

CA API Management

Cluster de-configuration



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1 INTRODUCTION

The goal of this document is to summarize the steps to break the clustering configuration of a Layer7 API Gateway cluster, in order to get two independent single-node gateways.

2 PREREQUISITES

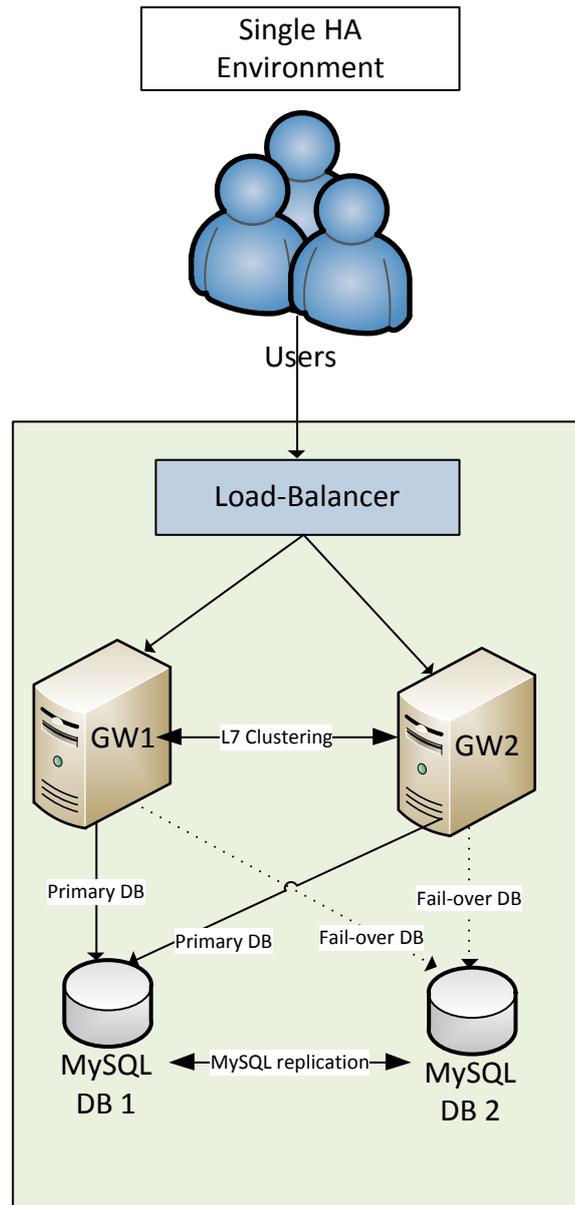
This procedure has been setup with **CA API Gateway version 8.3, software form.**

Before using this configuration-guide, you must backup the existing cluster (snapshot, MySQL backup, Gateway export) in order to be able to recreate the configuration in case of error.

3 INITIAL ARCHITECTURE

The initial architecture is a cluster of 2 Gateways Layer7 with their MySQL databases, with in multi-master replication.

Both gateways are connected to the 1st database (the local one), a failover will be automatically made to the 2nd database (the remote one) in case of incident on the 1st Database.

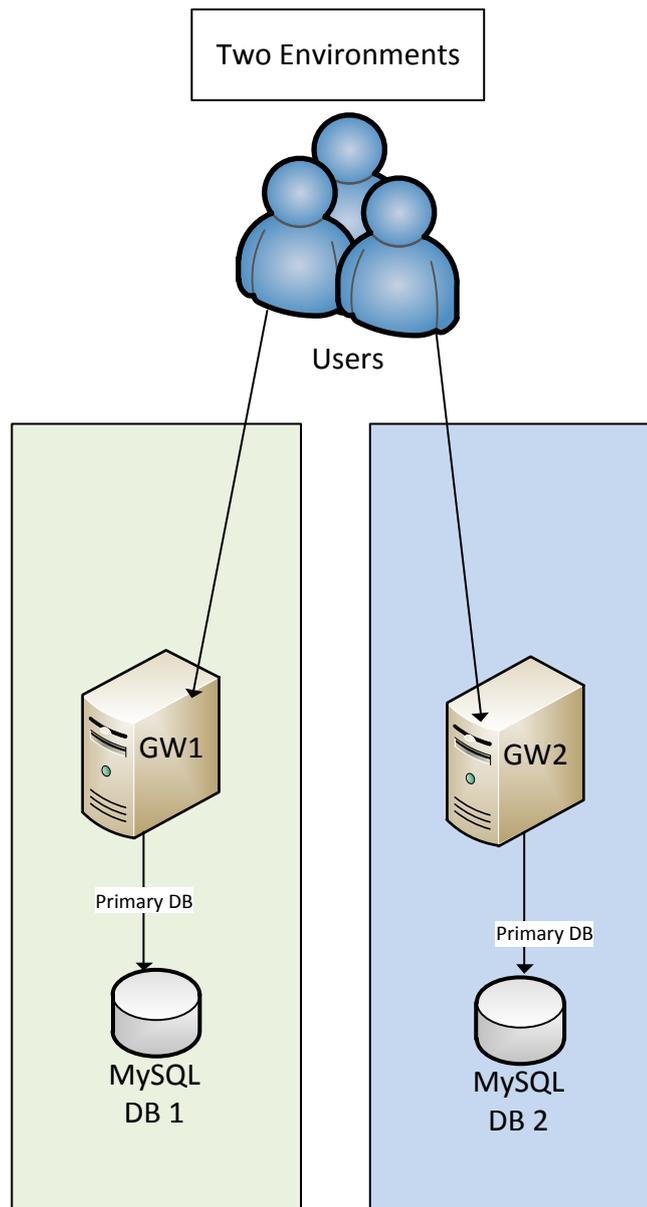


4 TARGET ARCHITECTURE

The target architecture is made of two single-node gateways.

Each gateway has its own local MySQL database.

There will be no MySQL replication between both gateways.



5 PROCEDURE

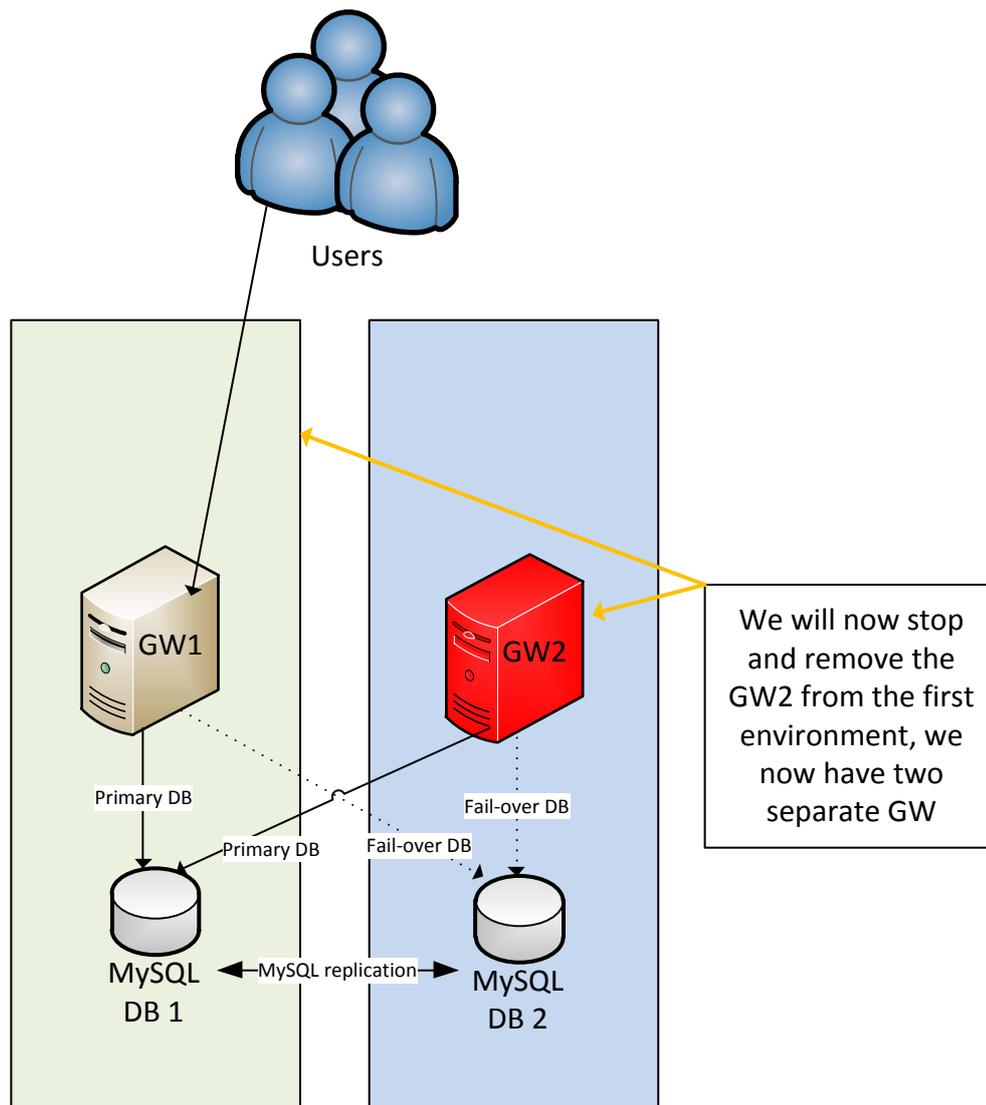
The cluster de-configuration will consist of the following actions.

Important: during the configuration, don't modify policies on gateways.

5.1 REMOVE THE SECOND GATEWAY FROM THE CLUSTER

In this chapter, we remove the second gateway from the cluster to create a new environment:

- The load-balancer will not be required anymore.

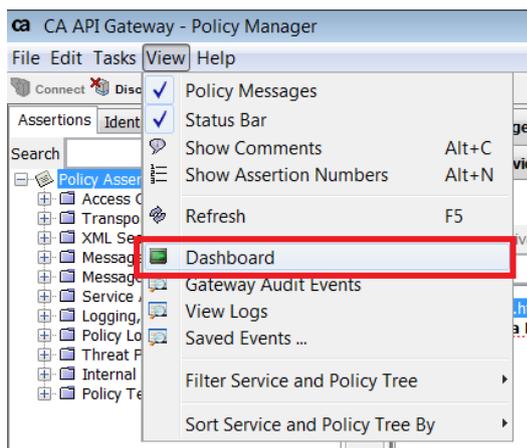


- Stop the second Gateway :
 - o Connect to the gateway with the service-account and stop-it with the included script « /opt/SecureSpan/Gateway/runtime/bin/gateway.sh stop »

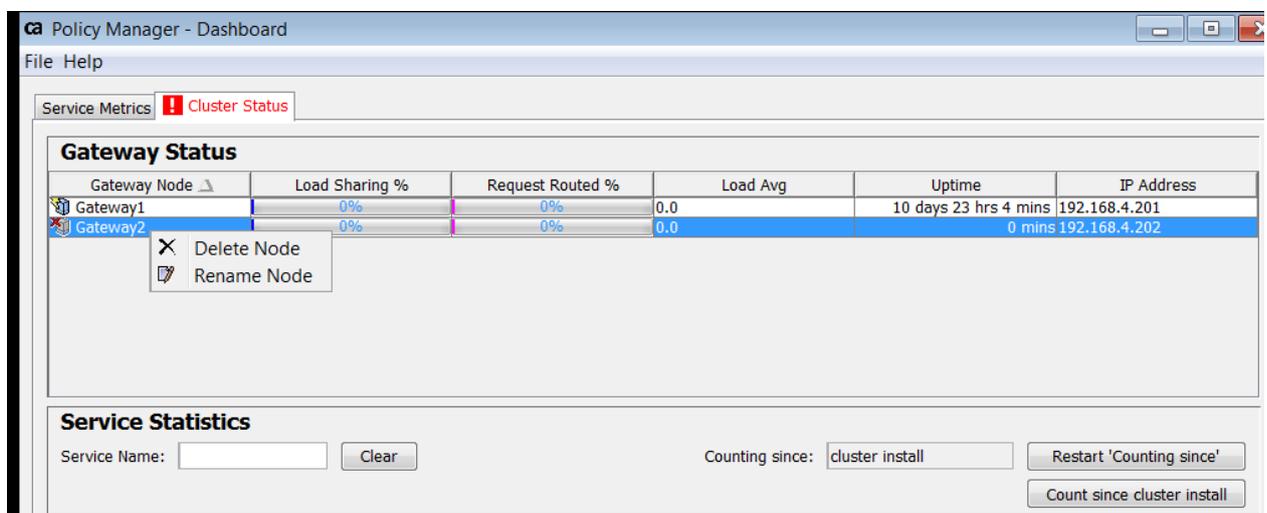


```
gateway@cmvm:/opt/SecureSpan/Gateway/runtime/bin
File Edit View Terminal Tabs Help
[gateway@cmvm bin]$ /opt/SecureSpan/Gateway/runtime/bin/gateway.sh stop
Stopping Process Controller...
Shutting down Gateway Services: done.
[gateway@cmvm bin]$
```

- Connect to the Policy Manager on the first Gateway to remove the second Gateway:
 - o On the Policy Manager, go on View → Dashboard



- o Select the gateway, then click on “Delete Node” on the second Gateway :



Service Metrics ! Cluster Status

Gateway Status

Gateway Node	Load Sharing %	Request Routed %	Load Avg	Uptime	IP Address
Gateway1	0%	0%	0.0	10 days 23 hrs 4 mins	192.168.4.201
Gateway2	0%	0%	0.0	0 mins	192.168.4.202

Context menu for Gateway2:

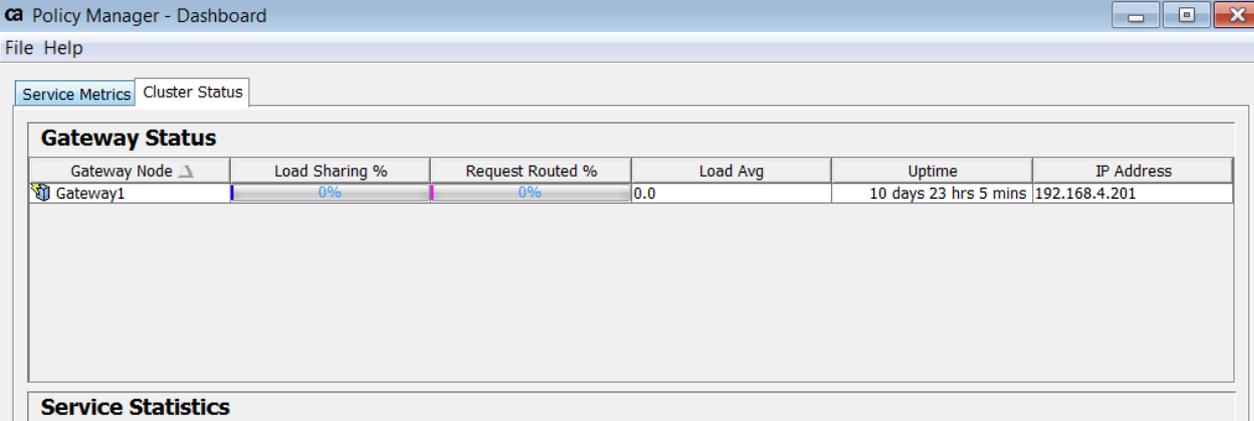
- ✕ Delete Node
- 🔍 Rename Node

Service Statistics

Service Name:

Counting since:

- There is only one gateway on the cluster :



The screenshot shows the 'Policy Manager - Dashboard' window. The 'Cluster Status' tab is active, displaying the 'Gateway Status' section. Below this section is a table with the following data:

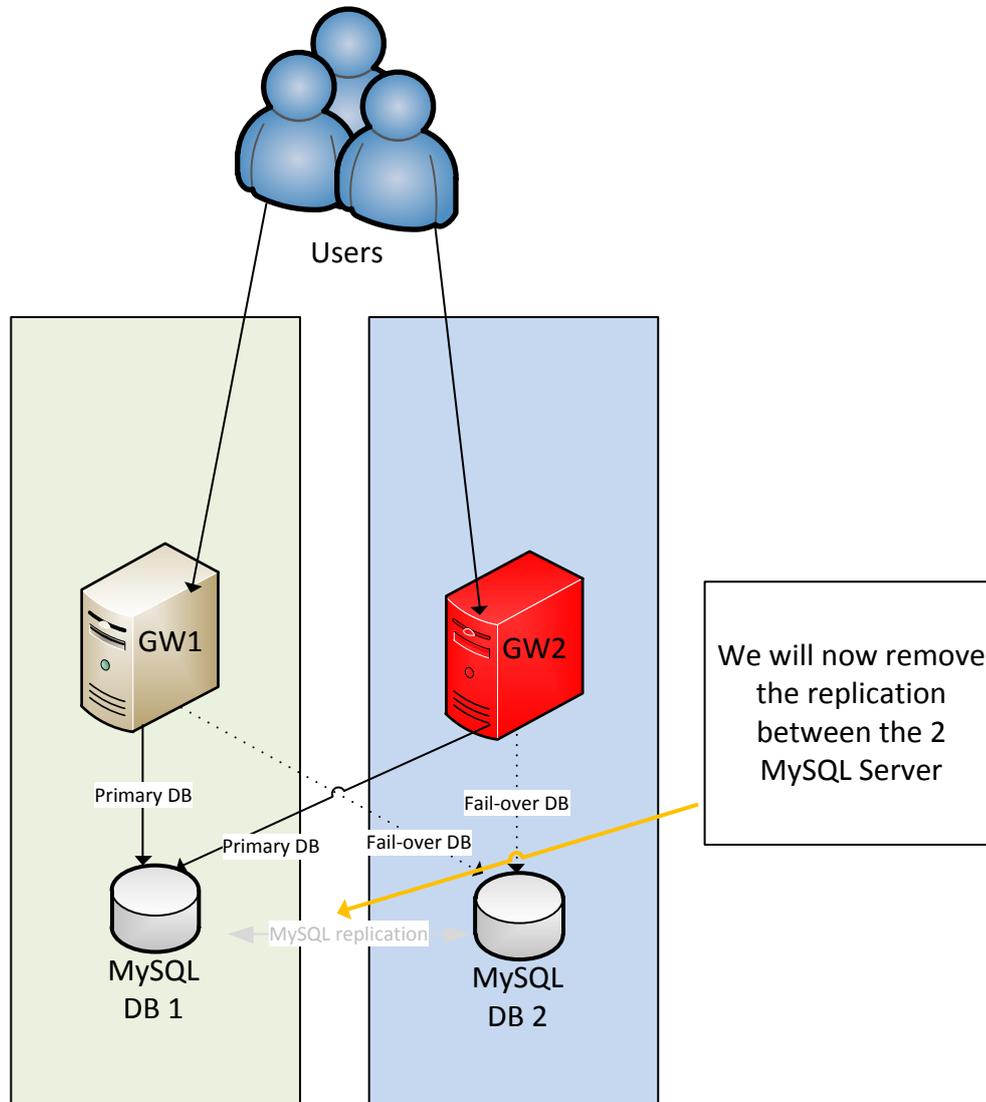
Gateway Node	Load Sharing %	Request Routed %	Load Avg	Uptime	IP Address
Gateway1	0%	0%	0.0	10 days 23 hrs 5 mins	192.168.4.201

Below the table, the 'Service Statistics' section is visible but empty.

- Now the environment is only composed on the first gateway;
- The second gateway is stopped;

5.2 STOP THE REPLICATION

In this chapter, we remove the MySQL replication:

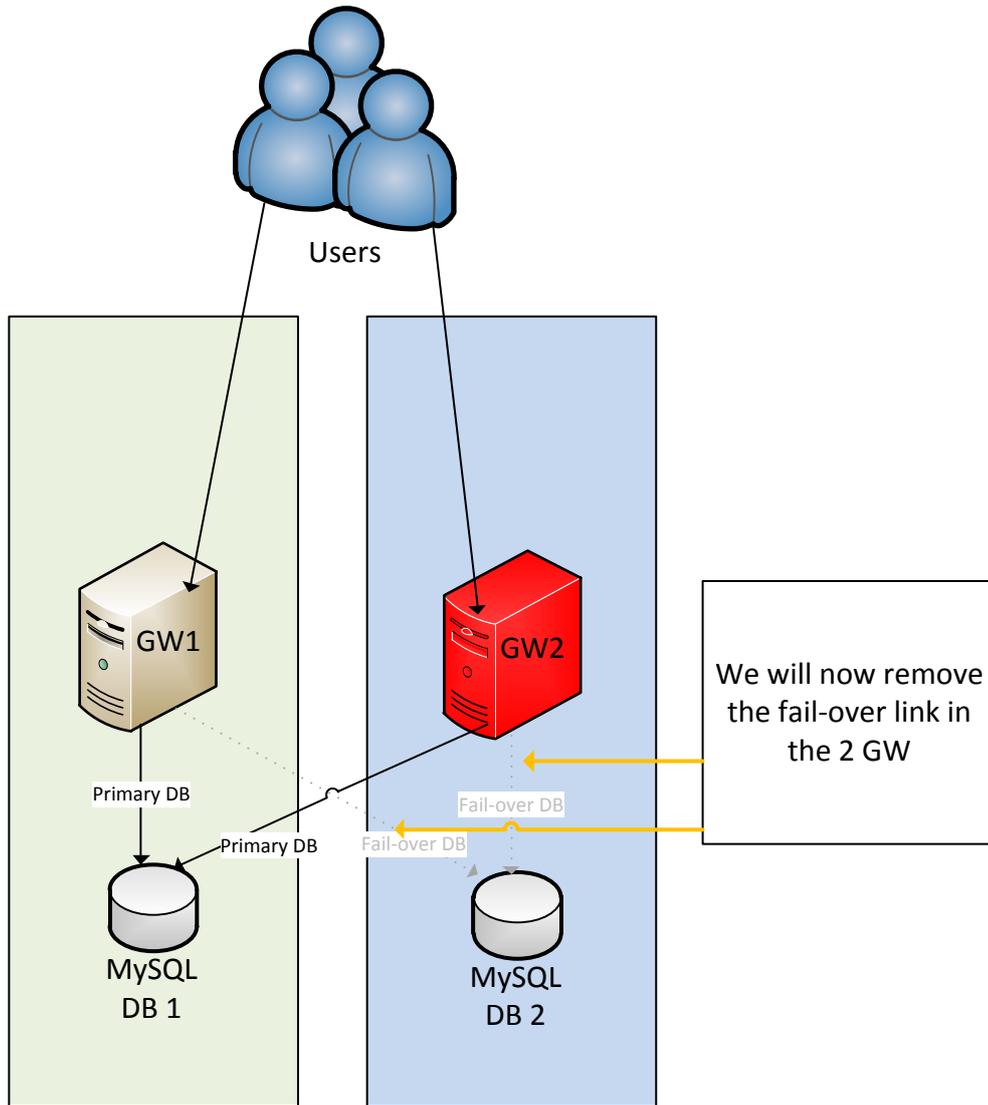


On both servers, connect by ssh and stop the MySQL replication:

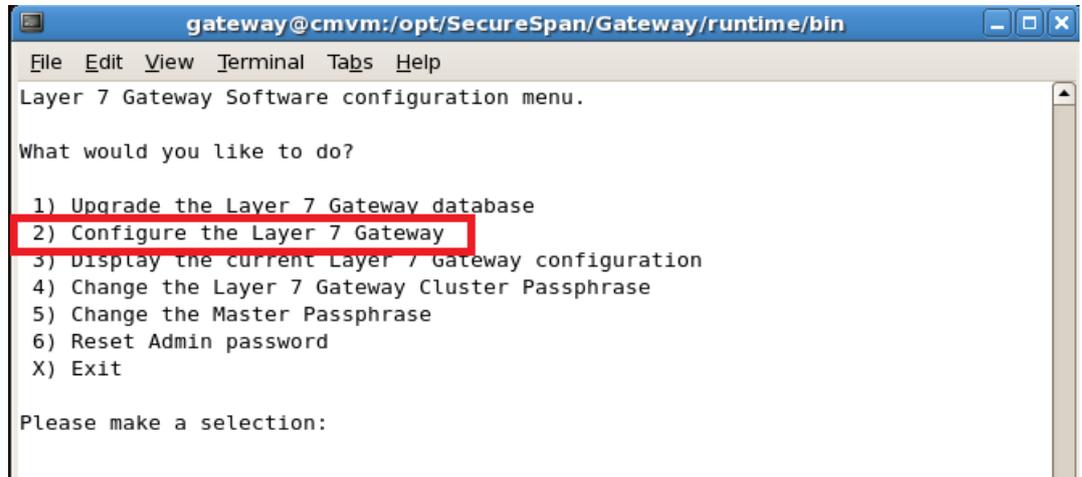
- Edit the `/etc/my.cnf` to comment each line that begin with “master”
 - o `log-bin=/var/lib/mysql/ssgbin-log`
 - o `log_bin_trust_function_creators=1`
 - o `log-slave-update`
 - o `server-id=1`
 - o `server-id=2`
 - Then restart MySQL with the script `/etc/init.d/mysqld restart`
- ➔ The first gateway is now autonomous.

5.3 REMOVE DB FAILOVER

In this chapter, we remove the DB Fail-Over that has been previously configured for the cluster.



- On the first gateway, we need to deactivate the database fail-over :
 - o You must connect on the first Gateway and use the “gateway” service account to launch the included script : “/opt/SecureSpan/Gateway/runtime/bin/setup.sh”



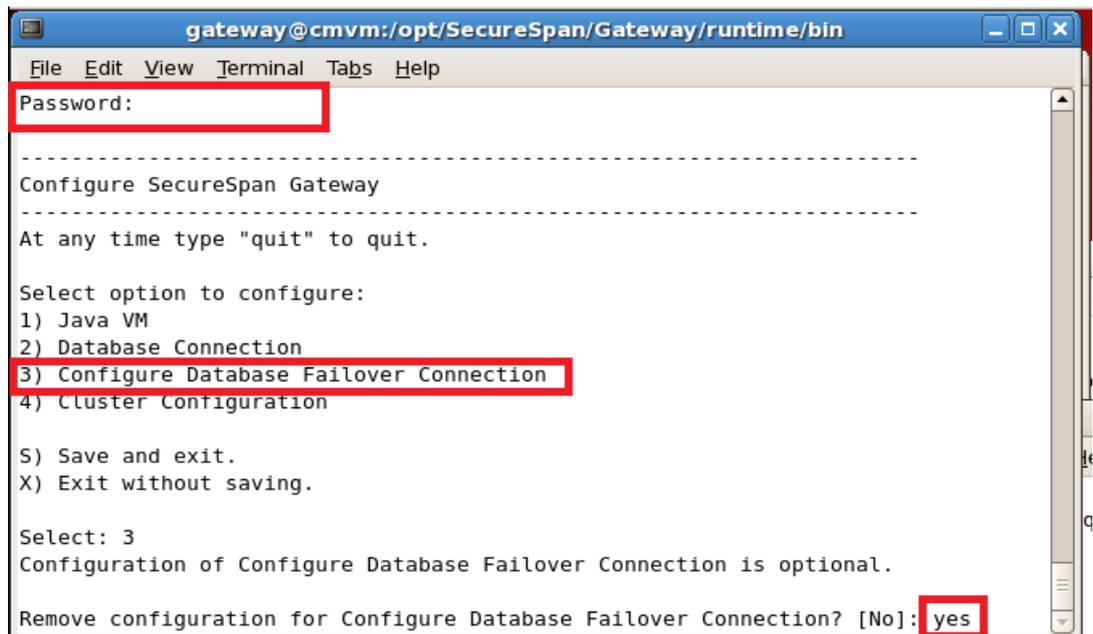
```
gateway@cmvm:/opt/SecureSpan/Gateway/runtime/bin
File Edit View Terminal Tabs Help
Layer 7 Gateway Software configuration menu.

What would you like to do?

 1) Upgrade the Layer 7 Gateway database
 2) Configure the Layer 7 Gateway
 3) Display the current Layer 7 Gateway configuration
 4) Change the Layer 7 Gateway Cluster Passphrase
 5) Change the Master Passphrase
 6) Reset Admin password
 X) Exit

Please make a selection:
```

- o Enter the Password and then go on the option 3 and validate the “db failover removal” with yes :



```
gateway@cmvm:/opt/SecureSpan/Gateway/runtime/bin
File Edit View Terminal Tabs Help
Password:
-----
Configure SecureSpan Gateway
-----
At any time type "quit" to quit.

Select option to configure:
 1) Java VM
 2) Database Connection
 3) Configure Database Failover Connection
 4) Cluster Configuration

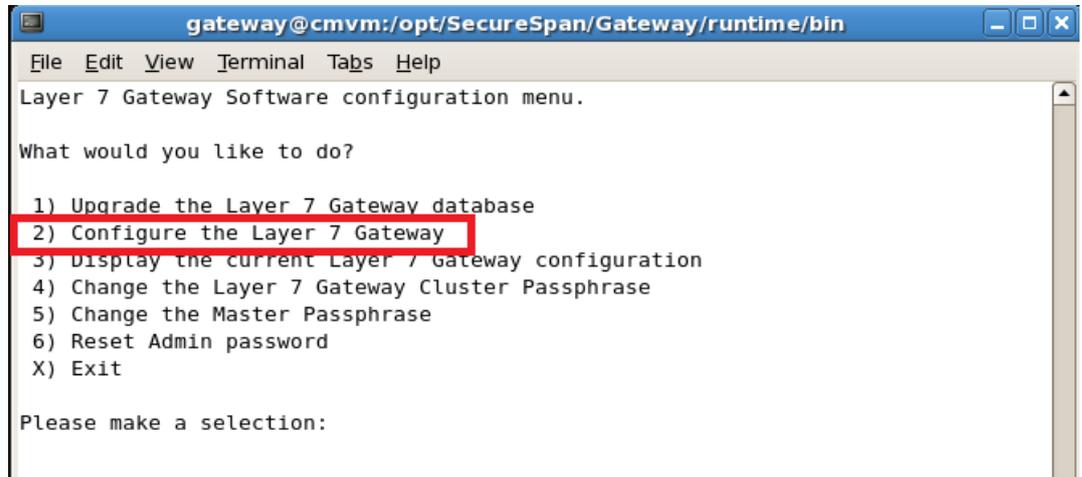
 5) Save and exit.
 X) Exit without saving.

Select: 3
Configuration of Configure Database Failover Connection is optional.

Remove configuration for Configure Database Failover Connection? [No]: yes
```

- o Save and exit the menu.

- Repeat this step on the second gateway, we need to deactivate the database fail-over :
 - o You must connect on the first Gateway and use the "gateway" service account to launch the included script : "/opt/SecureSpan/Gateway/runtime/bin/setup.sh"



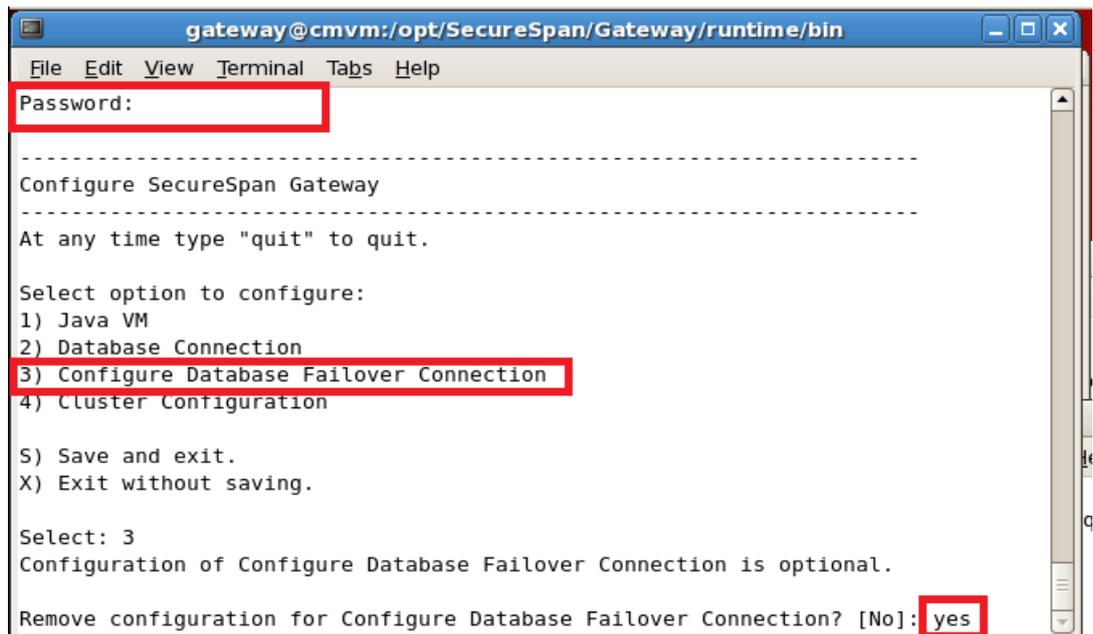
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gateway@cmvm:/opt/SecureSpan/Gateway/runtime/bin
File Edit View Terminal Tabs Help
Layer 7 Gateway Software configuration menu.

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 3) Display the current Layer 7 Gateway configuration
 4) Change the Layer 7 Gateway Cluster Passphrase
 5) Change the Master Passphrase
 6) Reset Admin password
 X) Exit

Please make a selection:
```

- o Enter the Password and then go on the option 3 and validate the "db failover removal" with yes :



```
gateway@cmvm:/opt/SecureSpan/Gateway/runtime/bin
File Edit View Terminal Tabs Help
Password:
-----
Configure SecureSpan Gateway
-----
At any time type "quit" to quit.

Select option to configure:
 1) Java VM
 2) Database Connection
 3) Configure Database Failover Connection
 4) Cluster Configuration

 5) Save and exit.
 X) Exit without saving.

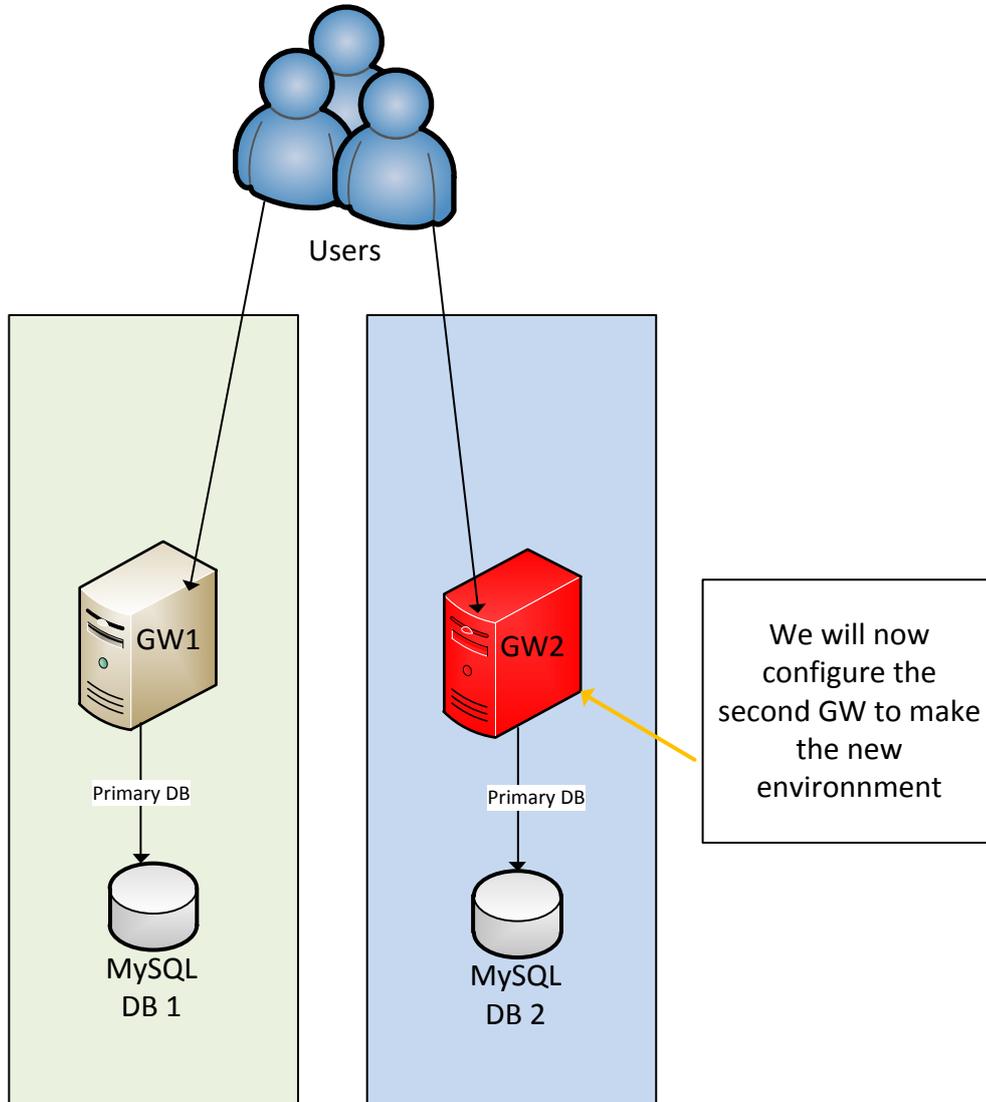
Select: 3
Configuration of Configure Database Failover Connection is optional.

Remove configuration for Configure Database Failover Connection? [No]: yes
```

- o Save and exit the menu.

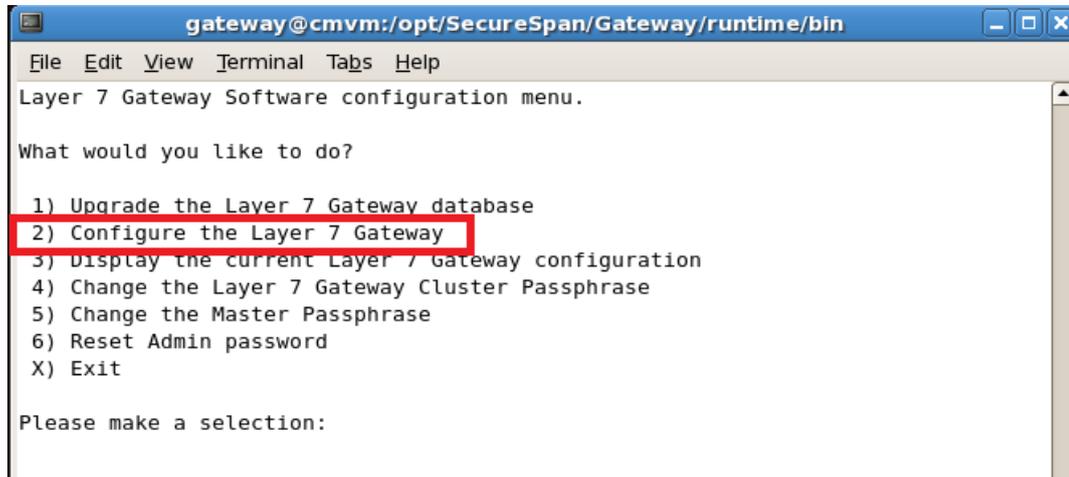
5.4 PREPARE THE NEW ENVIRONMENT

We need to configure the database of the second gateway:



We need to define the primary db of the second Gateway:

- You must connect on the second Gateway and use the "gateway" service account to launch the included script : "/opt/SecureSpan/Gateway/runtime/bin/setup.sh"



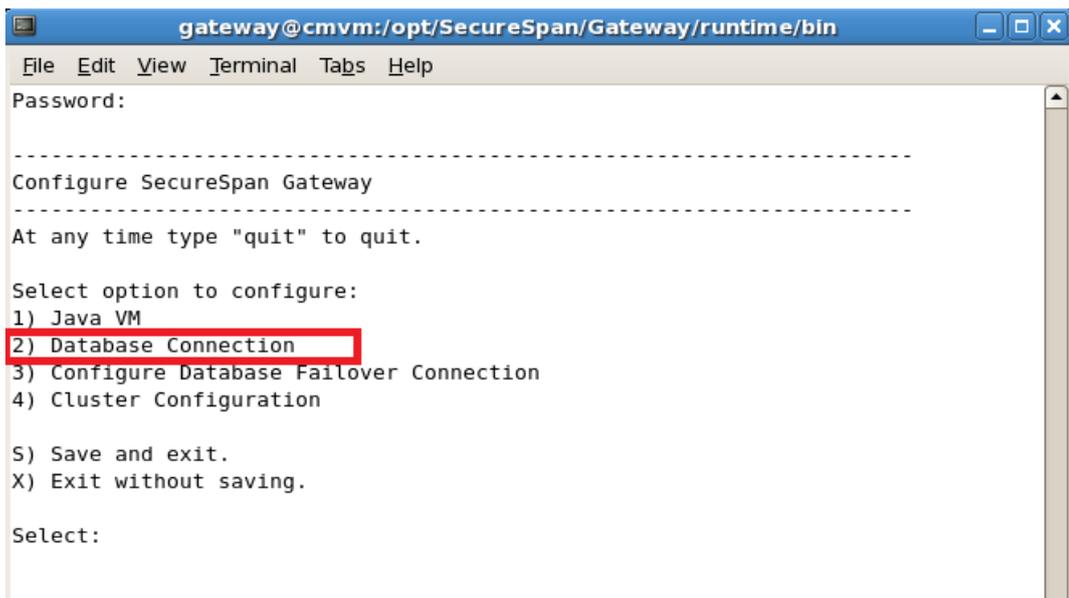
```
gateway@cmvm:/opt/SecureSpan/Gateway/runtime/bin
File Edit View Terminal Tabs Help
Layer 7 Gateway Software configuration menu.

What would you like to do?

1) Upgrade the Layer 7 Gateway database
2) Configure the Layer 7 Gateway
3) Display the current Layer 7 Gateway configuration
4) Change the Layer 7 Gateway Cluster Passphrase
5) Change the Master Passphrase
6) Reset Admin password
X) Exit

Please make a selection:
```

- Enter the Password and then go on the option 2 to define the database to use (localhost) :



```
gateway@cmvm:/opt/SecureSpan/Gateway/runtime/bin
File Edit View Terminal Tabs Help
Password:
-----
Configure SecureSpan Gateway
-----
At any time type "quit" to quit.

Select option to configure:
1) Java VM
2) Database Connection
3) Configure Database Fallover Connection
4) Cluster Configuration

5) Save and exit.
X) Exit without saving.

Select:
```

- And define the following information :

Enter the database hostname.

Database Host [localhost]: **localhost**

Enter the database port.

Database Port [3306]: **3306**

Enter the database name.

Database Name [ssg]: **ssg**

Enter the database user.

Database Username [gateway]: **gateway**

Enter the database password.

Database Password [****]:
Confirm Database Password:

Select option to configure:

- 1) Java VM
- 2) Database Connection
- 3) Configure Database Failover Connection
- 4) Cluster Configuration
- 5) Save and exit.**
- X) EXIT without saving.

Select:

- Database host: localhost

- Port: 3306

- Database : ssg

- Database username:

- Database password:

Don't forget to Save the changes

➔ The second Gateway is now configured with his database

We will now configure a new cluster passphrase for the new environment:

- You must connect on the second Gateway and use the "gateway" service account to launch the included script : "/opt/SecureSpan/Gateway/runtime/bin/setup.sh"

```

gateway@cmvm:/opt/SecureSpan/Gateway/runtime/bin
File Edit View Terminal Tabs Help
Layer 7 Gateway Software configuration menu.

What would you like to do?

 1) Upgrade the Layer 7 Gateway database
2) Configure the Layer 7 Gateway
 3) Display the current Layer 7 Gateway configuration
 4) Change the Layer 7 Gateway Cluster Passphrase
 5) Change the Master Passphrase
 6) Reset Admin password
 X) Exit

Please make a selection:

```

- Enter the Password and then go on the option 4 to define the new cluster passphrase:

```

-----
Configure SecureSpan Gateway
-----
At any time type "quit" to quit.

Select option to configure:
1) Java VM
2) Database Connection
3) Configure Database Failover Connection
4) Cluster Configuration
5) Save and exit.
X) Exit without saving.

Select: 4

Enter the cluster passphrase (6-128 characters).

Cluster Passphrase:
Confirm Cluster Passphrase:

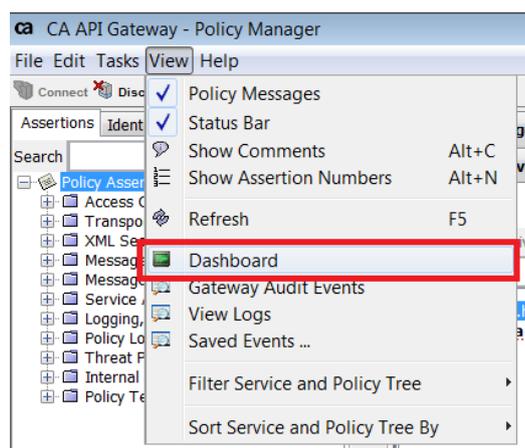
Select option to configure:
1) Java VM
2) Database Connection
3) Configure Database Failover Connection
4) Cluster Configuration
5) Save and exit.
X) Exit without saving.

Select: 5

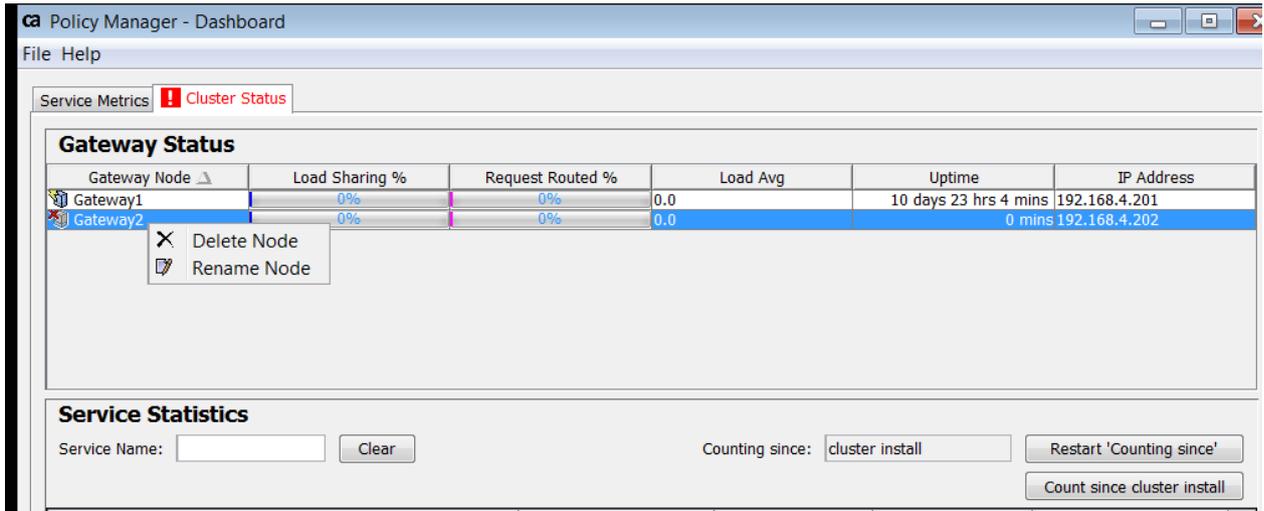
```

We will now remove the first gateway on the second Gateway cluster

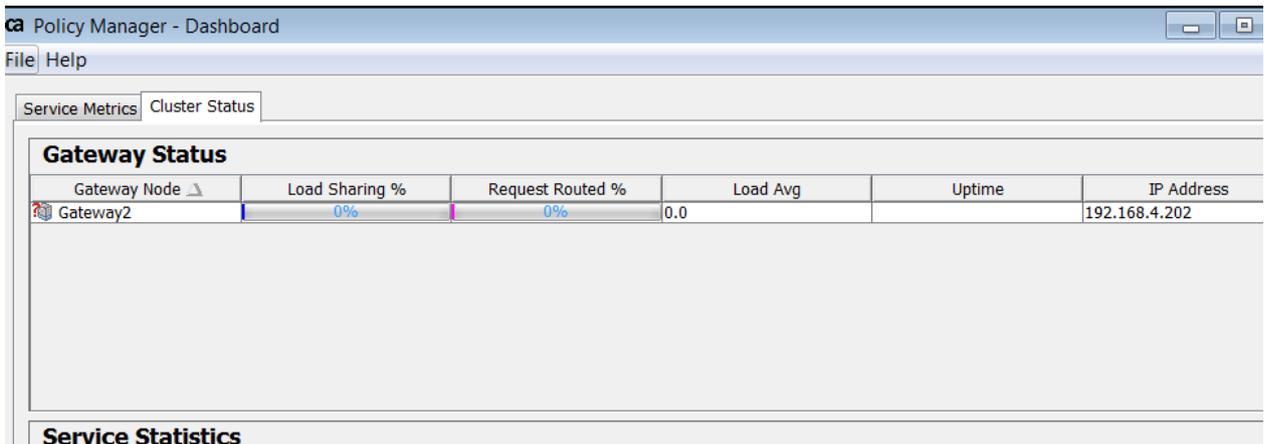
- Connect with the Policy Manager on the second Gateway to remove the **first** Gateway:
 - o On the Policy Manager, go on View → Dashboard



- o Select the gateway, then click on “Delete Node” on the **first** Gateway :



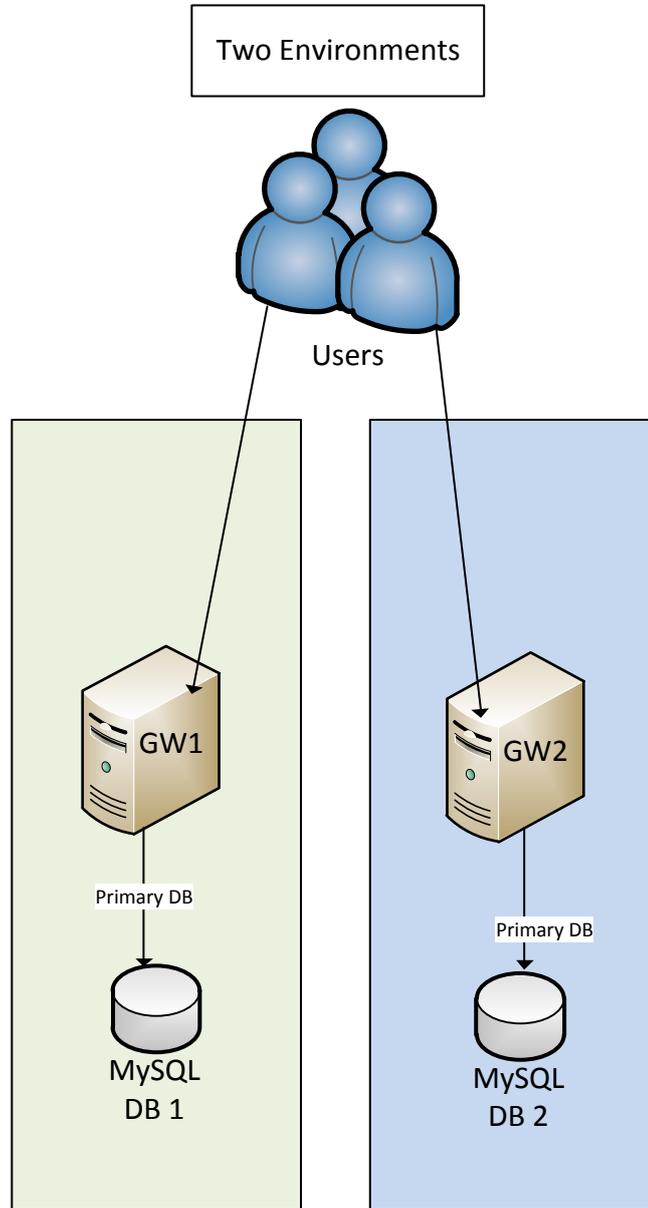
- There is only one gateway on the cluster :



- Now the new environment is only composed on the second gateway;
- The new environment is now ready

6 FINAL ARCHITECTURE

The new platform is now configured and operational:



7 OPTIONAL CONFIGURATION

For the new platform, you can also change the following passwords:

- Layer7 gateway cluster Passphrase (in orange):
 - o Already done in the documentation, this passphrase is used to store encrypted configuration in the Database
- Master passphrase (in yellow):
 - o The passphrase used to store all other passphrase
- Reset admin password (in green):
 - o The password of the account used to connect through the Policy Manager with the administrative account

```
Layer 7 Gateway Software configuration menu.  
  
What would you like to do?  
  
1) Upgrade the Layer 7 Gateway database  
2) Configure the Layer 7 Gateway  
3) Display the current Layer 7 Gateway configuration  
4) Change the Layer 7 Gateway Cluster Passphrase  
5) Change the Master Passphrase  
6) Reset Admin password  
X) Exit  
  
Please make a selection:
```