_cluster_stop  
Last login: Wed Sep 2 09:03:25 UTC 2020 on pts/0  
Stopping Cluster (pacemaker)...  
Stopping Cluster (corosync)...  
[>>
```

2. De huidige status van de database van de primaire server en de database van de secundaire server kan hier worden bekeken.

```
Database Replication Status:  
Database is currently the replication slave - Replicating from secondary-node ( .10)  
Replication to slave:  
client_addr | backend_start | state | write_lag | flush_lag | replay_lag  
(0 rows)  
Replication from master:  
pg_last_xlog_replay_location  
9/7079810  
(1 row)  
>>  
ha_cluster_start ha_deploy ha_provision_standby ha_teardown  
ha_cluster_stop ha_generatekeys ha_status  
>> ha_cluster_stop  
Last login: Wed Sep 2 09:03:25 UTC 2020 on pts/0  
Stopping Cluster (pacemaker)...  
Stopping Cluster (corosync)...  
>>  
>>  
>> ha_status  
Last login: Wed Sep 2 09:04:44 UTC 2020 on pts/0  
Error: cluster is not currently running on this node  
Last login: Wed Sep 2 09:10:52 UTC 2020 on pts/0  
Database Replication Status:  
DB service not currently running.  
>>
```

3. Gelogd in de SSM On-Prem GUI met behulp van VIP en de secundaire GUI is niet ingeschakeld.

4. De primaire server (.5) wordt als actieve server weergegeven.

5. De hartslag is losgekoppeld.

6. Secundaire server (4.5) verplaatst naar Standby-status.

High Availability

Host Event Logs

Degraded
The cluster is degraded One of the cluster nodes is offline

Heartbeat
Connection status: **Disconnected**

VIP .12

Active Server
public address (.1.5)
primary-node (192.168.1.4)

Standby Server
public address (.10)
secondary-node (192.168.1.5)

Active Degraded

7. De nieuwe TEST-account kan in gesynchroniseerde staat worden gezien als de replicatie plaatsvond van de secundaire naar de primaire database zoals in de afbeelding.

High Availability

Host Event Logs

Degraded
The cluster is degraded One of the cluster nodes is offline

Heartbeat
Connection status: **Disconnected**

VIP .12

Active Server
public address (.1.5)
primary-node (192.168.1.4)

Standby Server
public address (.10)
secondary-node (192.168.1.5)

Active Degraded

Accounts

Accounts Account Requests Event Log

New Account Search by Account Name

Account	Requested By	Cisco Smart Account	Cisco Virtual Account	Account Status	Actions
annan-ssm-on-prem-8-202006	annan@cisco.com	com	annan-SSM-On-Prem-8-202006	Active	Actions
TEST	annan@cisco.com	com	TEST123	Active	Actions

Showing All 2 Records

Synchronization

Name	Satellite Name	Last Synchronization	Synchronization Due	Alerts	Ac
annan-ssm-on-prem-8-202006	annan-ssm-on-...	2020-Sep-02 07:33:32	2020-Oct-02 07:33:32	Synchronization Successful	Acti
TEST	TEST	2020-Sep-02 07:35:42	2020-Oct-02 07:35:42	Synchronization Successful	Acti

8. GUI zal in dit stadium toegankelijk zijn vanaf het VIP-adres (.12) en niet vanaf het secundaire IP-adres.

9. Start HA Cluster op de secundaire server zoals in de afbeelding wordt getoond.


```
>> ha_cluster_start
Last login: Wed Sep  2 09:10:52 UTC 2020 on pts/0
Starting Cluster (corosync)...
Starting Cluster (pacemaker)...
```

10. De cluster HA status toont aan dat de database van de primaire server (van de replicatie Master) aan de linkerkant is replicierend naar de database van de secundaire server (van de replicatie Slave) aan de rechterkant zoals verwacht in de afbeelding.

```
PCSD Status:
secondary-node: Online
primary-node: Online

Daemon Status:
corosync: active/enabled
pacemaker: active/enabled
pcsd: active/enabled
Last login: Wed Sep  2 09:09:35 UTC 2020 on pts/0

Database Replication Status:
Database is currently the replication master - Replicating to secondary-node (192.168.1.10)

Replication to slave:
client_addr | backend_start | state | write_lag | flush_lag | replay_lag
-----|-----|-----|-----|-----|-----
192.168.1.5 | 2020-09-02 09:08:39.358506+00 | streaming | 0 | 0 | 0
(1 row)

Replication from master:
pg_last_xlog_replay_location
0/7879810
(1 row)

PCSD Status:
secondary-node: Online
primary-node: Online

Daemon Status:
corosync: active/enabled
pacemaker: active/enabled
pcsd: active/enabled
Last login: Wed Sep  2 09:20:43 UTC 2020 on pts/0

Database Replication Status:
Database is currently the replication slave - Replicating from primary-node (192.168.1.5)

Replication to slave:
client_addr | backend_start | state | write_lag | flush_lag | replay_lag
-----|-----|-----|-----|-----|-----
(0 rows)

Replication from master:
pg_last_xlog_replay_location
0/7880000
(1 row)

>>
>>
>>
>>
>>
```

11. De GUI toont hartslag verbonden tussen actieve primaire server en standby secundaire server.

12. De TEST-account is gesynchroniseerd met Cisco Software Central.

The screenshot displays the Cisco Smart Software Manager On-Prem High Availability interface. The main status is 'Normal', indicating the high availability cluster is functioning correctly. The Heartbeat connection status is 'Connected'. The VIP (Virtual IP) is 1.12. The Active Server (primary-node at 192.168.1.4) and Standby Server (secondary-node at 192.168.1.5) are both shown as operational. The Synchronization section shows a table of synchronization events:

Name	Satellite Name	Last Synchronization	Synchronization Due	Alerts	Actions
annanr-sm-on-prem-8-202006	annanr-sm-on-...	2020-Sep-02 07:33:32	2020-Oct-02 07:33:32	Synchronization Successful	Actions
TEST	TEST	2020-Sep-02 07:35:42	2020-Oct-02 07:35:42	Synchronization Successful	Actions

Registratie van productenten met SSM On-Prem VIP tijdens failover en failover

Hoge beschikbaarheid tussen twee SSM On-Prem servers moet worden ingesteld met behulp van deze handleiding:

Het HA-cluster implementeren:

https://www.cisco.com/web/software/286285517/152313/Smart_Software_Manager_On-Prem_8-202006_Installation_Guide.pdf

Gebruik in deze demonstratie:

4.11 - IP-adres van primaire server

0,9 - IP-adres van de secundaire server

4.14 - virtueel IP-adres

Hoge beschikbaarheid

1. Succesvolle configuratie van HA die primaire server (.11) als actieve, secundaire server (.9) als Standby- en VIP-server (.14) toont.

The screenshot shows the Cisco Smart Software Manager On-Prem interface. The main content area is titled 'High Availability' and shows a 'Normal' status for the HA cluster. Below this, there is a 'Heartbeat' section indicating 'Connection status: Connected'. A 'VIP' section shows the configuration for the virtual IP address (.14), with the Active Server (primary-node 169.254.0.1) and Standby Server (secondary-node 169.254.0.2) both shown as 'Active'. The 'System Information' section provides details for both servers:

Active Server		Standby Server	
Physical Memory	7.62 GB	Physical Memory	--
Disk Space	7.83 GB	Disk Space	--
Current Version	8-202105	Current Version	--

2. Cluster HA-status laat zien dat de database van de primaire server (replicatie-Master) op de linkerreplicatie naar de database van de secundaire server (replicatieslave) rechts zoals in de afbeelding verwacht wordt.

The first terminal screenshot shows the status of the primary node (primary-node: Online, secondary-node: Online). The database replication status indicates that the database is currently the replication master, replicating to the secondary-node (.9). The replication to slave table shows the following details:

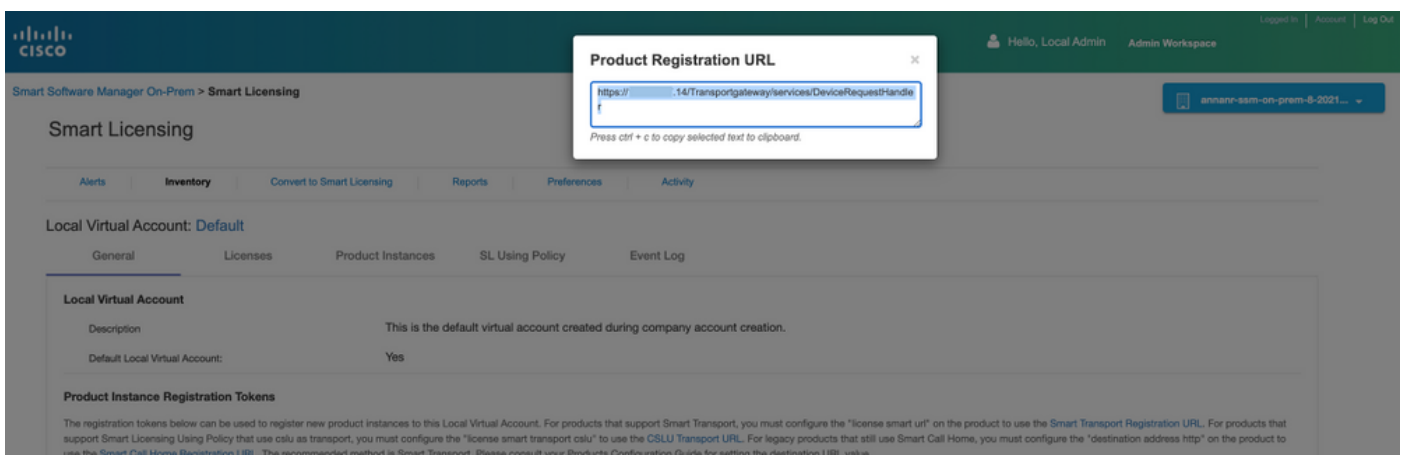
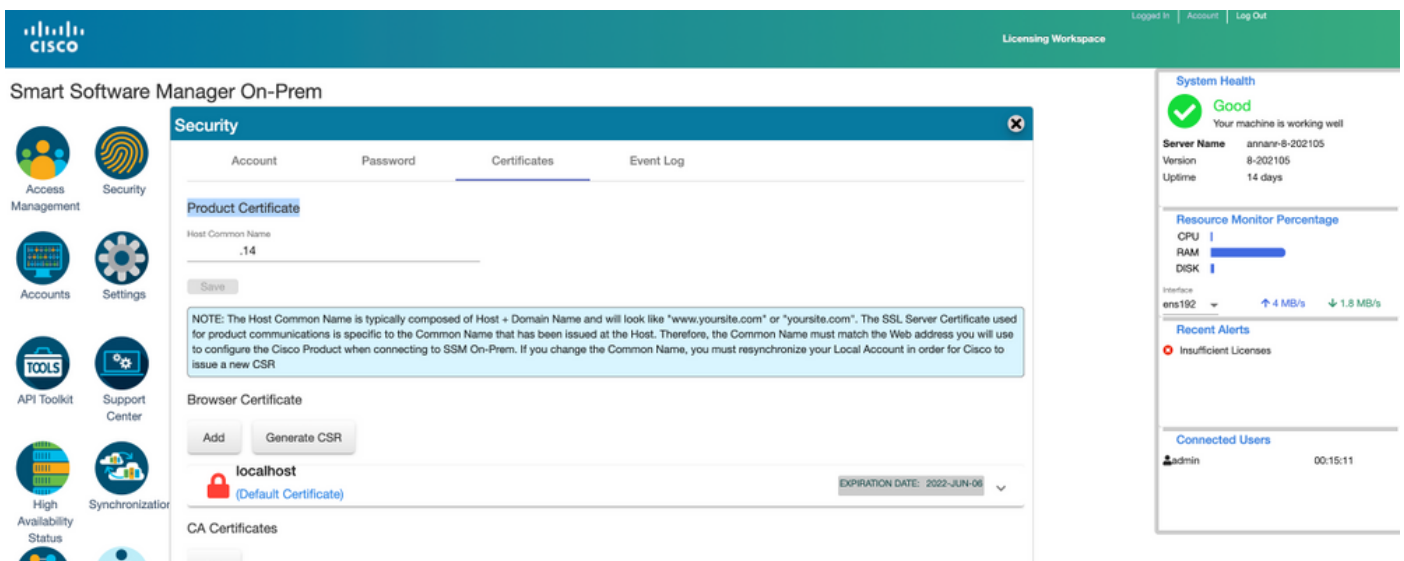
client_addr	backend_start	state	write_lag	flush_lag	replay_lag
169.254.8.2	2021-06-18 15:08:57.211221+00	streaming	0	0	0

The second terminal screenshot shows the status of the secondary node (secondary-node: Online, primary-node: Online). The database replication status indicates that the database is currently the replication slave, replicating from the primary-node (.11). The replication from master table shows the following details:

pg_last_xlog_replay_location
0/C763AF9

3. Wanneer SSM On-Prem wordt ingezet als een HA-cluster, logt u in op SSM On-Prem Administration Workspace, navigeer naar de Security > Certificaten en gebruikt u het virtuele IP-adres op de Host Common Name.

4. Deze waarde moet overeenkomen met de waarde die u wilt gebruiken voor de URL van de productbestemming. Bij het implementeren van dubbele stack (zowel IPv4 als IPv6) moet deze waarde een FQDN zijn en geen IP-adres.
5. Nadat u de Host Common Name hebt bijgewerkt, zorg er dan voor dat uw certificaten met de nieuwe Common Name worden gegenereerd door uw Local Account te synchroniseren met Cisco Smart Software Manager.
6. U moet synchroniseren voordat u de producten opnieuw probeert te registreren met de nieuwe Gemeenschappelijke Naam in de bestemming URL-configuratie.
7. Als de producten niet met elkaar worden gesynchroniseerd, kunnen ze niet worden geregistreerd onder de nieuwe Host Common Name.



8. Twee productgevallen (annanr-39) en (cucmpub) zijn geregistreerd bij het VIP-adres van SSM On-Prem, zoals te zien is op het tabblad **Product Voices**.
9. De licenties die door deze productgevallen zijn verbruikt/gevraagd, zijn weergegeven in het tabblad **Licentie**.

Smart Software Manager On-Prem > Smart Licensing

Smart Licensing

Alerts | Inventory | Convert to Smart Licensing | Reports | Preferences | Activity

Local Virtual Account: Default

General | Licenses | Product Instances | SL Using Policy | Event Log

Name	Product Type	Last Contact	Alerts	Actions
UDI_PID-PI-SOFTWARE;UDI_SN:annan-39	SDNMGMT	2021-Jun-20 18:39:00		Actions
cucompub	UCL	2021-Jun-20 18:36:56		Actions

Showing Page 1 of 12 Records

Smart Software Manager On-Prem > Smart Licensing

Smart Licensing

Alerts | Inventory | Convert to Smart Licensing | Reports | Preferences | Activity

Local Virtual Account: Default

General | Licenses | Product Instances | SL Using Policy | Event Log

Available Actions | Manage License Tags...

License	Billing	Purchased	In Use	Substitution	Balance	Alerts	Actions
Prime Infrastructure 3.x, BASE Lic.	Prepaid	0	1		-1	Insufficient Licenses	Actions
Prime Infrastructure 3.x, Lifecycle Lic.	Prepaid	0	34		-34	Insufficient Licenses	Actions
UC Manager Enhanced License (12.x)	Prepaid	0	3		-3	Insufficient Licenses	Actions
UC Manager Enhanced Plus License (12.x)	Prepaid	0	1		-1	Insufficient Licenses	Actions
UC Manager Telepresence Room License (12.x)	Prepaid	0	1		-1	Insufficient Licenses	Actions

Showing All 6 Records

failover

1. Stop het HA-cluster op primaire server zoals in de afbeelding getoond.

```

PCSD Status:
primary-node: Online
secondary-node: Online

Daemon Status:
corosync: active/enabled
pacemaker: active/enabled
pcsd: active/enabled
Last login: Sun Jun 20 18:12:43 UTC 2021 on pts/0

Database Replication Status:
Database is currently the replication master - Replicating to secondary-node (.9)

Replication to slave:
client_addr | backend_start | state | write_lag | flush_lag | replay_lag
-----
169.254.0.2 | 2021-06-18 15:58:57.211121+00 | streaming | 0 | 0
(1 row)

Replication from master:
pg_last_xlog_replay_location
-----
(1 row)

>> ha_cluster_stop
Last login: Sun Jun 20 18:12:45 UTC 2021 on pts/0
Stopping Cluster (pacemaker)...
Stopping Cluster (corosync)...
>>
  
```

```

PCSD Status:
secondary-node: Online
primary-node: Online

Daemon Status:
corosync: active/enabled
pacemaker: active/enabled
pcsd: active/enabled
Last login: Sun Jun 20 18:11:42 UTC 2021 on pts/0

Database Replication Status:
Database is currently the replication slave - Replicating from primary-node (.11)

Replication to slave:
client_addr | backend_start | state | write_lag | flush_lag | replay_lag
-----
(0 rows)

Replication from master:
pg_last_xlog_replay_location
-----
0/C763AF8
(1 row)

>>
>>
>>
>>
>>
>>
>>
>>
>>
>>
  
```

2. Aanmelden bij de SSM On-Prem GUI met behulp van VIP (.14) en de primaire GUI is defect.

3. De secundaire server (.9) wordt als actieve server weergegeven.

4. De hartslag is losgekoppeld.

5. De primaire server (.11) wordt naar de stand-by status verplaatst.

High Availability

Host | Event Logs

Degraded
The cluster is degraded One of the cluster nodes is offline

Heartbeat
Connection status: **Disconnected**

VIP 192.168.1.14

Active Server	Standby Server
public address (.9)	public address (11)
secondary-node (169.254.0.2)	primary-node (169.254.0.1)
Active	Degraded

System Information

Active Server		Standby Server	
Physical Memory	7.62 GB	Physical Memory	--
Disk Space	7.56 GB	Disk Space	--
Current Version	8-202105	Current Version	--

System Health
Good
Your machine is working well

Server Name: annann-7-20-8-05
Version: 8-202105
Uptime: 11 days

Resource Monitor Percentage
CPU |
RAM |
DISK |

Interface: ens192 | ↑ 5.8 MB/s ↓ 3.9 MB/s

Recent Alerts
Insufficient Licenses

Connected Users
admin | 00:00:18

6. Productinstanties registreren met het gebruik van SSM On-Prem VIP in URL voor productregistratie bij het instellen van transportgateway zoals in de afbeelding wordt getoond.

Administration / Settings / System Settings

General Account Settings

Cisco.com Credentials | Proxy | Support Request | **Smart Licensing Transport**

Please read the below instructions

- *On Clicking HTTP/HTTPS Proxy, traverse to Proxy tab for configuring proxy settings.*
- *In Transport Gateway Mode, usage information will be sent over the Internet via Smart Call Home Transport Gateway. For the setup details, please click [Transport Gateway](#) and [satellite](#).*

Transport Mode: Direct Transport Gateway HTTP/HTTPS Proxy

Enter a valid URL:

Buttons: Save, Reset, Test Connectivity

7. Naam van de productinstantie: pi37 is geregistreerd bij SSM On-Prem met gebruik van een VIP-adres zoals in de afbeelding.

Prime Infrastructure Administration / Licenses and Software Updates / Smart Software Licensing

Licensing Settings License Dashboard Settings

Smart Software Licensing

To view and manage Smart Licenses for your Cisco Smart Account, go to [Smart Software Manager](#)

Smart Software Licensing Status

Licensing Mode: Smart Software Licensing
 Product Name: Prime Infrastructure
 Registration Status: ✔ Registered (Jun 20, 2021)
 License Authorization Status: ✘ Out of Compliance (Jun 20, 2021)
 Smart Account: anranr-sam-on-prem-8-202105
 Virtual Account: Default
 Product Instance Name: p37
 Transport Settings: Transport Gateway [View / Edit](#)

Smart License Usage

Choose Licenses Last updated: Sunday Jun 20, 2021 at 7:28 PM

License	Description	Count	Status
Prime Infrastructure 3.x, Assurance Lic.	The Assurance license	2	✘ Out of Compliance
Prime Infrastructure 3.x, BASE Lic.	The Base license	1	✘ Out of Compliance
Prime Infrastructure 3.x, Lifecycle Lic.	The Lifecycle license	14	✘ Out of Compliance
Prime Infrastructure 3.x, UCS Server MGMT Lic.	The Data Center license	0	✔ No Licenses In Use
Prime Infrastructure 3.x, UCS VM	The Data Center Hypervisor license	0	✔ No Licenses In Use

Success
Smart agent registered successfully

8. Andere productgevallen registreren met het gebruik van SSM On-Prem VIP in productregistratie URL bij het instellen van transportgateway.

Status

i Transport settings saved successfully.

Configure how the product instance will communicate with Cisco.

Direct - product communicates directly with Cisco licensing servers.
 URL : <https://tools.cisco.com/its/service/oddce/services/DDCEService>

Transport Gateway - proxy data via Transport Gateway or Smart Software Manager satellite.
 URL :

HTTP/HTTPS Proxy - send data via an intermediate HTTP or HTTPS Proxy.

Authentication needed on HTTP or HTTPS proxy

IP Address/Host Name :
 Port :
 User Name :
 Password :

Do not share my hostname or IP address with Cisco.

9. Productregistratie is voltooid met SSM On-Prem met behulp van een VIP-adres zoals in de afbeelding.

Status

i Registration completed successfully

Smart Software Licensing Product Registration

To register the product for Smart Software Licensing:

Paste the Product Instance Registration Token you generated from [Smart Software Manager](#) or your Smart Software Manager satellite

10. Naam van de productinstantie: cucm-pub-30 is met succes geregistreerd bij SSM On-Prem met het gebruik van een VIP-adres zoals in de afbeelding weergegeven.

Cisco Unified CM Administration
For Cisco Unified Communications Solutions

System ▾ Call Routing ▾ Media Resources ▾ Advanced Features ▾ Device ▾ Application ▾ User Management ▾ Bulk Administration ▾ Help ▾

License Management

Status

Smart Software Licensing: The system is operating with an insufficient number of licenses. Configure additional licenses in [Smart Software Manager](#) within 72 days to avoid losing the ability to provision users and devices.

Smart Software Licensing

Registration Status	Registered
License Authorization Status	Out of Compliance (Sunday, June 20, 2021 10:29:53 PM EEST)
Smart Account	annanr-ssm-on-prem-8-202105
Virtual Account	Default
Product Instance Name	cucm-pub-30
Export-Controlled Functionality	Allowed
Transport Settings	Transport Gateway View/Edit the Licensing Smart Call Home settings
Licensing Mode	Enterprise

License Usage Report

Below is a summary of current license usage on the system. Current usage details for each type are available by pressing "Update Usage Details". Note that collecting these data is a resource intensive process and may take several deployment.

[View All License Type Descriptions And Device Classifications](#)

Update Usage Details Usage Details Last Updated: 2021-06-20 22:30:09

License Requirements by Type

License Type	Current Usage	Status	Report
CUWL	0	Registered	Users(0) Unassigned Devices(0)
Enhanced Plus	0	No Licenses in Use	Users(0)
Enhanced	44	Out of Compliance	Users(8) Unassigned Devices(36)
Basic	2	Out of Compliance	Users(1) Unassigned Devices(1)
Essential	4	Out of Compliance	Users(0) Unassigned Devices(4)
TelePresence Room	0	No Licenses in Use	Users(0) Unassigned Devices(0)

Users and Unassigned devices

Users	9	View Usage Report
Unassigned Devices	41	View Usage Report

11. Twee nieuwe productgevallen (pi37) en (cucm-pub-30) worden geregistreerd bij het VIP-adres van SSM On-Prem zoals te zien is op het tabblad **Product** Instanties.

12. De licenties die door deze productgevallen zijn gebruikt/gevraagd, zijn weergegeven in het tabblad **Licentie**.

Smart Software Manager On-Prem > Smart Licensing

Smart Licensing

Alerts | **Inventory** | Convert to Smart Licensing | Reports | Preferences | Activity

Local Virtual Account: Default

General | **Licenses** | Product Instances | SL Using Policy | Event Log

Name	Product Type	Last Contact	Alerts	Actions
UDI_PID-PI-SOFTWARE;UDI_SN:annanr-39	SONMGMT	2021-Jun-20 18:39:00		Actions
UDI_PID-PI-SOFTWARE;UDI_SN:pi37:	SONMGMT	2021-Jun-20 19:28:47		Actions
cucmpub	UCL	2021-Jun-20 18:36:56		Actions
cucm-pub-30	UCL	2021-Jun-20 19:28:51		Actions

Showing Page 1 of 1(4 Records) | << >>

Smart Software Manager On-Prem > Smart Licensing

Smart Licensing

Alerts | Inventory | Convert to Smart Licensing | Reports | Preferences | Activity

Local Virtual Account: Default

General | Licenses | Product Instances | SL Using Policy | Event Log

Available Actions | Manage License Tags... | Search by License

License	Billing	Purchased	In Use	Substitution	Balance	Alerts	Actions
<input type="checkbox"/> Prime Infrastructure 3.x, Assurance Lic.	Prepaid	0	2		-2	Insufficient Licenses	Actions
<input type="checkbox"/> Prime Infrastructure 3.x, BASE Lic.	Prepaid	0	2		-2	Insufficient Licenses	Actions
<input type="checkbox"/> Prime Infrastructure 3.x, Lifecycle Lic.	Prepaid	0	48		-48	Insufficient Licenses	Actions
<input type="checkbox"/> UC Manager Basic License (12.x)	Prepaid	0	2		-2	Insufficient Licenses	Actions
<input type="checkbox"/> UC Manager Enhanced License (12.x)	Prepaid	0	47		-47	Insufficient Licenses	Actions
<input type="checkbox"/> UC Manager Enhanced Plus License (12.x)	Prepaid	0	1		-1	Insufficient Licenses	Actions
<input type="checkbox"/> UC Manager Essential License (12.x)	Prepaid	0	4		-4	Insufficient Licenses	Actions
<input type="checkbox"/> UC Manager Telepresence Room License (12.x)	Prepaid	0	1		-1	Insufficient Licenses	Actions

Showing All 8 Records

13. Start de HA-cluster op de primaire server.

```
>> ha_cluster_start
Last login: Sun Jun 20 19:36:49 UTC 2021 on pts/0
Starting Cluster (corosync)...
Starting Cluster (pacemaker)...
```

14. De HA-clusterstatus toont aan dat de primaire database wordt gerepliceerd uit de secundaire database.

15. Primair|Secundair zoals in de afbeelding weergegeven.

```
PGSD Status:
primary-node: Online
secondary-node: Online

Daemon Status:
corosync: active/enabled
pacemaker: active/enabled
pcsd: active/enabled
Last login: Sun Jun 20 18:44:08 UTC 2021 on pts/0

Database Replication Status:
=====
Database is currently the replication slave - Replicating from secondary-node (.....9)

Replication to slave:
client_addr | backend_start | state | write_lag | flush_lag | replay_lag
(0 rows)

Replication from master:
pg_last_xlog_replay_location
(1 row)

PGSD Status:
secondary-node: Online
primary-node: Online

Daemon Status:
corosync: active/enabled
pacemaker: active/enabled
pcsd: active/enabled
Last login: Sun Jun 20 18:42:18 UTC 2021 on pts/0

Database Replication Status:
=====
Database is currently the replication slave - Replicating from primary-node (.....11)

Replication to slave:
client_addr | backend_start | state | write_lag | flush_lag | replay_lag
(0 rows)

Replication from master:
pg_last_xlog_replay_location
8/C763028
(1 row)
```

16. GUI toont hartslag zoals aangesloten, secundair in actieve toestand en Primair in stand-by toestand zoals in de afbeelding.

High Availability

Host | Event Logs

Normal
The status of the high availability cluster is normal.

Heartbeat
Connection status: **Connected**

VIP .14

Active Server
public address (.9)
secondary-node (169.254.0.2)

Standby Server
public address (.11)
primary-node (169.254.0.1)

System Information

Active Server		Standby Server	
Physical Memory	7.62 GB	Physical Memory	--
Disk Space	7.54 GB	Disk Space	--
Current Version	8-202105	Current Version	--

System Health
Good
Your machine is working well

Server Name: annan-7-20-8-05
Version: 8-202105
Uptime: 11 days

Resource Monitor Percentage
CPU |
RAM |
DISK |

Interface: ens192 | ↑ 5.8 MB/s | ↓ 4 MB/s

Recent Alerts
Insufficient Licenses

Connected Users
admin | 00:15:26

valzijde

1. Stop Ha_cluster in het voortgezet.
2. De huidige status van de database van de primaire server en de database van de secundaire server zijn zichtbaar.

```

Last login: Sun Jun 20 18:58:34 UTC 2021 on pts/0
-----
Database Replication Status:
-----
Database is currently the replication slave - Replicating from secondary-node (.9)

Replication to slave:
 client_addr | backend_start | state | write_lag | flush_lag | replay_lag
-----
(0 rows)

Replication from master:
 pg_last_xlog_replay_location
-----
0/8012730
(1 row)
>>

[>>]
[>>]
[>> ha_cluster_stop
Last login: Sun Jun 20 18:45:56 UTC 2021
Stopping Cluster (pacemaker)...

Stopping Cluster (corosync)...
>>
>>
[>> ha_status
Last login: Sun Jun 20 18:47:20 UTC 2021 on pts/0
Error: cluster is not currently running on this node
Last login: Sun Jun 20 18:57:24 UTC 2021 on pts/0
-----
Database Replication Status:
-----
DB service not currently running.
>>

```

3. Geregistreerd in de SSM On-Prem GUI met behulp van VIP (.14) en de secundaire GUI is uitgevallen.
4. Primaire server (.11) wordt als actieve server weergegeven.
5. De hartslag is losgekoppeld.
6. Secundaire server (4.9) verplaatst naar Standby-status.

High Availability

Host | Event Logs

Degraded
The cluster is degraded One of the cluster nodes is offline

Heartbeat
Connection status: **Disconnected**

VIP .14

Active Server	Standby Server
public address (.11)	public address (.9)
primary-node (169.254.0.1)	secondary-node (169.254.0.2)
Active	Degraded

System Information

Active Server		Standby Server	
Physical Memory	7.62 GB	Physical Memory	--
Disk Space	7.83 GB	Disk Space	--
Current Version	8-202105	Current Version	--

System Health
Good
Your machine is working well

Server Name: annan-8-202105
Version: 8-202105
Uptime: 14 days

Resource Monitor Percentage
CPU |
RAM |
DISK |

Interface: ens192 | 4.1 MB/s | 1.9 MB/s

Recent Alerts
Insufficient Licenses

Connected Users
admin | 00:00:16

7. GUI zal in dit stadium toegankelijk zijn vanaf het VIP-adres (.14) en niet vanaf het secundaire IP-adres.

8. Start HA-cluster op de secundaire server.

```
>> ha_cluster_start
Last login: Sun Jun 20 18:57:24 UTC 2021 on pts/0
Starting Cluster (corosync)...
Starting Cluster (pacemaker)...
>>
```

9. Cluster HA-status laat zien dat de database van de primaire server (replicatie-Master) op de linkerreplicatie naar de database van de secundaire server (replicatieslave) rechts zoals verwacht is.

```
PCSD Status:
primary-node: Online
secondary-node: Online

Daemon Status:
corosync: active/enabled
pacemaker: active/enabled
pcsd: active/enabled
Last login: Sun Jun 20 19:05:09 UTC 2021 on pts/0

Database Replication Status:
Database is currently the replication master - Replicating to secondary-node (.9)

Replication to slave:
client_addr | backend_start | state | write_lag | flush_lag | replay_lag
-----|-----|-----|-----|-----|-----
169.254.0.2 | 2021-06-20 19:01:56.616211+00 | streaming | 0 | 0 | 0
(1 row)

Replication from master:
pg_last_xlog_replay_location
0/6012730
(1 row)

PCSD Status:
secondary-node: Online
primary-node: Online

Daemon Status:
corosync: active/enabled
pacemaker: active/enabled
pcsd: active/enabled
Last login: Sun Jun 20 19:04:47 UTC 2021 on pts/0

Database Replication Status:
Database is currently the replication slave - Replicating from primary-node (.11)

Replication to slave:
client_addr | backend_start | state | write_lag | flush_lag | replay_lag
-----|-----|-----|-----|-----|-----
(0 rows)

Replication from master:
pg_last_xlog_replay_location
0/1000000
(1 row)

>>
>>
```

10. De GUI toont hartslag verbonden tussen actieve primaire server en standby secundaire server.

Smart Software Manager On-Prem

High Availability

Host | Event Logs

Normal
The status of the high availability cluster is normal.

Heartbeat
Connection status: **Connected**

VIP .14

Active Server	Standby Server
public address (.11)	public address (.9)
primary-node (169.254.0.1)	secondary-node (169.254.0.2)
Active	Standby

System Information

Active Server	Standby Server
Physical Memory 7.62 GB	Physical Memory --
Disk Space 7.83 GB	Disk Space --
Current Version 8-202105	Current Version --

System Health
Good
Your machine is working well

Server Name annan-8-202105
Version 8-202105
Uptime 14 days

Resource Monitor Percentage
CPU |
RAM |
DISK |

Interface ens192 ↑ 4.1 MB/s ↓ 1.9 MB/s

Recent Alerts
Insufficient Licenses

Connected Users
admin 00:07:26

11. Alle vier productgevallen die zijn geregistreerd op het VIP-adres van SSM On-Prem, zoals te zien is op het tabblad **Product** Instanties.

12. De licenties die door deze productgevallen zijn gebruikt/gevraagd, zijn weergegeven in het tabblad **Licentie**.

Smart Software Manager On-Prem > Smart Licensing

Smart Licensing

Alerts | **Inventory** | Convert to Smart Licensing | Reports | Preferences | Activity

Local Virtual Account: Default

General | **Licenses** | Product Instances | SL Using Policy | Event Log

Name	Product Type	Last Contact	Alerts	Actions
UDI_PID-PI-SOFTWARE:UDI_SN:annan-39	SDNMGMT	2021-Jun-20 18:39:00		Actions
UDI_PID-PI-SOFTWARE:UDI_SN:pi37:	SDNMGMT	2021-Jun-20 19:28:47		Actions
cucompub	UCL	2021-Jun-20 18:36:56		Actions
cuom-pub-30	UCL	2021-Jun-20 19:28:51		Actions

Showing Page 1 of 1(4 Records)


```

=====
Database Replication Status:
=====
Database is currently the replication slave - Replicating from primary-node ( [REDACTED] .5)

Replication to slave:
 client_addr | backend_start | state | write_lag | flush_lag | replay_lag
-----+-----+-----+-----+-----+-----
(0 rows)

Replication from master:
 pg_last_xlog_replay_location
-----
 0/9000D30
(1 row)

[>> ha_teardown
Last login: Wed Sep  2 11:12:42 UTC 2020 on pts/0

WARNING: You are about to destroy the HA cluster configuration
and convert this service node into stand-alone mode without a cluster.

This script operates on the local service node and will not
affect the remote service node.

[Destroy HA cluster and convert to stand-alone? Enter 'yes' to continue: yes
Adjusting firewall...
success
success
The interface is under control of NetworkManager, setting zone to default.
success
success
Destroying HA cluster...
Stopping Cluster (pacemaker)...
Stopping Cluster (corosync)...
Shutting down pacemaker/corosync services...
Killing any remaining services...
Removing all cluster configuration files...
Disabling HA services...
Removed symlink /etc/systemd/system/multi-user.target.wants/pcsd.service.
Stopping SSH tunnel...
Removed symlink /etc/systemd/system/multi-user.target.wants/tunha.service.
Cleaning up...
atlantis_default
Enabling SSMS stand-alone mode...
Created symlink from /etc/systemd/system/multi-user.target.wants/satellite.service to /etc/systemd/system/satellite.service.
Deleting SSH tunnel user...

HA cluster has been destroyed.  SSMS is now in stand-alone mode.

>>

```

7. Het HA-cluster is vernietigd. SSMS bevindt zich nu in een zelfstandige modus.

```

HA cluster has been destroyed.  SSMS is now in stand-alone mode.

[>> ha_status
Last login: Wed Sep  2 11:18:33 UTC 2020
Error: cluster is not currently running on this node
Last login: Wed Sep  2 11:19:02 UTC 2020 on pts/0
HA is not enabled.

>>

```

8. GUI benaderd met het gebruik van het IP-adres van de secundaire server sneeuwt de widget hoge beschikbaarheid niet meer.

Smart Software Manager On-Prem

System Health: **Good**
Your machine is working well
Server Name: CentOS
Version: 8-202006
Uptime: 1 day

Resource Monitor Percentage
CPU: |
RAM: |

Network Interface: ens192
Connected
IPv4 Address: .10
Subnet Mask: 255.255.255.0
IPv6 Address:
Prefix:
Edit Interface

Name	Satellite Name	Last Synchronization	Synchroniz
annanr-ssm-on-prem-8-202006	annanr-ssm-on-...	2020-Sep-02 07:33:32	2020-Oct-
TEST	TEST	2020-Sep-02 07:35:42	2020-Oct-

9. Scheur op de primaire server inschakelen zoals in de afbeelding wordt weergegeven.

```
[>> ha_takedown
Last login: Wed Sep  2 11:03:55 UTC 2020

WARNING: You are about to destroy the HA cluster configuration
and convert this service node into stand-alone mode without a cluster.

This script operates on the local service node and will not
affect the remote service node.

[Destroy HA cluster and convert to stand-alone? Enter 'yes' to continue: yes
Adjusting firewall...
success
success
The interface is under control of NetworkManager, setting zone to default.
success
success
Destroying HA cluster...

Stopping Cluster (pacemaker)...
Stopping Cluster (corosync)...
Shutting down pacemaker/corosync services...
Killing any remaining services...
Removing all cluster configuration files...
Disabling HA services...
Removed symlink /etc/systemd/system/multi-user.target.wants/pcsd.service.
Stopping SSH tunnel...
  sshtunha.service
aded  activating auto-restart SSH tunnel device forwarding service
Removed symlink /etc/systemd/system/multi-user.target.wants/sshtunha.service.
Removed symlink /etc/systemd/system/multi-user.target.wants/tunha.service.
Cleaning up...
atlantis_default
Enabling SSMS stand-alone mode...
Created symlink from /etc/systemd/system/multi-user.target.wants/satellite.service to /etc/systemd/system/satellite
.service.
Deleting SSH tunnel user...

HA cluster has been destroyed.  SSMS is now in stand-alone mode.
```

10. HA is uitgeschakeld.

```

>>
>> ha_status
Last login: Wed Sep  2 11:11:39 UTC 2020
Error: cluster is not currently running on this node
Last login: Wed Sep  2 11:15:21 UTC 2020 on pts/0
HA is not enabled.
>>

```

11. GUI, benaderd met het gebruik van het IP-adres van de primaire server, sneeuwt het venster Hoge beschikbaarheid niet meer.

Wat nu?!

1. Meld u aan bij SSM On-Prem Primaire **beheerwruimte**, navigeer naar de **Security > Certificaten** en gebruik het IP-adres/Hostname/FQDN) van de Primaire server op de Host Common Name.
2. Nadat u de Host Common Name hebt bijgewerkt, zorg er dan voor dat uw certificaten met de nieuwe Common Name worden gegenereerd door uw Local Account te synchroniseren met Cisco SSM.
3. U moet synchroniseren voordat u probeert om de producten opnieuw te registreren met de nieuwe Gemeenschappelijke Naam in de bestemming URL configuratie.
4. Als de producten niet met elkaar worden gesynchroniseerd, kunnen ze niet worden geregistreerd onder de nieuwe Host Common Name.

Gerelateerde informatie

- Console-gids:

https://www.cisco.com/web/software/286285517/151968/Smart_Software_Manager_On-

[Prem 8 Console Guide.pdf](#)

- Gebruikershandleiding:

[https://www.cisco.com/web/software/286285517/151968/Smart Software Manager On-Prem 8 User Guide.pdf](https://www.cisco.com/web/software/286285517/151968/Smart_Software_Manager_On-Prem_8_User_Guide.pdf)

- Installatiegids:

[https://www.cisco.com/web/software/286285517/152313/Smart Software Manager On-Prem 8-202006 Installation Guide.pdf](https://www.cisco.com/web/software/286285517/152313/Smart_Software_Manager_On-Prem_8-202006_Installation_Guide.pdf)

- [Technische ondersteuning en documentatie – Cisco Systems](#)