

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

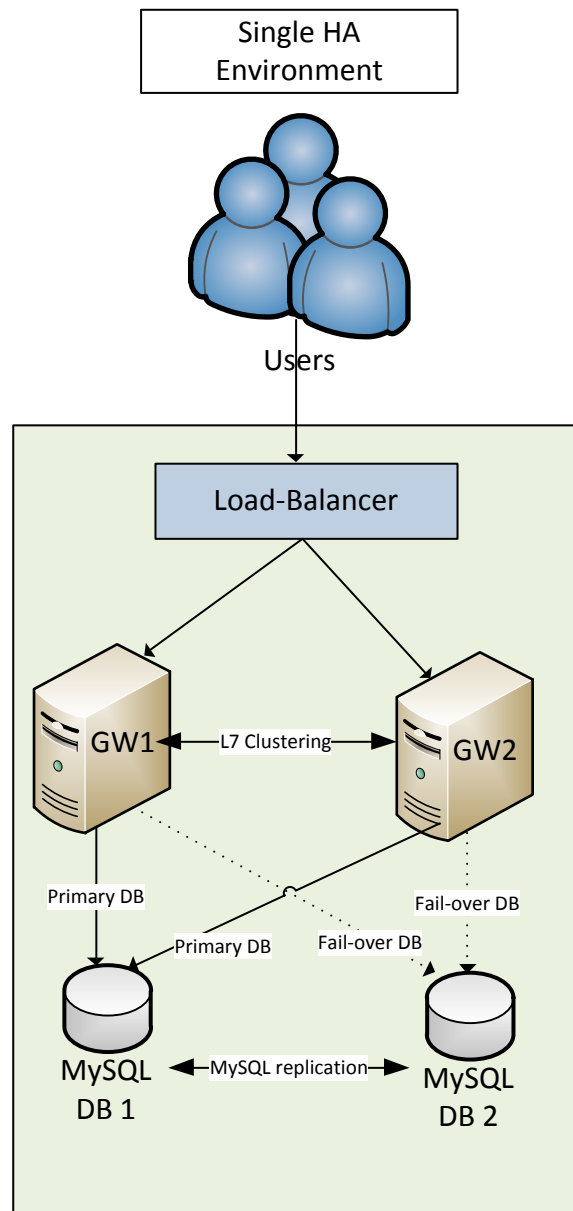
This procedure has been setup with **CA API Gateway version 8.3, software form.**

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.

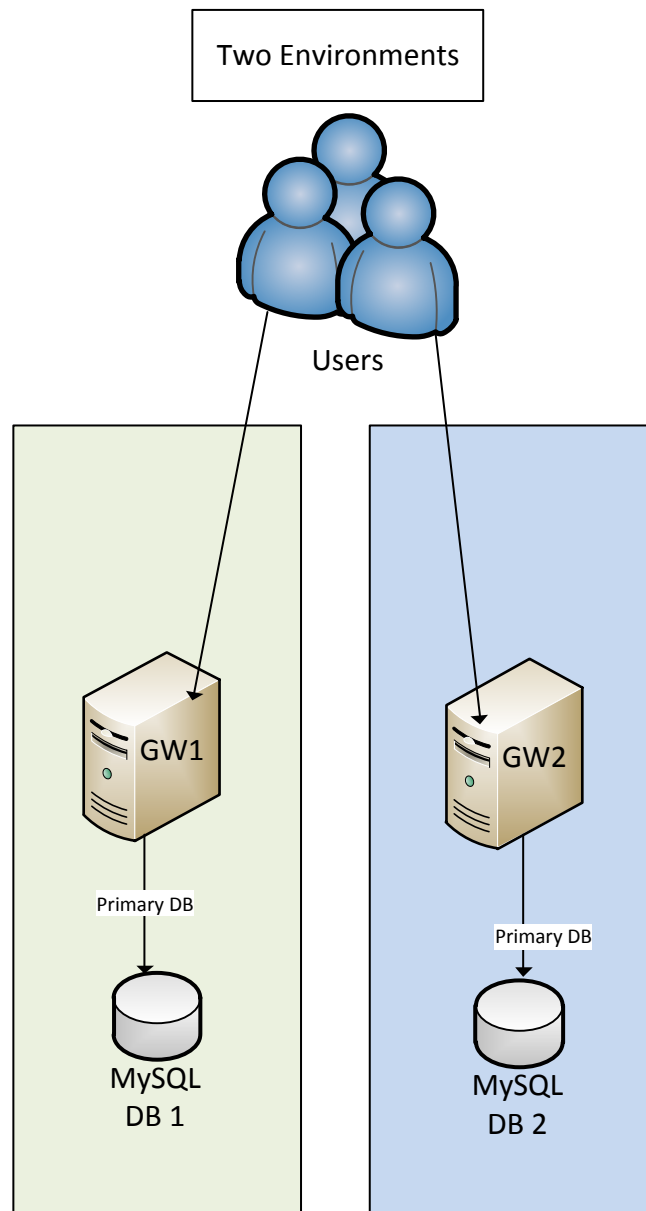


4 TARGET ARCHITECTURE

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

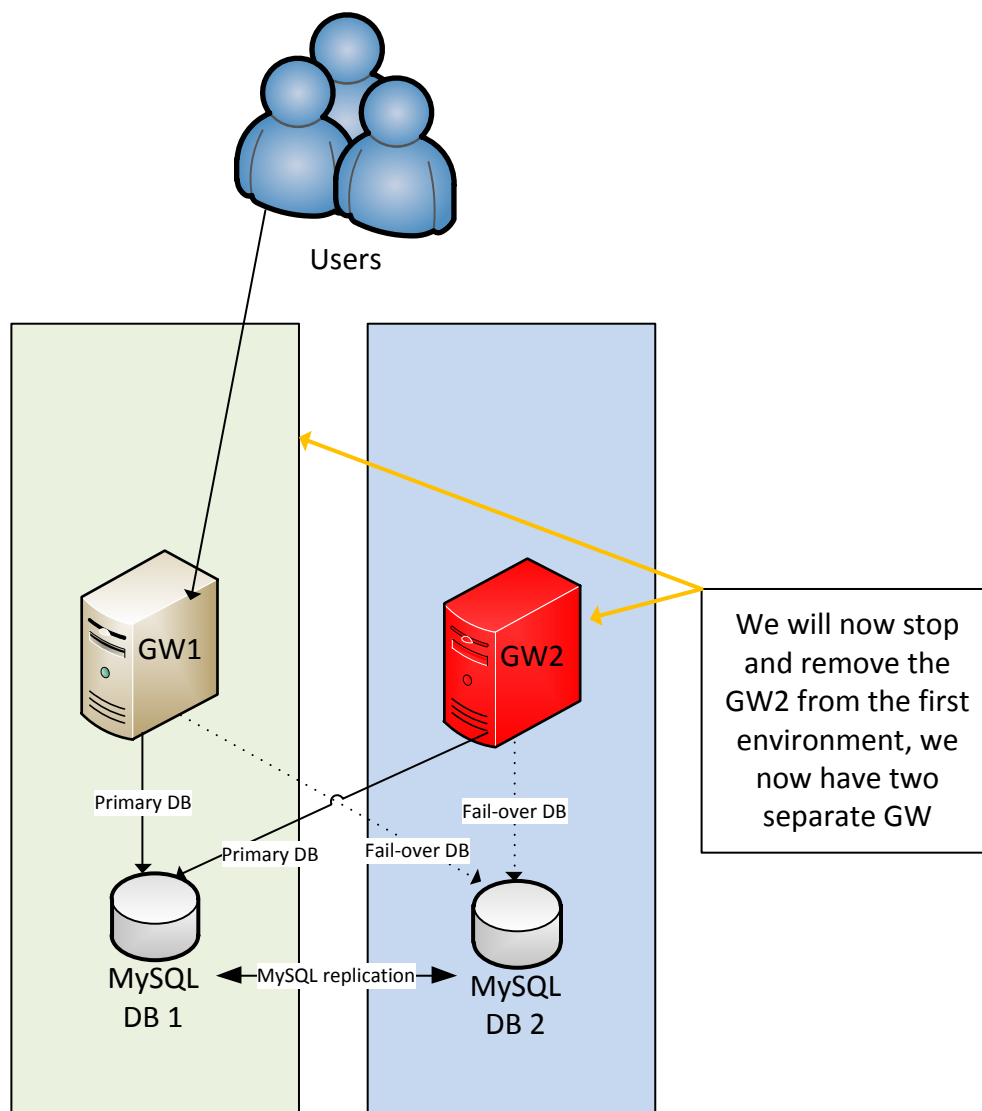
The cluster de-configuration will consist of the following actions.

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

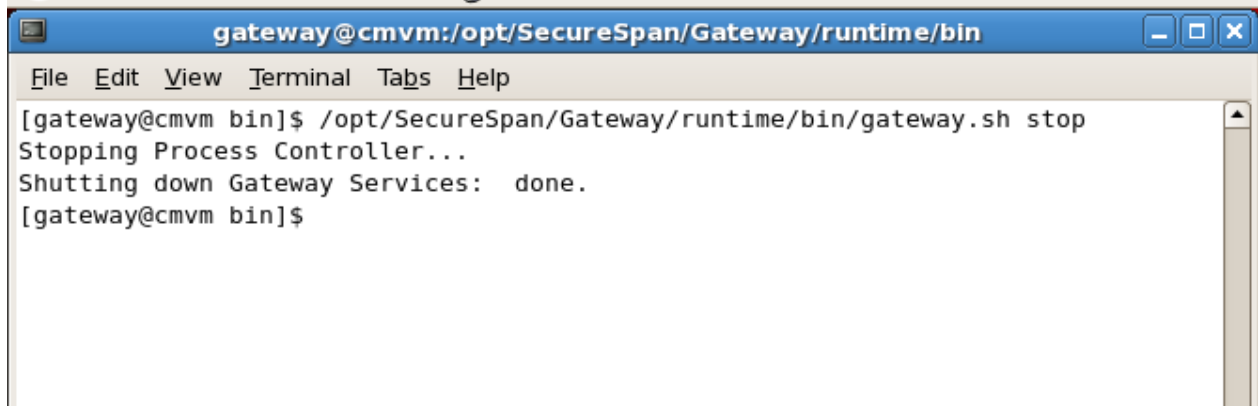
5.1 REMOVE THE SECOND GATEWAY FROM THE CLUSTER

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

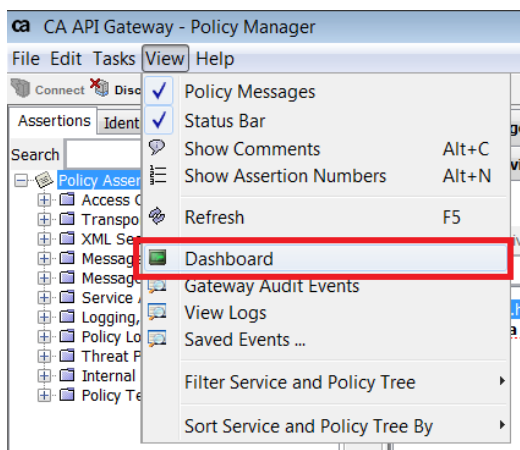
- The load-balancer will not be required anymore.



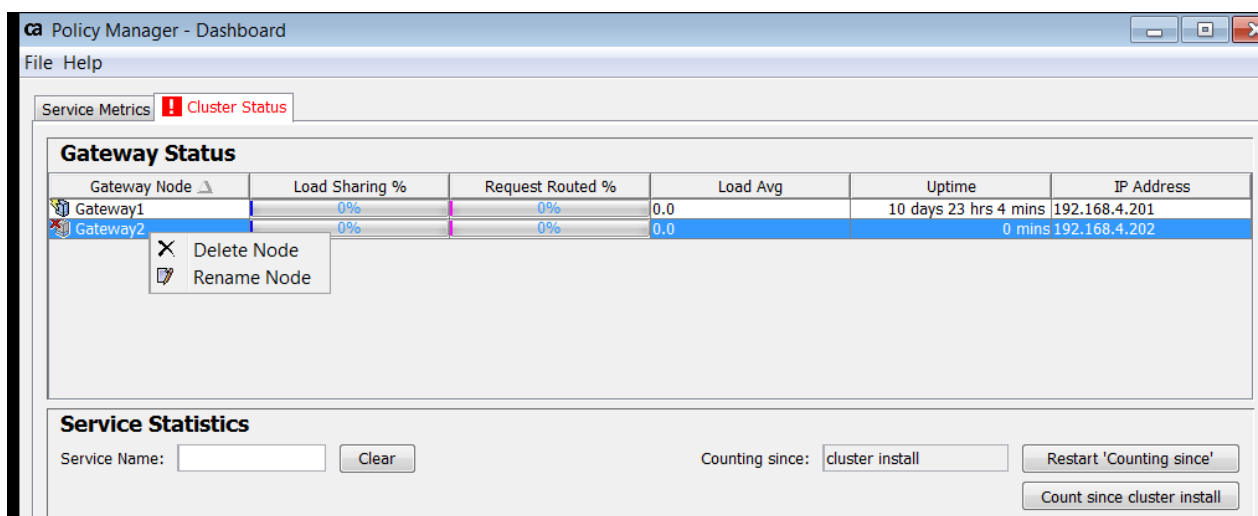
- Stop the second Gateway :
 - Connect to the gateway with the service-account and stop-it with the included script « /opt/SecureSpan/Gateway/runtime/bin/gateway.sh stop »



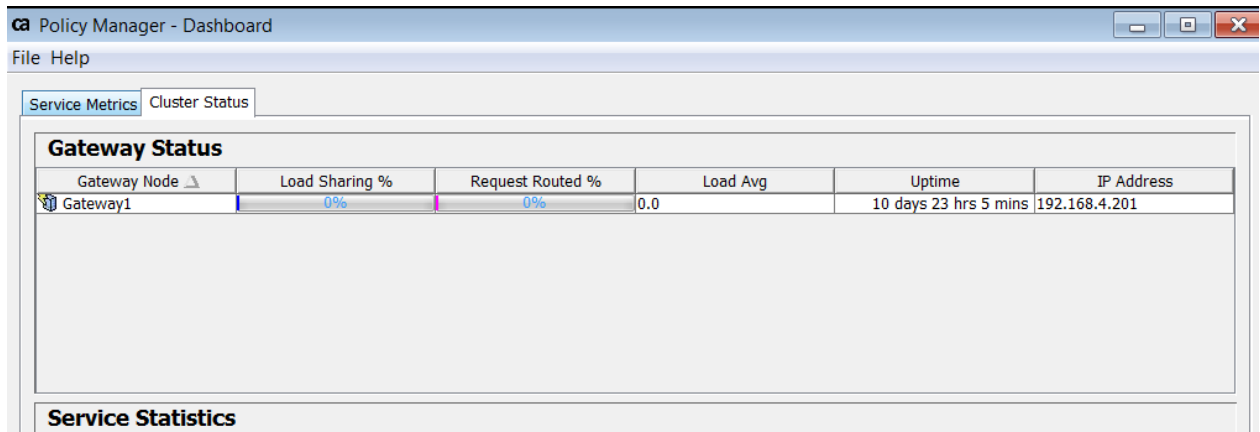
- Connect to the Policy Manager on the first Gateway to remove the second Gateway:
 - On the Policy Manager, go on View → Dashboard



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



- There is only one gateway on the cluster :



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

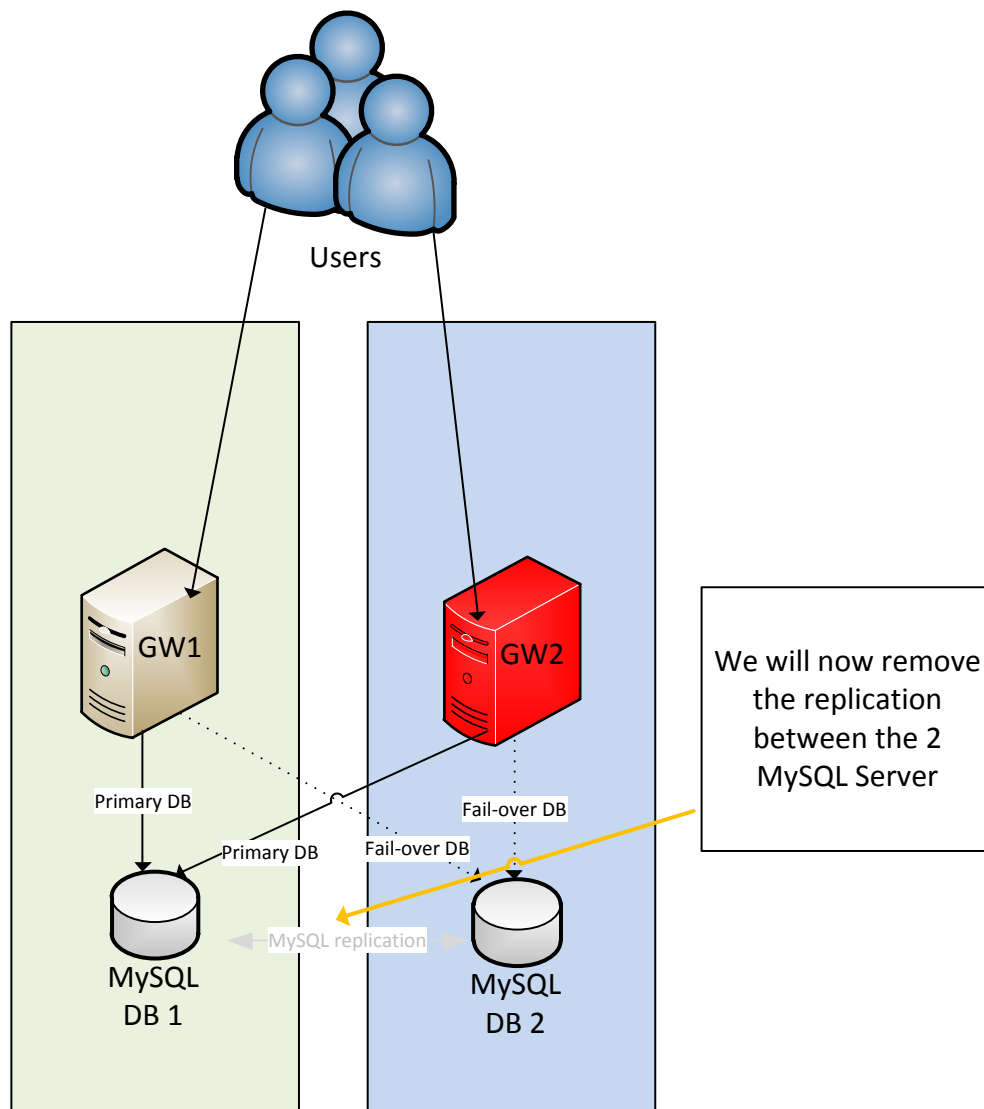
Gateway Node	Load Sharing %	Request Routed %	Load Avg	Uptime	IP Address
Gateway1	0%	0%	0.0	10 days 23 hrs 5 mins	192.168.4.201

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:

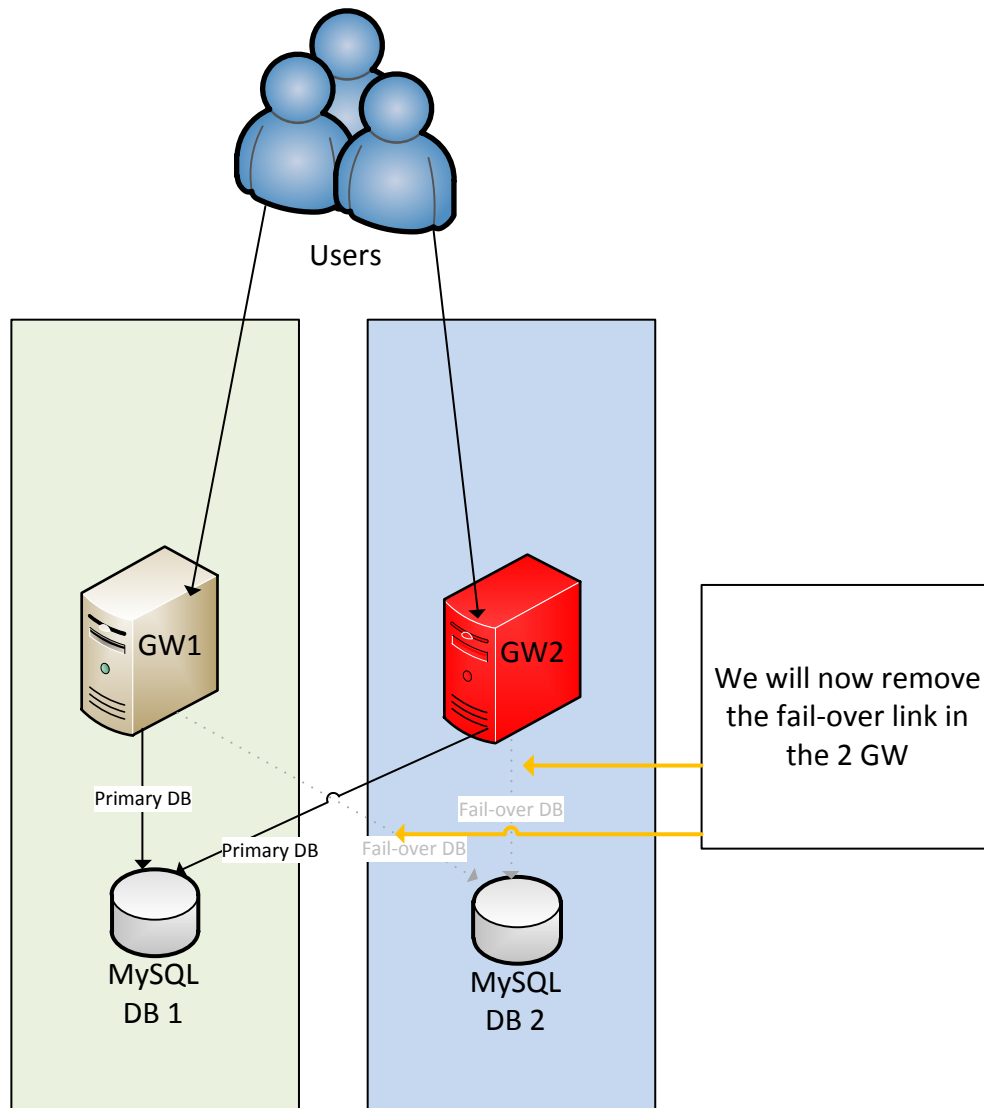


On both servers, connect by ssh and stop the MySQL replication:

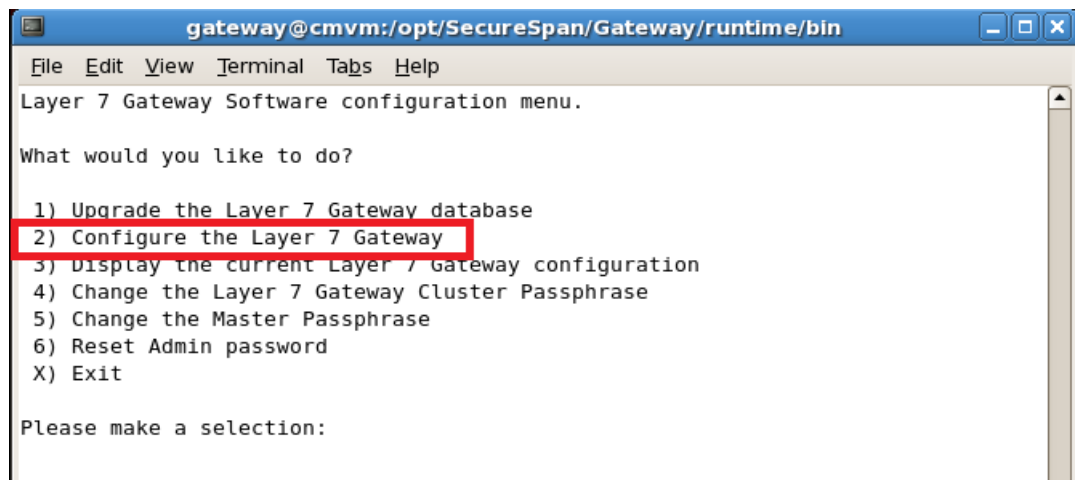
- Edit the `/etc/my.cnf` to comment each line that begin with “master”
 - `log-bin=/var/lib/mysql/ssgbin-log`
 - `log_bin_trust_function_creators=1`
 - `log-slave-update`
 - `server-id=1`
 - `server-id=2`
 - Then restart MySQL with the script `/etc/init.d/mysqld restart`
- ➔ The first gateway is now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



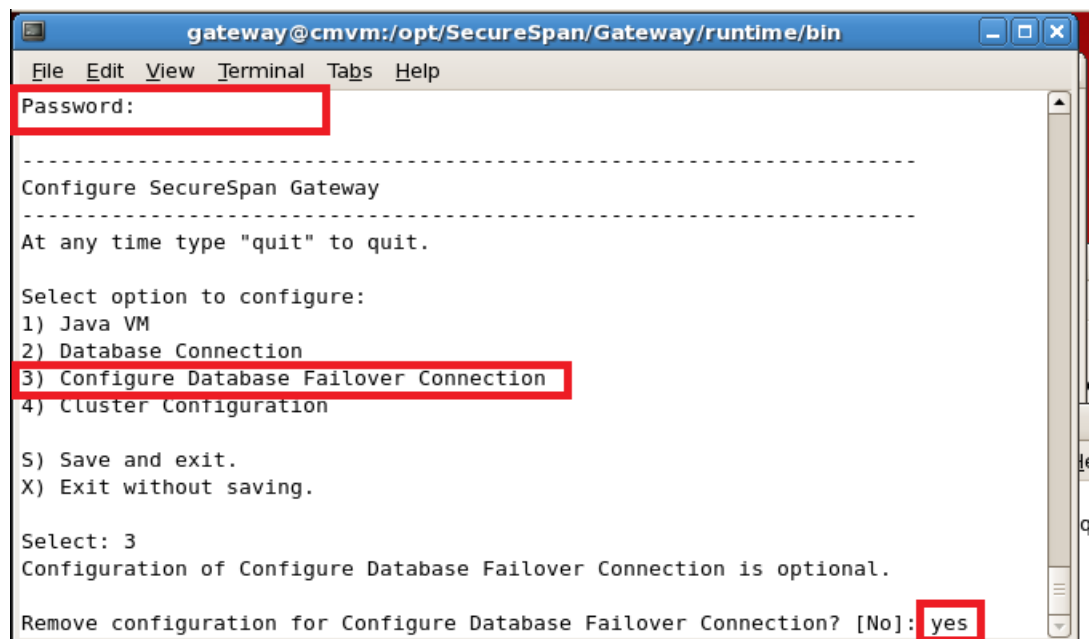
```
gateway@cmvm:/opt/SecureSpan/Gateway/runtime/bin
File Edit View Terminal Tabs Help
Layer 7 Gateway Software configuration menu.

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

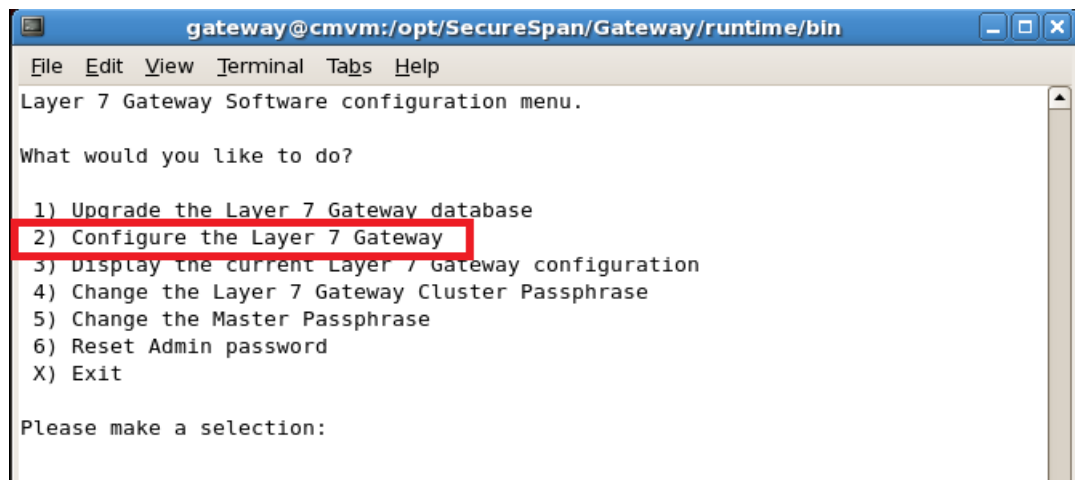
5) Save and exit.
X) Exit without saving.

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 :
 - 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”



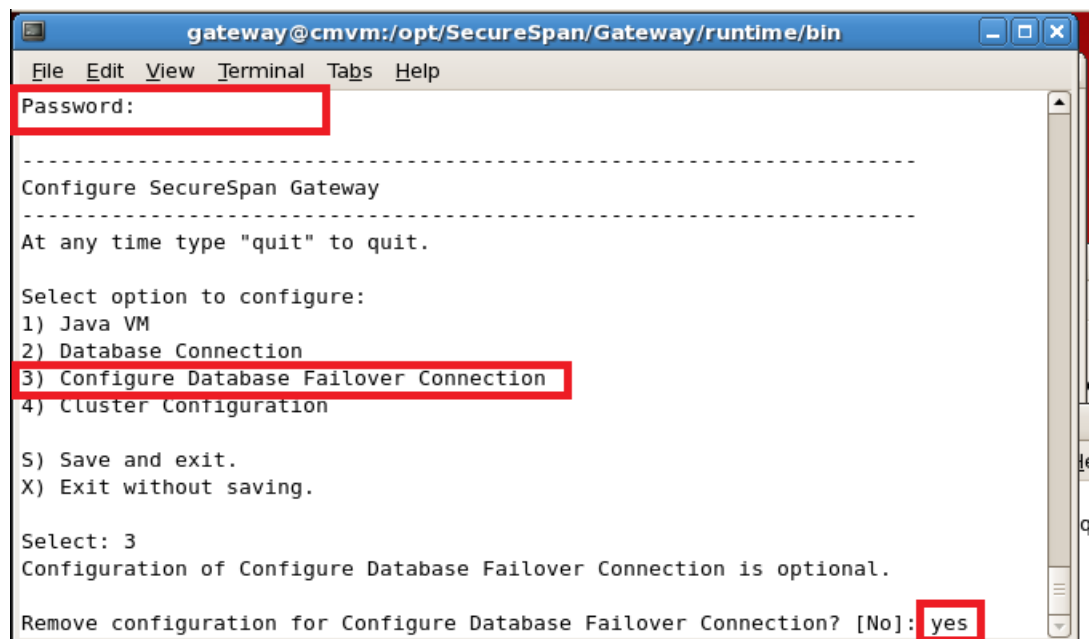
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gateway@cmvm:/opt/SecureSpan/Gateway/runtime/bin
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Layer 7 Gateway Software configuration menu.

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 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.

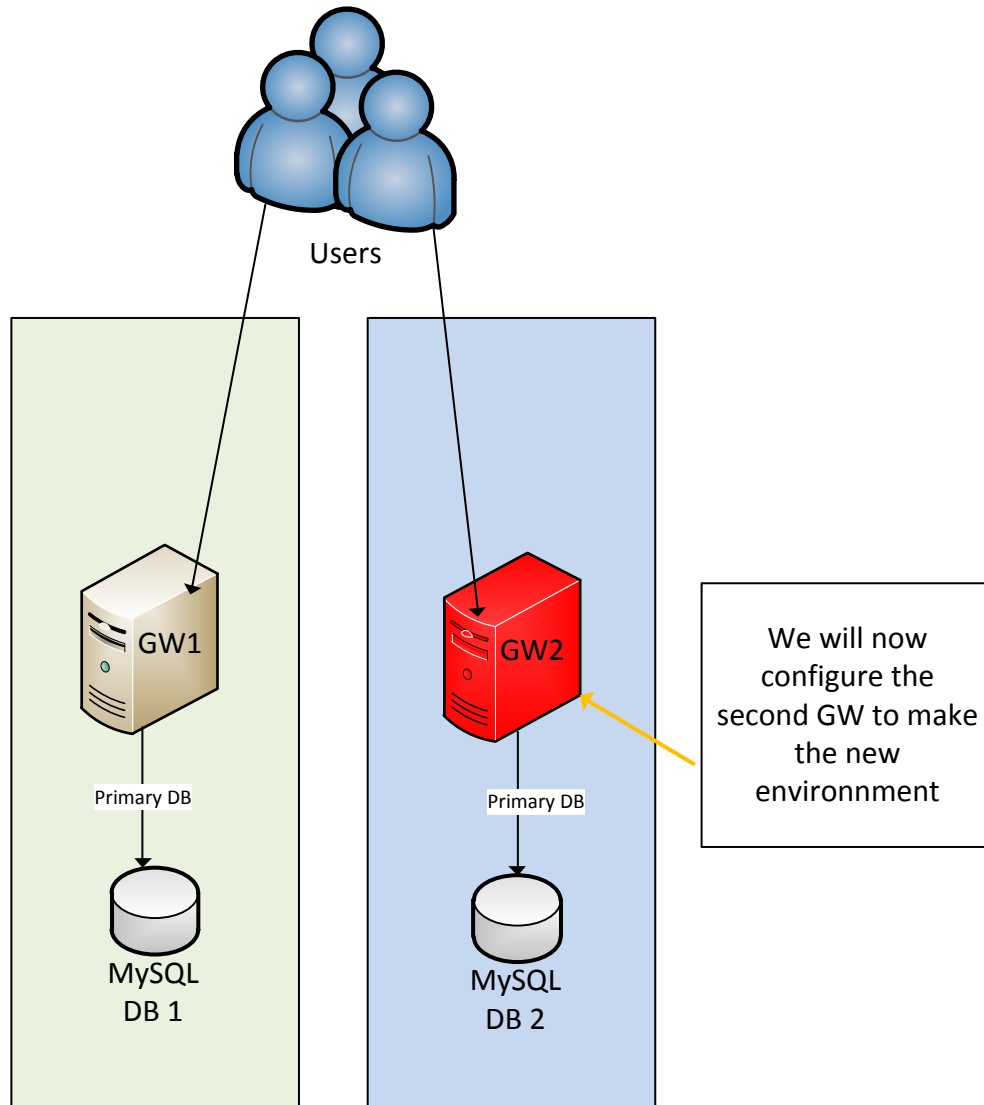
Select: 3
Configuration of Configure Database Failover Connection is optional.

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

- Save and exit the menu.

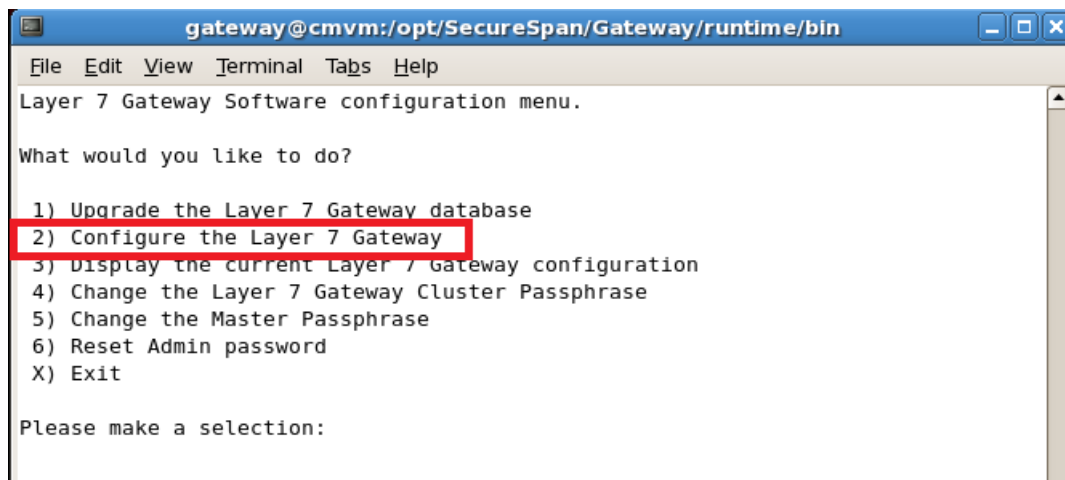
5.4 PREPARE THE NEW ENVIRONMENT

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"`



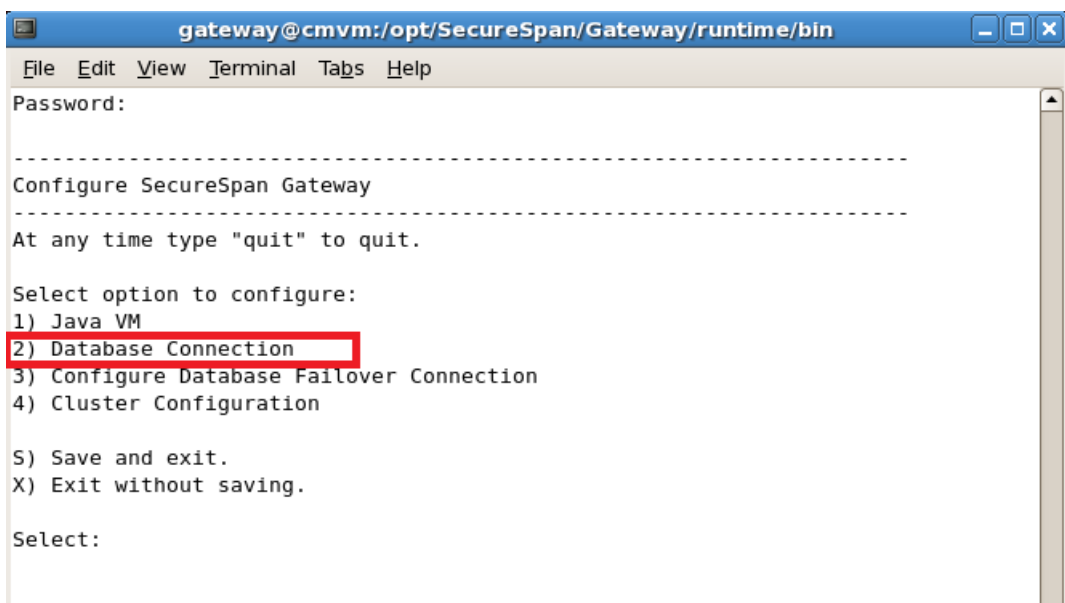
```
gateway@cmvm:/opt/SecureSpan/Gateway/runtime/bin
File Edit View Terminal Tabs Help
Layer 7 Gateway Software configuration menu.

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 Failover 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:

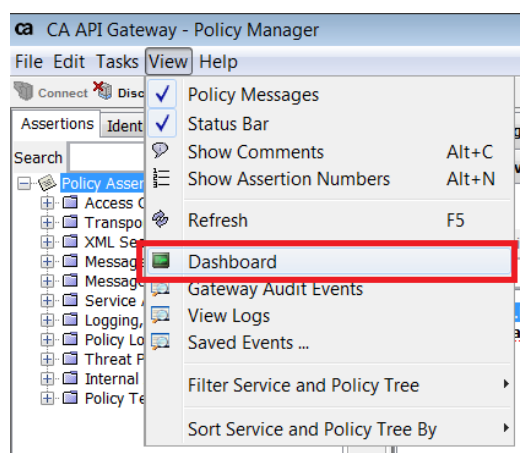
Select option to configure:
1) Java VM
2) Database Connection
3) Configure Database Failover Connection
4) Cluster Configuration
5) Save and exit.
X) Exit without saving.

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 :

The screenshot shows the 'CA Policy Manager - Dashboard' window. The 'Cluster Status' tab is active, displaying a table of gateway nodes. Gateway1 is selected, and a context menu is open with options 'Delete Node' and 'Rename Node'. Below the table is the 'Service Statistics' section with input fields for 'Service Name' and 'Counting since'.

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

Service Statistics

Service Name: Clear

Counting since: Restart 'Counting since'

- There is only one gateway on the cluster :

The screenshot shows the 'CA Policy Manager - Dashboard' window with the 'Cluster Status' tab active. Only 'Gateway2' is listed in the table. The 'Service Statistics' section is visible below.

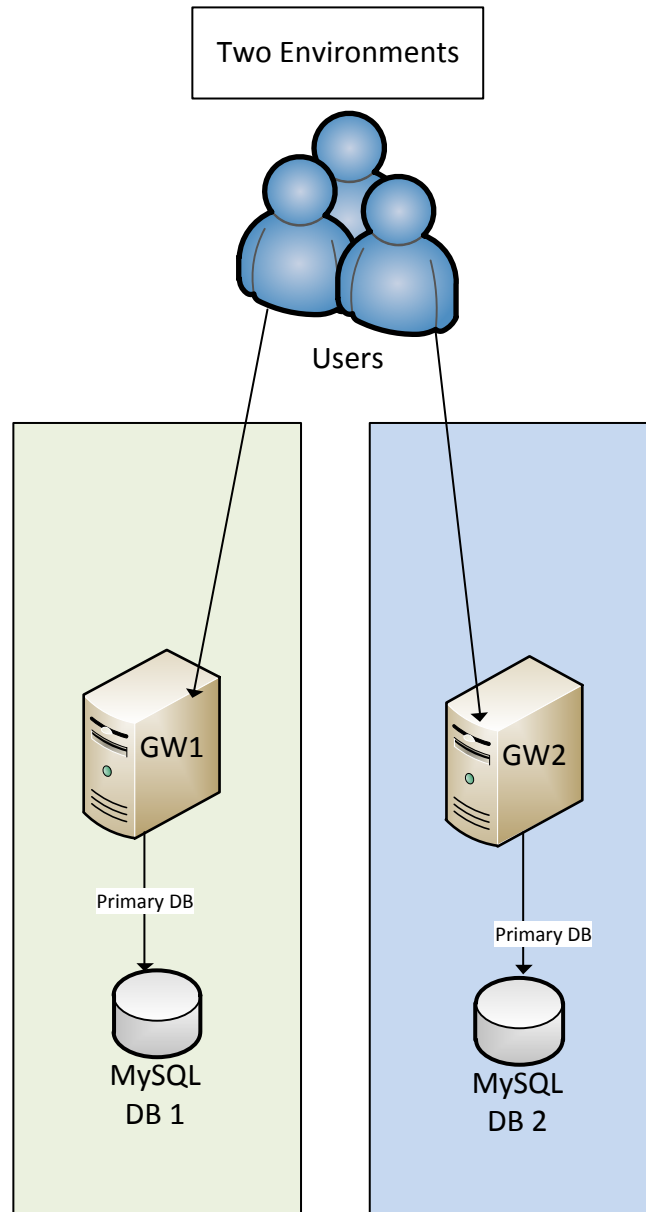
Gateway Node	Load Sharing %	Request Routed %	Load Avg	Uptime	IP Address
Gateway2	0%	0%	0.0		192.168.4.202

Service Statistics

- 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:
```