How to migrate a (web) server

This guide explains the steps to take when migrating a web server to a new machine and/or a new platform. Most of it will also apply to any other type of server.

Prerequisites

- Source (Pandora): running existing server with Debian 9 installed
- Destination (Calypso): basic install of the new server with Debian 11
- A firewall (FW) with port forwards for outside access (e.g. ports 80 and 443)
- Make sure both machines have SSH access through a private key so you don't need to enter a
 password
- Create a batch file ccalypso on Pandora to facilitate copying folders and files with the following content:

```
#!/bin/bash
if [ "$2" == "" ]; then
    exit 1
fi
sudo rsync -avz -e 'ssh -i /home/user/.ssh/id_ecdsa -p 22' --rsync-
path='sudo rsync' $1 user@dest.ip.addr:$2
```

User home directory

1. Copy folders and files from Pandora

```
$ ccalypso /home/user/folder-or-file /home/user/
```

- 2. If the UID on both machines are the same you don't need to update folder and file ownership
- 3. You can use the same way for any other folder or file you want to transfer from the old to the new server

Apache 2.4

- 1. Install Apache 2.4 and PHP 7/8 on Calypso
- 2. Rename folders on Calypso

```
$ sudo mv /etc/apache2/conf-available /etc/apache2/conf-available-
debian
$ sudo mv /etc/apache2/conf-enabled /etc/apache2/conf-enabled-debian
$ sudo mv /etc/apache2/sites-available /etc/apache2/sites-available-
debian
$ sudo mv /etc/apache2/sites-enabled /etc/apache2/sites-enabled-debian
```

3. Copy folders from Pandora

```
$ ccalypso /etc/apache2/conf-available /etc/apache2/
$ ccalypso /etc/apache2/conf-enabled /etc/apache2/
$ ccalypso /etc/apache2/sites-available /etc/apache2/
$ ccalypso /etc/apache2/sites-enabled /etc/apache2/
```

- 4. On Calypso check and copy selected files back from the debian installed folder to the folder copied from Pandora
- 5. If the UID on both machines are the same you don't need to update folder and file ownership
- 6. If you have reverse proxies don't forget to update your firewall settings

Maria DB

- 1. Install MariaDB 10.5 on Calypso
- 2. On Calypso, dump the contents of the mysql database

```
$ mysqldump -u user -p --opt mysql > mysql.sql
```

3. Stop the mysql service on both machines

```
$ sudo service mysql stop
```

4. On Calypso, rename the db folder

```
$ sudo mv /var/lib/mysql /var/lib/mysql debian
```

5. On Pandora, copy the db folder to Calypso

```
$ ccalypso /var/lib/mysql /var/lib/
```

6. On Calypso, remove the following folders and files

```
$ sudo rm -R /var/lib/mysql/mysql
$ sudo rm -R /var/lib/mysql/phpmyadmin
$ sudo rm -R /var/lib/mysql/debian-10.1.flag
```

7. On Calypso move the following folders and files back from the mysql_debian folder to the mysql folder copied from Pandora

```
$ sudo mv /var/lib/mysql_debian/mysql /var/lib/mysql
$ sudo mv /var/lib/mysql_debian/aria_log00000001 /var/lib/mysql
$ sudo mv /var/lib/mysql_debian/aria_log_control /var/lib/mysql
$ sudo mv /var/lib/mysql_debian/debian-10.5.flag /var/lib/mysql
$ sudo mv /var/lib/mysql_debian/multi-master.info /var/lib/mysql
$ sudo mv /var/lib/mysql_debian/mysql_upgrade_info /var/lib/mysql
```

- 8. Remove folder / var/lib/mysql debian
- 9. If the UID on both machines are the same you don't need to update folder and file ownership

System

- 1. Check and adjust crontab for all users and root
- 2. Check and adjust the sudoers file and all files in /etc/sudoers.d/
- 3. Check other machines which depend on the webserver, for example a mail server using Let's Encrypt certificates managed by the web server

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