

# Tips on setting up replication of the IBM i in a High Availability or Disaster Recovery environment

## Issue

Zend does not have any official recommendations for what should be replicated to the DR machine in a high availability setting. Replication settings are the responsibility of the customer. However, here are some tips from Zend Support that may be helpful.

## Environment

Zend Server for IBM i, any supported version, running on any supported version of IBM i

## Resolution



**Note: The only way to be sure your DR is working is to test it.**

Zend Support strongly recommends that you test fail-over once everything is set up, and test it periodically to verify that your HA solution is working for you.

### Do not replicate directories installed by the Zend Server Licensed Program

It is important not to replicate directories that are registered to a Licensed Program. This is particularly true for an application like Zend Server where the customer makes changes in the registered directories. So, we strongly recommend not to replicate `/www/zendphp74` and `/usr/local/zendphp74`, and do not replicate anything under either one of these directories. Instead, install Zend Server on each machine at the same release version. All changes should be done twice, once on each machine. This applies to configuration changes, updates, deploying applications if you use Zend Server to do that, and anything else that might happen in these directory structures. Since all maintenance is performed on both machines, it will not be necessary to replicate the ZENDPHP74 (or ZENDPHP7 Zend Server 9.1.x - 2019.x or ZENDSVR6 Zend Server 6 - 8.5.x) library.

### Place content and sessions elsewhere to replicate them

To replicate your application files (.php, .htm, .css, .js, and so on) put them in some directory that is not under `/www/zendphp74`. Use Alias or Virtual Host in your Apache config to use your application out of this directory.

Files output by your application, like PDF, spreadsheets, and other kinds of files your app produces that are stored on the IFS, should all be located outside the registered directories. This will allow you to replicate those files safely.

If you wish to retain sessions on failover, you can specify a sessions directory outside of the Zend Server directory server by setting the `session.save_path` directive. Remember this setting needs to be changed on both machines. You may also consider just not replicating sessions if session loss does not have a major impact when using your application.

### Do not replicate the Zend Server db directory

If you are replicating other directories in Zend Server (not recommended), we do not recommend replicating the db directory because of the very large number of transactions that would be pushed through replication. The full path for this directory is:

```
/usr/local/zendphp74/var/db (/usr/local/zendphp7/var/db for versions 9.1-2019 /usr/local/zendsvr6/var/db for versions 6-8.5)
```

### PowerHA only replicates from independent ASP, so it will not be possible to replicate the zend library and directories.

Because Zend Server is installed and updated via PTF as a Licensed Program, it must remain in the \*SYSBAS ASP. This is because the APYPTF command requires all objects to be in \*SYSBAS at the time of update. For PowerHA users, you will not be able to replicate any Zend Server directories.

### Never use Mimix to replicate /usr/local/ZendPHP7/tmp

Some products like Mimix rely on journaling the IFS folders to perform replication. You should never journal this folder:

`/usr/local/ZendPHP74/tmp`      (`/usr/local/ZendPHP7/tmp` for versions 9.1-2019    `/usr/local/ZendSVR6/tmp` for versions 6-8.5)

This folder contains shared memory objects and other IPC objects that do not function correctly when journaled. Never journal this folder. Do not replicate it. If you are replicating other directories in Zend Server (not recommended), in the event of a failover, restart Zend Server on the failover box using the reset option on the menu. This will clear the shared memory and start fresh:

[Reset Zend Server for IBM i](#)



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