

Cluster de alta disponibilidade SSM On-Prem 8.X em funcionamento

Contents

[Introduction](#)

[Prerequisites](#)

[Requirements](#)

[Componentes Utilizados](#)

[Informações de Apoio](#)

[Sincronização de conta no local do SSM durante failover e failback](#)

[Alta Disponibilidade](#)

[Failover](#)

[Retorno](#)

[Registro de instância de produto com SSM VIP no local durante failover e failback](#)

[Alta Disponibilidade](#)

[Failover](#)

[Retorno](#)

[Desatualizar um cluster de alta disponibilidade](#)

[O que vem a seguir?!](#)

[Informações Relacionadas](#)

Introduction

Este documento descreve como a sincronização de Conta On-Prem do Smart Software Manager (SSM) e o registro de Instância de Produto funcionam no servidor SSM On-Prem implantado como um Cluster de alta disponibilidade (HA), no momento de cenários de failover e de rechamada.

Prerequisites

Requirements

A Cisco recomenda que você tenha conhecimento destes tópicos:

- SSM no local
- HA

Componentes Utilizados

As informações neste documento são baseadas no SSM On-Prem 8 e superiores.

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. Se a rede estiver

ativa, certifique-se de que você entenda o impacto potencial de qualquer comando.

Informações de Apoio

Estes são os documentos de referência que fornecem informações sobre 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

Sincronização de conta no local do SSM durante failover e failback

O HA entre dois servidores SSM On-Prem deve ser configurado com a ajuda deste guia:

Implante o cluster HA:

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

Nesta demonstração, use:

.5 - Endereço IP do servidor primário

.10 - Endereço IP do servidor secundário

.12 - Endereço IP virtual

Alta Disponibilidade

1. A configuração bem-sucedida do HA mostra o servidor primário (.5) como servidor secundário ativo (.10) como standby e o sd VIP (.12) mostrado na imagem.

High Availability

Host

Event Logs

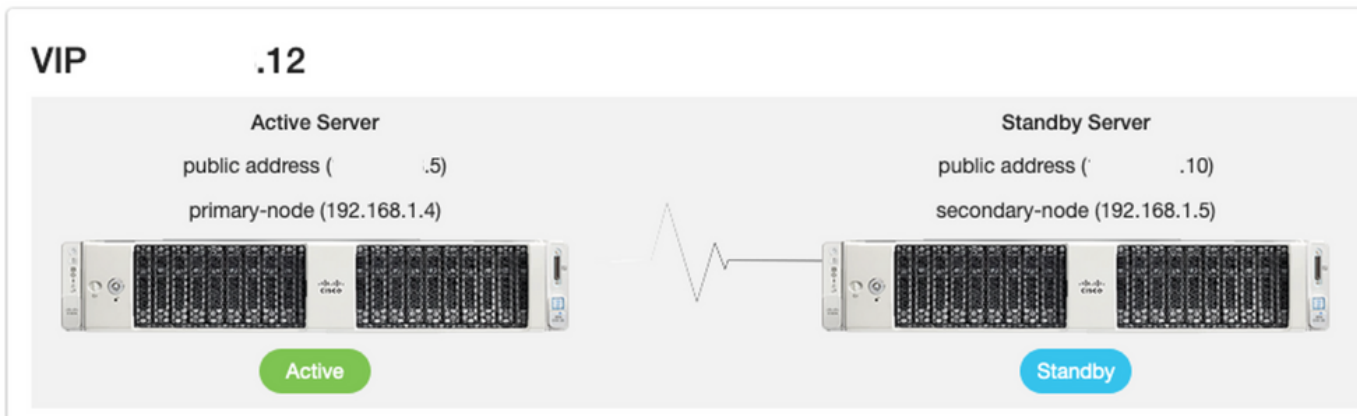


Normal

The status of the high availability cluster is normal.

Heartbeat

Connection status: **Connected**



2. A sincronização do SSM On-Prem com o Cisco Software Central foi concluída com êxito do servidor Principal/Ativo, como mostrado na imagem.

The screenshot shows the Cisco Smart Software Manager On-Prem interface. The top navigation bar includes 'Logged In', 'Account', and 'Log Out'. The main content area is divided into several sections:

- System Health:** Shows a green checkmark and 'Good' status, indicating the machine is working well. It lists Server Name (CentOS), Version (8-202006), and Uptime (1 day).
- Resource Monitor Percentage:** Displays progress bars for CPU, RAM, and DISK usage.
- Recent Alerts:** A section for monitoring system alerts.
- Connected Users:** Shows the current user 'admin' with a session duration of 00:06:1.
- Network:** A sidebar showing the status of the 'ens192' interface as 'Connected' with an IPv4 address ending in .5.
- Synchronization:** A section with 'Accounts' and 'Schedules' tabs. It shows a table of synchronization events for the account 'annanr-ssm-on-prem-8-202006'.
- Accounts:** A table listing account details, including the account name, requested by, and status.

3. O status de HA do cluster mostra que o banco de dados do servidor primário (Replication Master) à esquerda é replicado para o banco de dados do servidor secundário (Replication Slave) à direita, conforme esperado, como mostrado na imagem.

```
psql: Smart Software Manager On-Prem
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 (192.168.1.10)

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: Smart Software Manager On-Prem
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 (192.168.1.5)

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

Replication from master:
 pg_last_xlog_replay_location
-----
0/53CDB68
(1 row)

>>
>>
>>
>>
```

Failover

1. Interrompendo cluster HA no servidor primário como mostrado na imagem.

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

Stopping Cluster (corosync)...
```

2. Primário|Secundário como mostrado na imagem.

```
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
(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' (?): 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)

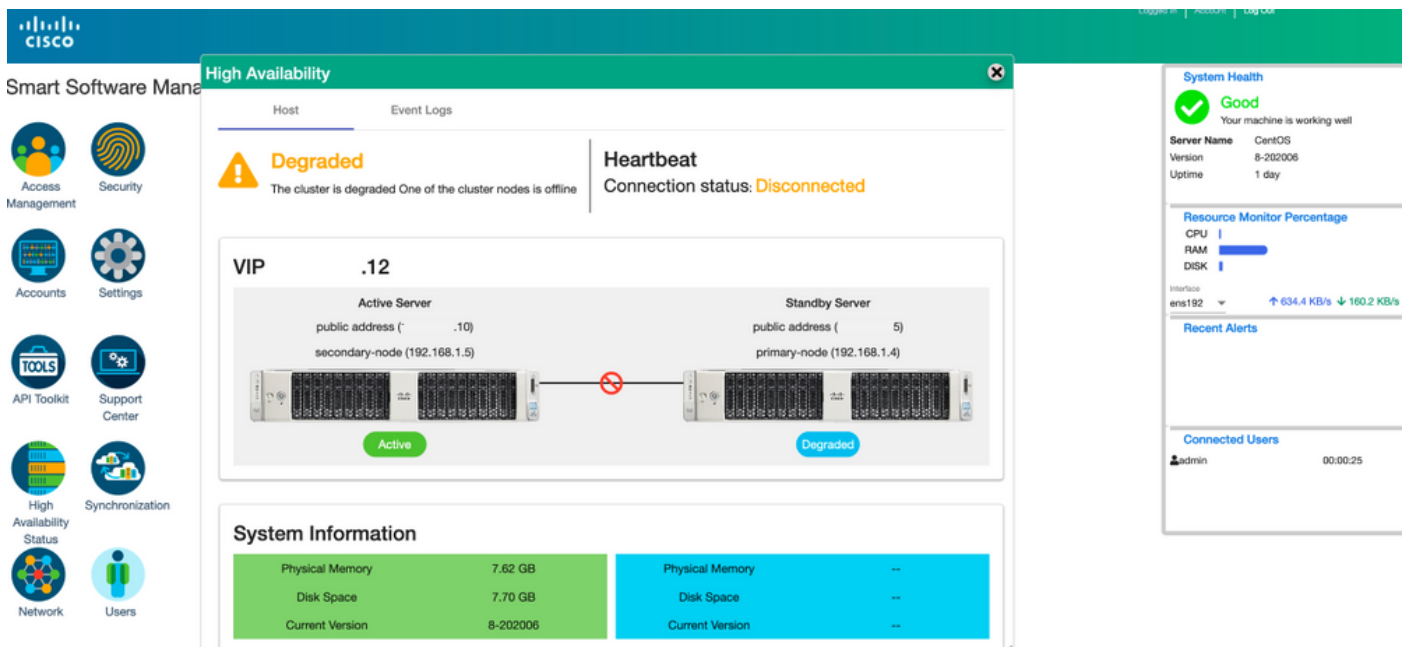
Replication from master:
pg_last_xlog_replay_location
-----
0/53C0C0e
(1 row)
```

3. Conectado à GUI do SSM On-Prem com o uso de VIP e a GUI primária está inoperante.

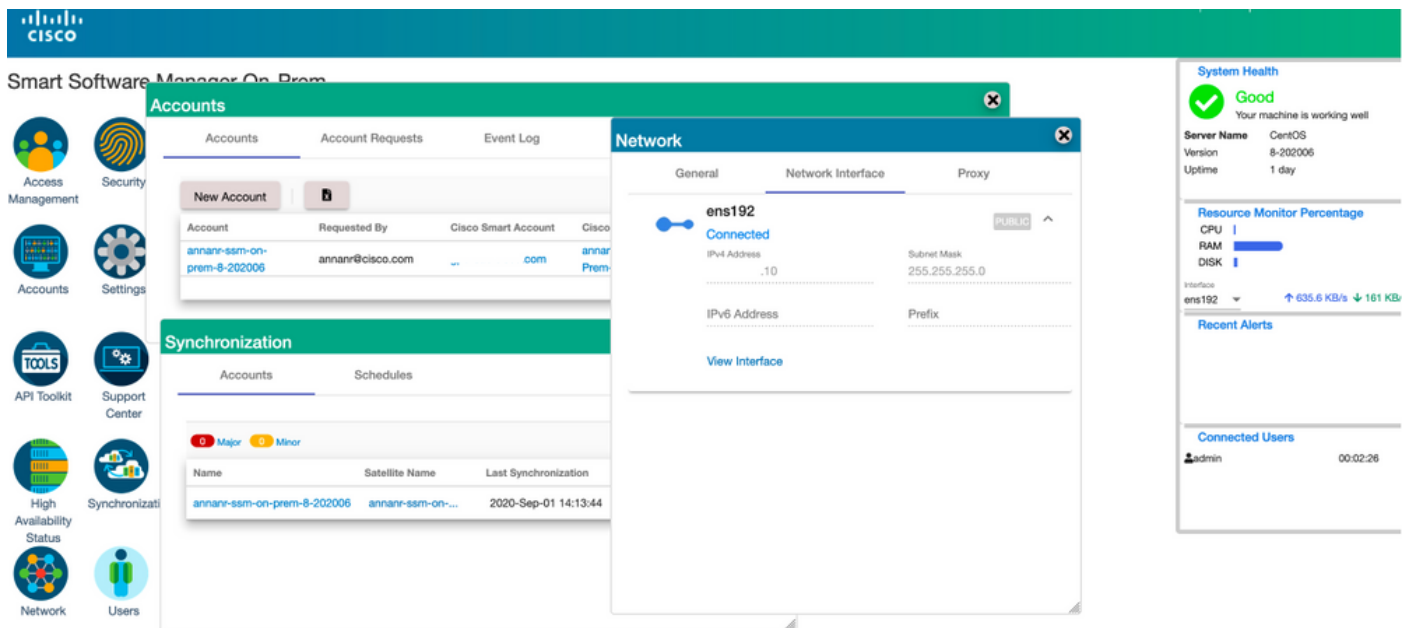
4. O servidor secundário (.10) é mostrado como um servidor Ativo.

5. O ritmo cardíaco está desconectado.

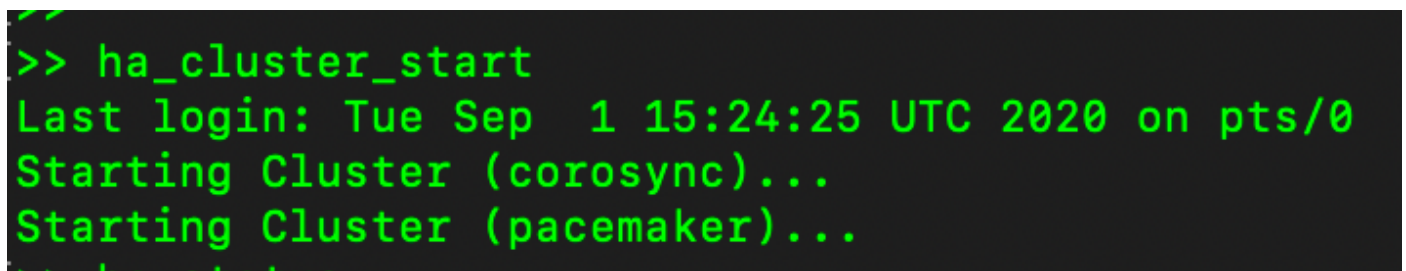
6. Servidor primário (.5) movido para o estado Standby.



7. A sincronização da conta no local do SSM com o Cisco Software Central pode ser vista com êxito na GUI do servidor Secundário/Ativo, como mostrado na imagem.



8. Iniciando o cluster HA no servidor primário como mostrado na imagem.



9. O status do cluster HA mostra que o banco de dados principal é replicado do banco de dados secundário.

10. Primário|Secundário como mostrado na imagem.

Accounts

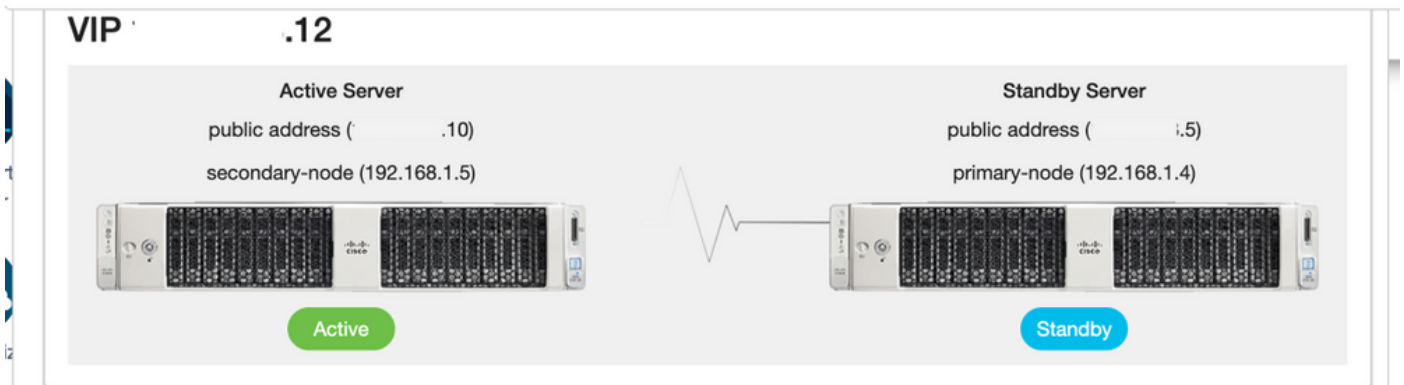
Accounts

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



Retorno

1. Parando Ha_cluster em Secundário, como mostrado na imagem.

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

2. O status atual do banco de dados do servidor primário e do banco de dados do servidor secundário podem ser vistos aqui.

```
=====  
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  
-----  
0/7079810  
(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. Conectado à GUI no local do SSM com o uso de VIP e a GUI secundária está inoperante.

4. O servidor primário (.5) é mostrado como um servidor ativo.

5. O ritmo cardíaco está desconectado.

6. Servidor secundário (.5) movido para o estado Standby.

Host

Event Logs

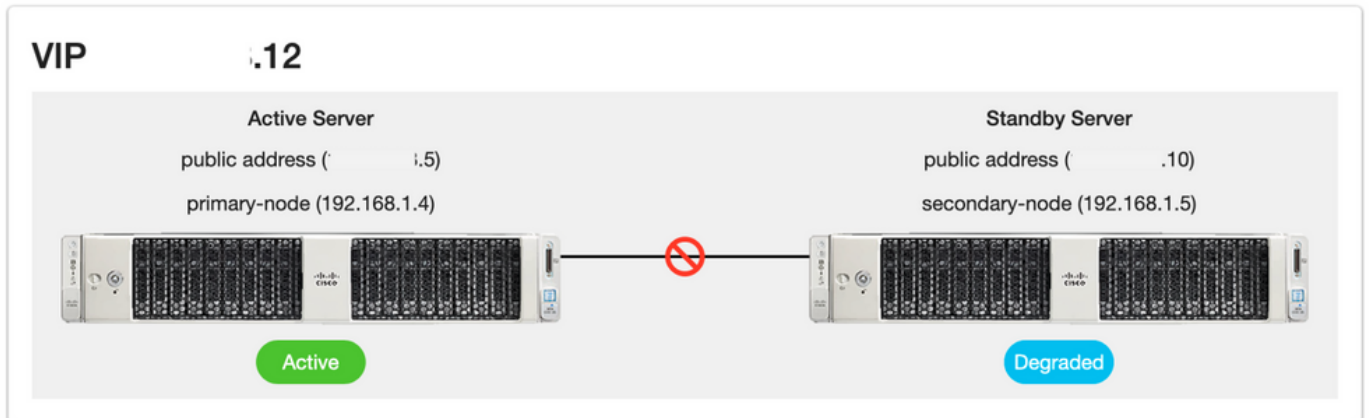


Degraded

The cluster is degraded One of the cluster nodes is offline

Heartbeat

Connection status: **Disconnected**



7. A conta TEST recém-criada pode ser vista em estado sincronizado à medida que a replicação ocorreu do banco de dados Secundário para Principal, como mostrado na imagem.

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 (.5)
 primary-node (192.168.1.4)
 Active

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

Synchronization

Accounts | Synchronization

Name	Satellite Name	Last Synchronization	Synchronization Due	Alerts	Ac
annanr-ssm-on-prem-8-202006	annanr-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. A GUI será acessível do endereço VIP (.12) neste estágio e não do endereço IP secundário.

9. Iniciando o cluster HA no servidor secundário como mostrado na imagem.


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

10. O status de HA do cluster mostra que o banco de dados do servidor primário (Replication Master) à esquerda está sendo replicado para o banco de dados do servidor secundário (Replication Slave) à direita, como esperado na imagem.

```
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
-----
0/7079810
(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
-----
0/7080000
(1 row)

>>
>>
>>
>>
```

11. A GUI mostra Heartbeat conectado entre o servidor Ative Primary e o servidor Standby Secondary.

12. A conta TEST é sincronizada com êxito com o Cisco Software Central.

The screenshot displays the Cisco Smart Software Manager (SSM) interface. The main window is titled "High Availability" and shows a "Normal" status for the high availability cluster. Below this, a "Heartbeat" section indicates a "Connected" status. A diagram shows two servers: the "Active Server" (primary-node at 192.168.1.4) and the "Standby Server" (secondary-node at 192.168.1.5), both connected to a Virtual IP (VIP) of 1.12. On the right, a "System Health" panel shows a "Good" status. Below the main window, a "Synchronization" panel shows a table of synchronization events for the account "TEST".

Name	Satellite Name	Last Synchronization	Synchronization Due	Alerts	Actions
annanr-ssm-on-prem-8-202006	annanr-ssm-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

Registro de instância de produto com SSM VIP no local durante failover e failback

A alta disponibilidade entre dois servidores no local SSM deve ser configurada usando este guia:

Implantação do cluster HA:

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

Nesta demonstração, use:

.11 - Endereço IP do servidor primário

.9 - Endereço IP do servidor secundário

.14 - Endereço IP virtual

Alta Disponibilidade

1. Configuração de HA bem-sucedida que mostra o servidor primário (.11) como servidor secundário ativo (.9) como standby e VIP (.14).

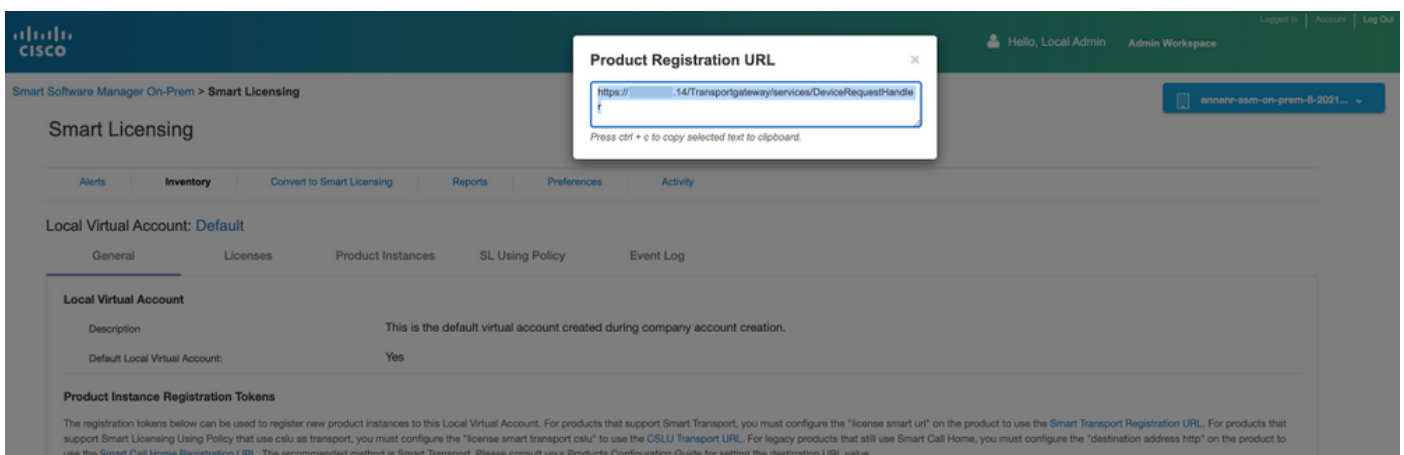
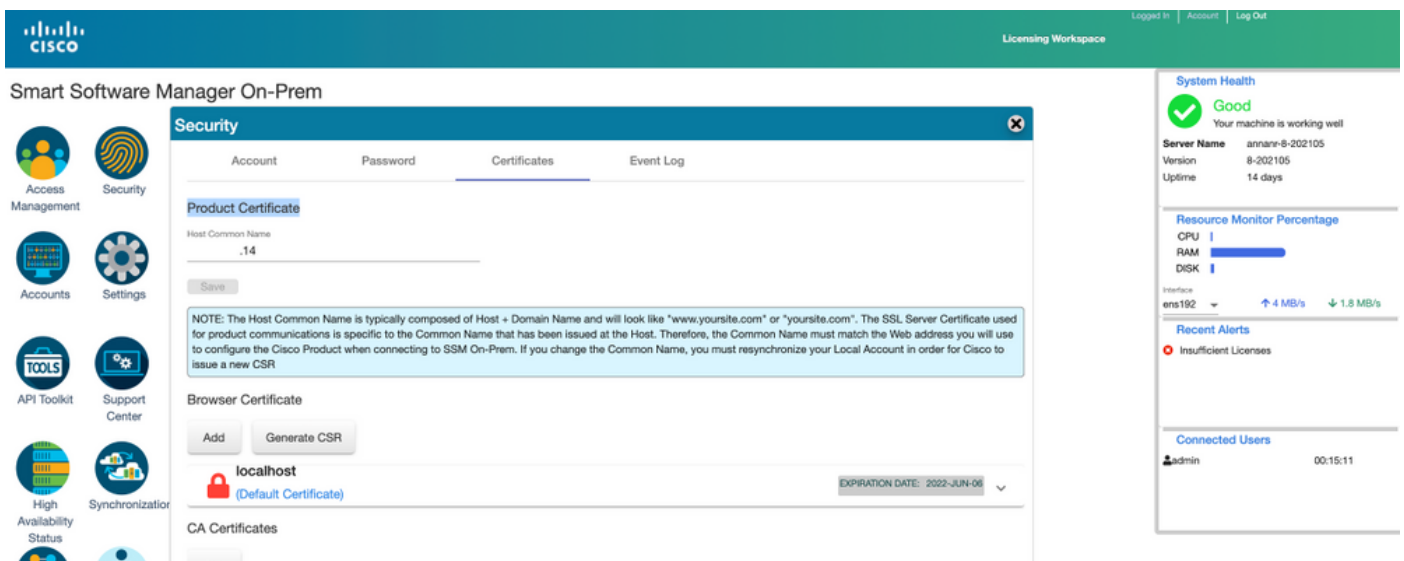
The screenshot shows the Cisco Smart Software Manager On-Prem interface. The main window is titled 'High Availability' and displays a 'Normal' status for the HA cluster. Below this, it shows the 'Heartbeat' connection status as 'Connected'. A 'VIP' (.14) is shown shared between an 'Active Server' (primary-node 169.254.0.1) and a 'Standby Server' (secondary-node 169.254.0.2). The 'System Information' section provides details for both servers, including Physical Memory, Disk Space, and Current Version.

2. O status de HA do cluster mostra que o banco de dados do servidor primário (Replication Master) à esquerda é replicado para o banco de dados do servidor secundário (Replication Slave) à direita, conforme esperado, como mostrado na imagem.

The image shows two terminal windows displaying PostgreSQL replication status. The left terminal shows the primary node (secondary-node) as the replication master, and the right terminal shows the secondary node (primary-node) as the replication slave. Both terminals show the 'Database Replication Status' and 'Replication from master' details.

3. Quando o SSM On-Prem for implantado como um cluster HA, faça login no SSM On-Prem Administration Workspace, navegue até **Security > Certificados** e use o Virtual IP Address no Host Common Name.

4. Esse valor deve corresponder ao valor que você planeja usar para a URL de destino do produto. Se estiver implantando pilha dupla (IPv4 e IPv6), esse valor deve ser um FQDN e não um endereço IP.
5. Depois de atualizar o nome comum do host, certifique-se de que seus certificados sejam regenerados com o novo nome comum, sincronizando suas contas locais com o Cisco Smart Software Manager.
6. Você deve sincronizar antes de tentar registrar novamente os produtos com o novo Nome Comum na configuração de URL de destino.
7. A não sincronização pode fazer com que os produtos não se registrem com o novo Host Common Name.



8. Duas instâncias de produto (annanr-39) e (cucmpub) estão registradas no endereço VIP do SSM On-Prem, conforme visto na guia **Product Instances (Instâncias de produto)**.
9. A licença consumida/solicitada por essas instâncias de produto está refletindo na guia **Licença**.

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

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. Interrompendo cluster HA no servidor primário como mostrado na imagem.

```

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)

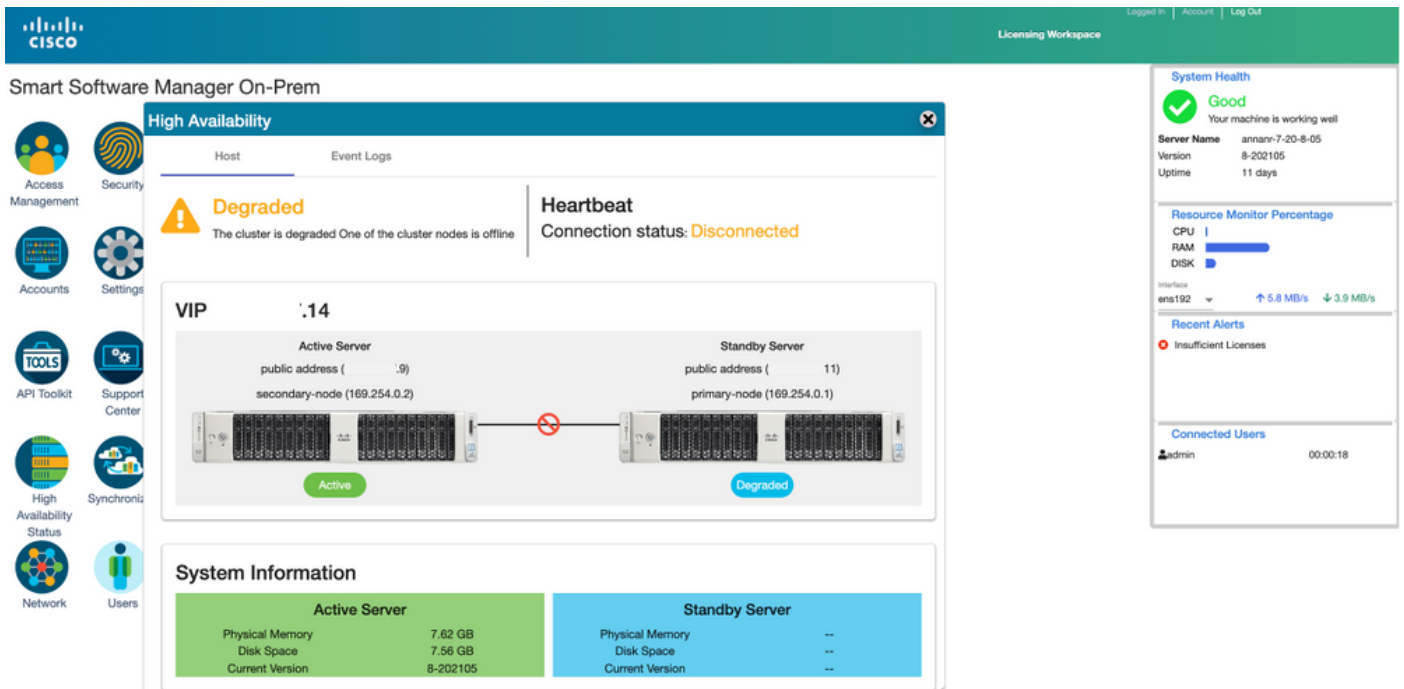
Replication to slave:
client_addr | backend_start | state | write_lag | flush_lag | replay_lag
-----
(0 rows)

Replication from master:
pg_last_xlog_replay_location

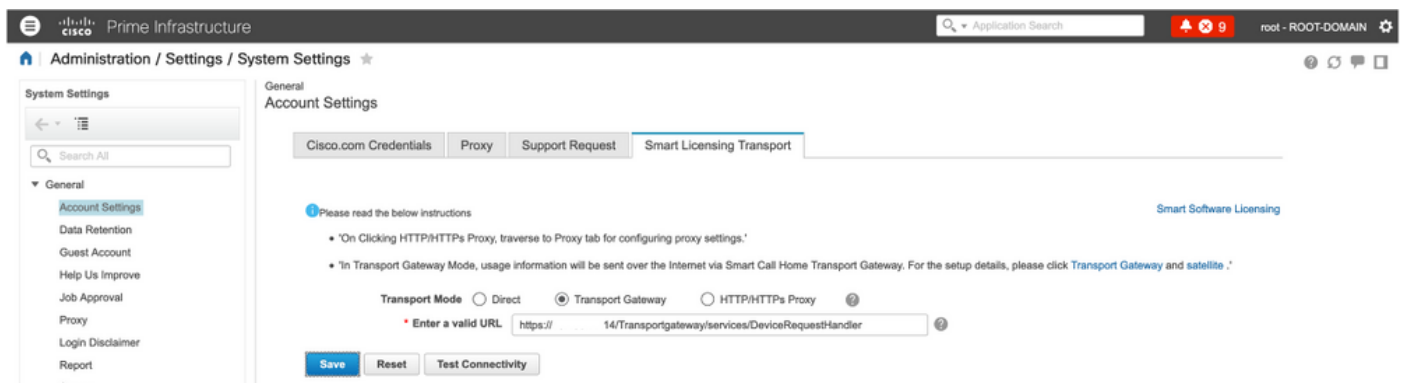
0/C763AF8
(1 row)

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

2. Conectado à GUI do SSM On-Prem com o uso de VIP (.14) e a GUI primária está inoperante.
3. O servidor secundário (.9) é mostrado como um servidor ativo.
4. O ritmo cardíaco está desconectado.
5. O servidor primário (.11) é movido para o estado Standby.



6. Registrando instâncias de produtos com o uso do SSM On-Prem VIP na URL de registro de produto na configuração do Transport Gateway, como mostrado na imagem.



7. Nome da instância do produto: pi37 foi registrado com êxito com o SSM On-Prem com o uso de um endereço VIP, como mostrado na imagem.

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

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

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. Registrando outras instâncias de produto com o uso do SSM On-Prem VIP na URL de registro de produto na configuração do Transport Gateway.

Status: 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. O registro do produto foi concluído com êxito com o SSM On-Prem usando um endereço VIP como mostrado na imagem.

Status: 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. Nome da instância do produto: cucm-pub-30 foi registrado com êxito com o SSM On-Prem com o uso de um endereço VIP, como mostrado na imagem.

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. Duas novas instâncias de produto (pi37) e (cucm-pub-30) estão registradas no endereço VIP do SSM On-Prem, conforme visto na guia **Product Instances**.

12. A licença consumida/solicitada por essas instâncias de produto está refletindo na guia **Licença**.

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	SDNMGMT	2021-Jun-20 18:39:00		Actions
UDI_PID-PI-SOFTWARE;UDI_SN:pi37:	SDNMGMT	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. Iniciando o cluster HA no servidor primário.

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

14. O status do cluster HA mostra que o banco de dados principal é replicado do banco de dados secundário.

15. Primário|Secundário como mostrado na imagem.

```
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
0/C763028
(1 row)
```

16. A GUI mostra o heartbeat como conectado, Secundário no estado Ativo e Primário no estado Standby, como mostrado na imagem.

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)
Active

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

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	--

Retorno

1. Parando Ha_cluster no secundário.
2. O status atual do banco de dados do servidor primário e do banco de dados do servidor secundário inativo podem ser vistos.

```

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)

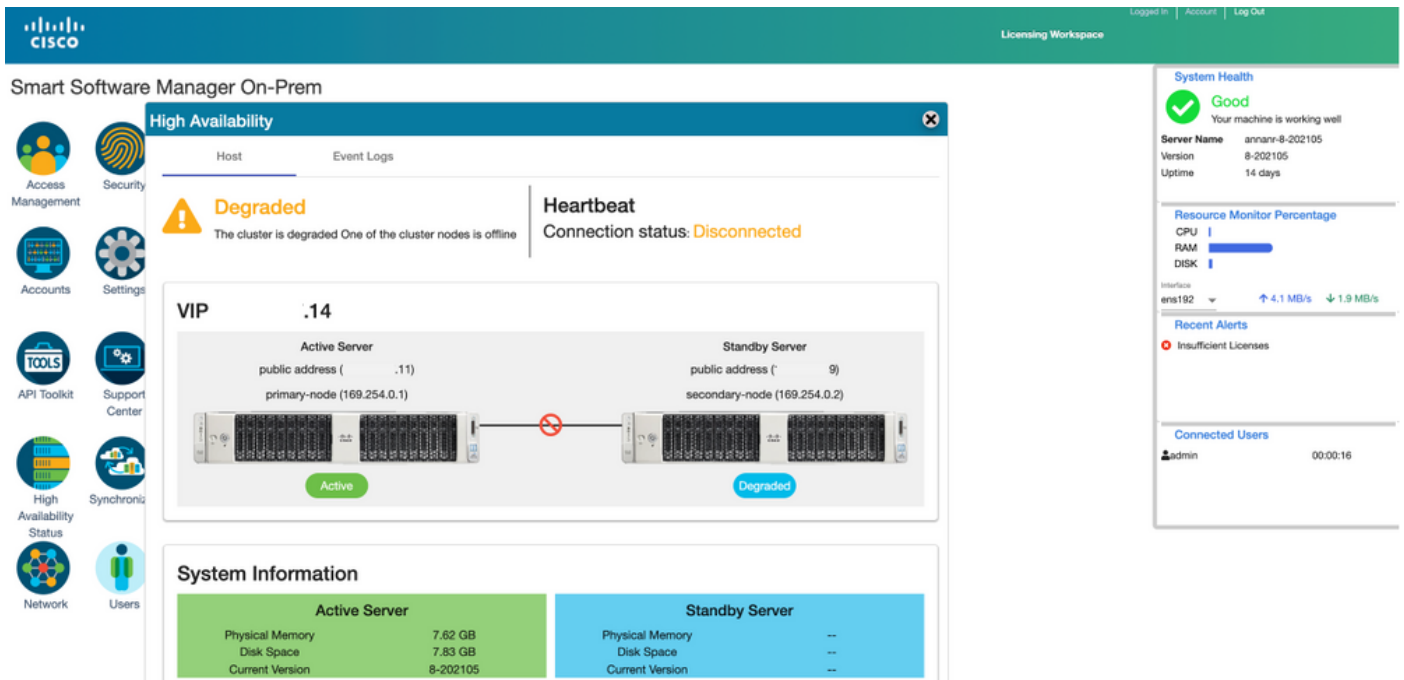
Replication from master:
 pg_last_xlog_replay_location
-----
0/8012730
(1 row)
>>

[>>]
[>>]
[>> 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.
>>

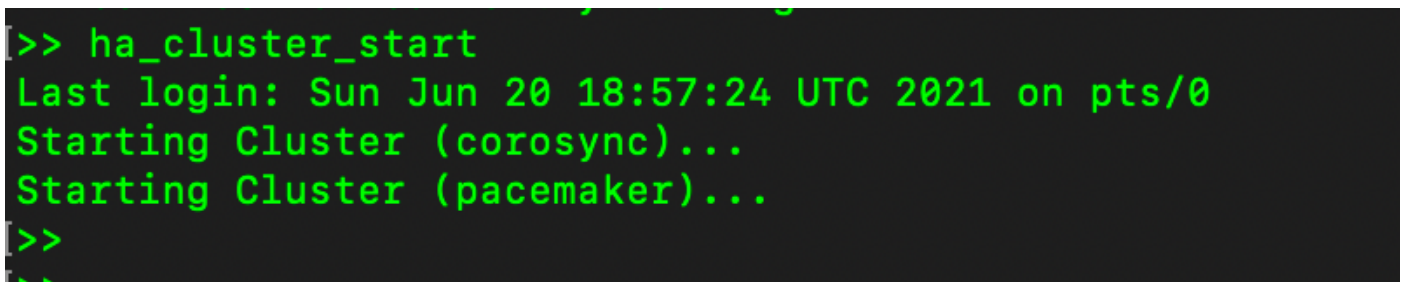
```

3. Conectado à GUI no local do SSM usando VIP (.14) e a GUI secundária está inoperante.
4. O servidor primário (.11) é mostrado como um servidor Ativo.
5. O ritmo cardíaco está desconectado.
6. Servidor secundário (.9) movido para o estado Standby.

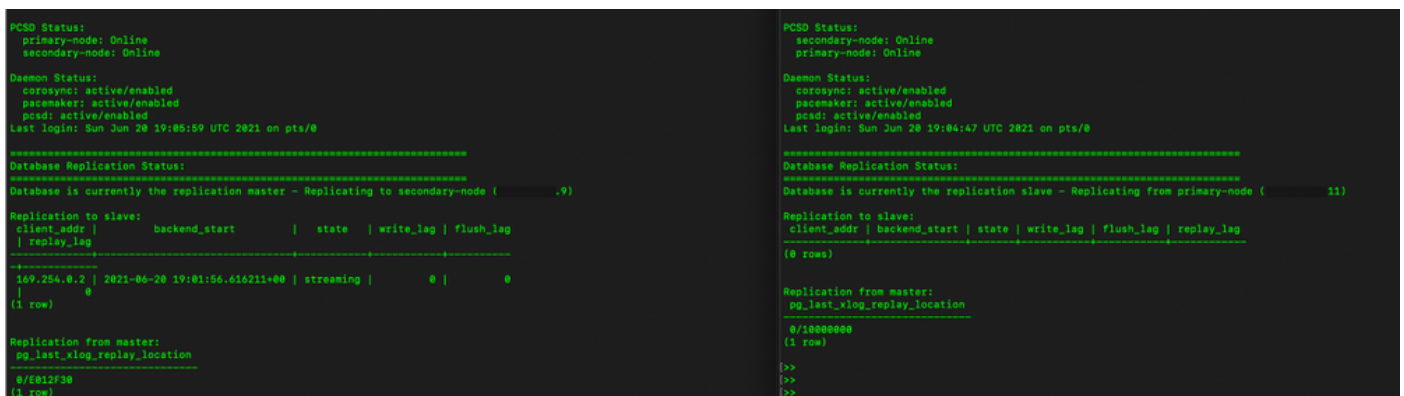


7. A GUI será acessível do endereço VIP (.14) neste estágio e não do endereço IP secundário.

8. Iniciando o cluster HA no servidor secundário.



9. O status de HA do cluster mostra que o banco de dados do servidor primário (Replication Master) à esquerda é replicado para o banco de dados do servidor secundário (Replication Slave) à direita conforme esperado.



10. A GUI mostra Heartbeat conectado entre o servidor Ative Primary e o servidor Standby Secondary.

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 (.11)
primary-node (169.254.0.1)
Active

Standby Server
public address (.9)
secondary-node (169.254.0.2)
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. Todas as quatro instâncias de produto registradas no endereço VIP do SSM On-Prem, conforme visto na guia **Product Instances**.

12. A licença consumida/solicitada por essas instâncias de produto está refletindo na guia **Licença**.

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

Search by Name, Product Type

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

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

Smart Licensing

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

Local Virtual Account: Default

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

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		-9	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

Desatualizar um cluster de alta disponibilidade

1. Um cluster no local do Cisco Smart Manager pode ser baixado diretamente para um único nó autônomo.
2. Use o console local para se conectar ao SSM principal/ativo no local com o uso do comando <ha_takedown>.
3. Depois de verificar a operação do SSM On-Prem, o servidor Secundário/Standby deve ser descartado e não pode ser reutilizado.
4. Agora você terá um sistema autônomo em vez de um cluster.
5. O encerramento foi iniciado conforme mostrado na imagem.

```

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 | 2020-09-02 09:08:59.358586+00 | streaming | 0 | 0 | 0
(1 row)

Replication from master:
pg_last_xlog_replay_location
-----
0/7079010
(1 row)

>>> ha_takedown
Last login: Wed Sep 2 11:03:58 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
The interface is under control of NetworkManager, setting zone to default.
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...
ssh tunnels service
added activating auto-restart SSH tunnel device forwarding service
Removed symlink /etc/systemd/system/multi-user.target.wants/ssh tunnels.service.
Removed symlink /etc/systemd/system/multi-user.target.wants/tunha.service.
Cleaning up...
atlantis_default
Enabling SSM 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. SSM is now in stand-alone mode.

>>>
>>> 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.
    
```

```

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
-----
0/9080030
(1 row)

>>> ha_takedown
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
The interface is under control of NetworkManager, setting zone to default.
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...
ssh tunnels service
added activating auto-restart SSH tunnel device forwarding service
Removed symlink /etc/systemd/system/multi-user.target.wants/ssh tunnels.service.
Removed symlink /etc/systemd/system/multi-user.target.wants/tunha.service.
Cleaning up...
atlantis_default
Enabling SSM 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. SSM is now in stand-alone mode.

>>>
>>> ha_status
Last login: Wed Sep 2 11:18:53 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.
    
```

6. Disparo no servidor secundário, como mostrado na imagem.


```

=====
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
-----
 0/9000D30
(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. O cluster HA foi destruído. O SSMS agora está em um modo independente.

```

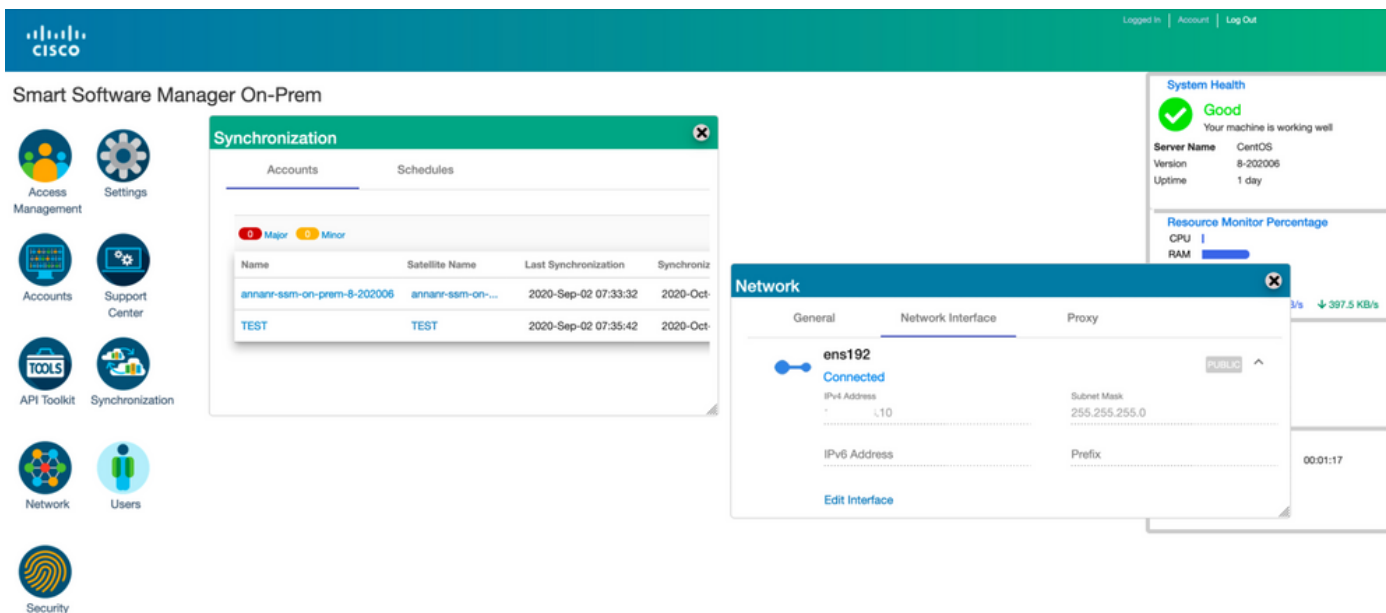
HA cluster has been destroyed.  SSMS is now in stand-alone mode.

[>> 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. A GUI acessada com o uso do endereço IP do servidor secundário não exibe mais o widget Alta disponibilidade.



9. Disparo no servidor Primário como mostrado na imagem.

```
[>> 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 foi desabilitado com êxito.

```

>>
>> 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. A GUI acessada com o uso do endereço IP do servidor primário não exibe mais o widget Alta disponibilidade.

O que vem a seguir?!

1. Faça login no SSM On-Prem Primary **Administration Workspace**, navegue até **Security > Certificados** e use o Primary server's (endereço IP/nome de host/FQDN) no Host Common Name.
2. Depois de atualizar o Nome Comum do Host, certifique-se de que seus certificados sejam regenerados com o novo Nome Comum, sincronizando suas Contas Locais com o Cisco SSM.
3. Você deve sincronizar antes de tentar registrar novamente os produtos com o novo Nome Comum na configuração de URL de destino.
4. A não sincronização pode fazer com que os produtos não se registrem com o novo Host Common Name.

Informações Relacionadas

- Guia do console:
https://www.cisco.com/web/software/286285517/151968/Smart_Software_Manager_On-Prem_8_Console_Guide.pdf
- Guia do usuário:

https://www.cisco.com/web/software/286285517/151968/Smart_Software_Manager_On-Prem_8_User_Guide.pdf

- Guia de instalação:

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

- [**Suporte Técnico e Documentação - Cisco Systems**](#)