Zend Server Cluster - Switching to a Different Database

Applies to:

Zend Server 6.x and later versions

Summary

Sometimes there is a reason to "move" the existing cluster to a different database. The most common reasons are switching to a more performant MySQL server or separating the application databases from the Zend Server Cluster database.

How To

The regular method of moving to a different database is this:

1. Preparing the new database, for example, cloning it to another server.
2. Removing the nodes from Zend Server Cluster.
3. Adding the removed nodes to the new Zend Server Cluster with newly created database as backend.

However, this procedure may take significant time, depending on the cluster's size. Same effect can be achieved with direct "hacking" of Zend Server's configuration files. Although this procedure is not something we usually recommend, it works correctly and can be considered for implementation, if migration down time must be reduced to the absolute minimum.

Here it is:

1. Prepare the new database, for example, by cloning it to another server.

Then, on each node do the following:

2. Stop Zend Server (`sudo /usr/local/zend/bin/zendctl.sh stop`).

3. Modify the file */usr/local/zend/etc/zend_database.ini* to reflect the new database connection information.

4. Modify the file */usr/local/zend/etc/zsd.ini*. The parameter "zend_server_daemon.cluster_node_id" must have the same values as in the previous file (marked red in the example):

```
zend_server_daemon.cluster_node_id=1@server.mysql.intra.net@newDB@1435341786.381
```
Legend:
  field 1 - Node ID - **do not** change
  field 2 - MySQL server's hostname or IP address
  field 3 - New database name
  field 4 - Timestamp - changing not recommended

5. Start Zend Server (`sudo /usr/local/zend/bin/zendctl.sh start`).

Alternative Scenario

Obviously, the clone of the original database will not receive the updates that have been done to the original database during the migration. This may be especially important for clusters actively using Zend Job Queue. In this case a small change to the order of actions is needed (this also applies to the regular procedure):

1. Stop Zend Server on ALL the nodes (or remove all the nodes from Zend Server Cluster).
2. Prepare/clone the database.
3. Change the configuration files and start Zend Server on each node (or add all the nodes to Zend Server Cluster).