

Updating BookStack

Updating process for BookStack.

- [v21.05.4 to v21.08.3](#)
- [v21.08.3 to v21.12](#)

v21.05.4 to v21.08.3

Version v21.08 brought some important security updates and added a nice feature – 2FA. That is enough to justify upgrading to the new version.

Before proceeding, make sure you have a proper backup of your BookStack instance. If you don't, follow the guide [here](#).

Prerequisites

Web services usually store files in the `/var/www` directory, in this case BookStack is in `/var/www/BookStack`. Depending on your permissions configuration, the following steps might differ.

- If the owner of all files in the directory is `www-data`, you should run the update commands as `www-data`.
- In case you have a separate user that owns the directory, execute the commands as this user.

Become `www-data` (or another user) with `sudo su`.

```
$ sudo su www-data
```

You will most likely run into this error:

```
This account is currently not available.
```

Service accounts that web apps use to run (like `www-data`) do not usually have access to the shell. **It should be that way.** Unfortunately this means, you won't be able to run any commands under them with `sudo su`, because they can't use shell. There are two way to get around this:

- Temporarily editing `/etc/passwd` and adding shell to `www-data`
- Temporarily adding `/bin/bash` to `www-data` in the current shell

I will do the latter option because it's quicker. Use `sudo` with `-s` option to add `/bin/bash` to `www-data`

```
$ sudo su www-data -s /bin/bash
```

This will open shell under `www-data` so you can perform the management actions you want without messing up file ownerships.

```
www-data@hostname:~/
```

Download using git

Make sure you are in the correct directory (root of BookStack) `/var/www/BookStack` with `pwd`:

```
(www-data)$ pwd
/var/www/BookStack
```

Updates of BookStack are done using `git`. Pull the latest version with this command:

```
(www-data)$ git pull origin release
```

Output should look something like this:

```
remote: Enumerating objects: 2228, done.
remote: Counting objects: 100% (1129/1129), done.
remote: Total 2228 (delta 1129), reused 1129 (delta 1129), pack-reused 1099
Receiving objects: 100% (2228/2228), 982.79 KiB | 883.00 KiB/s, done.
Resolving deltas: 100% (1740/1740), completed with 501 local objects.
From https://github.com/BookStackApp/BookStack
* branch      release    -> FETCH_HEAD
   926abbe7..fa855383 release -> origin/release
Updating 926abbe7..fa855383
Fast-forward
 .env.example.complete          | 6 +
 .github/translators.txt        | 19 ++
 app/Actions/Activity.php       | 10 +-
 app/Actions/ActivityService.php | 19 +-
 app/Actions/ActivityType.php   | 7 +-
 app/Actions/Comment.php        | 8 +-
 app/Actions/CommentRepo.php    | 19 +-
 app/Actions/Favourite.php       | 4 +-
 app/Actions/Tag.php            | 10 +-
 app/Actions/TagRepo.php        | 10 +-
 app/Actions/View.php           | 5 +-
 app/Api/ApiDocsGenerator.php   | 26 +-
 app/Api/ApiToken.php           | 13 +-
 app/Api/ApiTokenGuard.php      | 27 +-
 app/Api/ListingResponseBuilder.php | 11 +-

```

app/Application.php	6 +-
app/Auth/Access/EmailConfirmationService.php	9 +-
app/Auth/Access/ExternalAuthService.php	9 +-
app/Auth/Access/ExternalBaseUserProvider.php	30 +-
app/Auth/Access/Guards/ExternalBaseSessionGuard.php	47 +-
app/Auth/Access/Guards/LdapSessionGuard.php	28 +-
app/Auth/Access/Guards/Saml2SessionGuard.php	6 +-
app/Auth/Access/Ldap.php	34 +-
app/Auth/Access/LdapService.php	34 +-
app/Auth/Access/LoginService.php	164 ++++++++
app/Auth/Access/Mfa/BackupCodeService.php	62 +++++
app/Auth/Access/Mfa/MfaSession.php	60 +++++
app/Auth/Access/Mfa/MfaValue.php	76 +++++
app/Auth/Access/Mfa/TotpService.php	72 +++++
app/Auth/Access/Mfa/TotpValidationRule.php	37 ++
app/Auth/Access/RegistrationService.php	13 +-
app/Auth/Access/Saml2Service.php	67 +-
app/Auth/Access/SocialAuthService.php	48 +-
app/Auth/Access/UserInviteService.php	5 +-
app/Auth/Access/UserTokenService.php	62 +-
app/Auth/Permissions/EntityPermission.php	6 +-
app/Auth/Permissions/JointPermission.php	4 +-
app/Auth/Permissions/PermissionService.php	60 +++-
app/Auth/Permissions/PermissionsRepo.php	11 +-
app/Auth/Permissions/RolePermission.php	6 +-

...

...

...

```

rename resources/views/books/{ => parts}/list-item.blade.php (100%)
rename resources/views/books/{ => parts}/list.blade.php (84%)
rename resources/views/books/{ => parts}/sort-box.blade.php (100%)
rename resources/views/chapters/{ => parts}/child-menu.blade.php (81%)
rename resources/views/chapters/{ => parts}/form.blade.php (92%)
rename resources/views/chapters/{ => parts}/list-item.blade.php (92%)
rename resources/views/{partials => common}/activity-item.blade.php (100%)
rename resources/views/{partials => common}/activity-list.blade.php (76%)
rename resources/views/{partials => common}/custom-head.blade.php (55%)
rename resources/views/{partials => common}/custom-styles.blade.php (100%)
rename resources/views/{partials => common}/dark-mode-toggle.blade.php (100%)
create mode 100644 resources/views/common/export-custom-head.blade.php

```

```
rename resources/views/{partials => common}/export-styles.blade.php (100%)
rename resources/views/{partials => common}/loading-icon.blade.php (100%)
...
```

Install with Composer

```
(www-data)$ composer install --no-dev
```

This will install or update required PHP dependencies in production mode (without dev dependencies) and produce similar output:

```
> @php -r "!file_exists('bootstrap/cache/services.php') || @unlink('bootstrap/cache/services.php');"
Installing dependencies from lock file
Verifying lock file contents can be installed on current platform.
Package operations: 5 installs, 21 updates, 0 removals
- Downloading dasprid/enum (1.0.3)
- Downloading bacon/bacon-qr-code (2.0.4)
- Downloading phpoption/phpoption (1.8.0)
...
- Upgrading aws/aws-sdk-php (3.187.2 => 3.191.8): Extracting archive
- Installing league/html-to-markdown (5.0.0): Extracting archive
- Installing paragonie/constant_time_encoding (v2.4.0): Extracting archive
- Installing pragmarx/google2fa (8.0.0): Extracting archive
Generating optimized autoload files
> Illuminate\Foundation\ComposerScripts::postAutoloadDump
> @php artisan package:discover --ansi
Discovered Package: barryvdh/laravel-dompdf
Discovered Package: nunomaduro/collision
Discovered Package: socialiteproviders/manager
Package manifest generated successfully.
52 packages you are using are looking for funding.
Use the `composer fund` command to find out more!
> @php artisan cache:clear
Application cache cleared!
> @php artisan view:clear
Compiled views cleared!
```

Update database with php artisan

Run `php artisan` to update the database and make any required changes.

```
(www-data)$ php artisan migrate
```

Output (type in yes):

```
*****
```

```
*   Application In Production!   *
```

```
*****
```

Do you really wish to run this command? (yes/no) [no]:

> yes

Migrating: 2021_06_30_173111_create_mfa_values_table

Migrated: 2021_06_30_173111_create_mfa_values_table (0.03 seconds)

Migrating: 2021_07_03_085038_add_mfa_enforced_to_roles_table

Migrated: 2021_07_03_085038_add_mfa_enforced_to_roles_table (0 seconds)

Migrating: 2021_08_28_161743_add_export_role_permission

Migrated: 2021_08_28_161743_add_export_role_permission (0.01 seconds)

You could also just run the previous commands in one line with this `git pull origin release && composer install --no-dev && php artisan migrate`

Clear cache

It is also recommended to clean the cache:

```
(www-data)$ php artisan cache:clear
```

```
(www-data)$ php artisan config:clear
```

```
(www-data)$ php artisan view:clear
```

Exit the www-data shell

After you are done, exit the shell

```
(www-data)$ exit
```

```
user$
```

v21.08.3 to v21.12

Version v21.12 brought some more serious security updates and a couple of nice features. Let's update :)

Before proceeding, make sure you have a proper backup of your BookStack instance. If you don't, follow the guide [here](#).

Always check the official [Updates](#) page before proceeding. Once in a while, there are some specific instructions for updating from/to certain versions.

Prerequisites

Web services usually store files in the `/var/www` directory, in this case BookStack is in `/var/www/BookStack`. Depending on your permissions configuration, the following steps might differ.

- If the owner of all files in the directory is `www-data`, you should run the update commands as `www-data`.
- In case you have a separate user that owns the directory, execute the commands as this user.

Become `www-data` (or another user) with `sudo su`.

```
$ sudo su www-data
```

You will most likely run into this error:

```
This account is currently not available.
```

Service accounts that web apps use to run (like `www-data`) do not usually have access to the shell. **It should be that way.** Unfortunately this means, you won't be able to run any commands under them with `sudo su`, because they can't use shell. There are two way to get around this:

- Temporarily editing `/etc/passwd` and adding shell to `www-data`
- Temporarily adding `/bin/bash` to `www-data` in the current shell

I will do the latter option because it's quicker. Use `sudo` with `-s` option to add `/bin/bash` to `www-data`

```
$ sudo su www-data -s /bin/bash
```

This will open shell under `www-data` so you can perform the management actions you want without messing up file ownerships.

```
www-data@hostname:~/
```

Download using git

Make sure you are in the correct directory (root of BookStack) `/var/www/BookStack` with `pwd`:

```
(www-data)$ pwd  
/var/www/BookStack
```

Updates of BookStack are done using `git`. Pull the latest version with this command:

```
(www-data)$ git pull origin release
```

Output should look something like this:

```
hint: Pulling without specifying how to reconcile divergent branches is  
hint: discouraged. You can squelch this message by running one of the following  
hint: commands sometime before your next pull:  
hint:  
hint:  git config pull.rebase false  # merge (the default strategy)  
hint:  git config pull.rebase true   # rebase  
hint:  git config pull.ff only       # fast-forward only  
hint:  
hint: You can replace "git config" with "git config --global" to set a default  
hint: preference for all repositories. You can also pass --rebase, --no-rebase,  
hint: or --ff-only on the command line to override the configured default per  
hint: invocation.  
remote: Enumerating objects: 4106, done.  
remote: Counting objects: 100% (2414/2414), done.  
remote: Compressing objects: 100% (134/134), done.  
remote: Total 4106 (delta 2280), reused 2405 (delta 2278), pack-reused 1692  
Receiving objects: 100% (4106/4106), 1.82 MiB | 10.86 MiB/s, done.  
Resolving deltas: 100% (3333/3333), completed with 554 local objects.  
From https://github.com/BookStackApp/BookStack  
* branch                release    -> FETCH_HEAD  
fa855383..09436836 release -> origin/release
```


Updating fa855383..09436836

Fast-forward

.env.example	2 +-	
.env.example.complete	32 +-	
.github/ISSUE_TEMPLATE/api_request.md	17 -	
.github/ISSUE_TEMPLATE/api_request.yml	26 +	
.github/ISSUE_TEMPLATE/bug_report.md	29 -	
.github/ISSUE_TEMPLATE/bug_report.yml	62 +	
.github/ISSUE_TEMPLATE/feature_request.md	14 -	
.github/ISSUE_TEMPLATE/feature_request.yml	26 +	
.github/ISSUE_TEMPLATE/language_request.md	13 -	
.github/ISSUE_TEMPLATE/language_request.yml	32 +	
.github/ISSUE_TEMPLATE/support_request.yml	63 +	
.github/SECURITY.md	32 +	
.github/translators.txt	24 +-	
.github/workflows/phpstan.yml	41 +	
.github/workflows/phpunit.yml	8 +-	
.github/workflows/test-migrations.yml	6 +-	
.gitignore	3 +-	
LICENSE	2 +-	
app/Actions/Activity.php	2 +-	
app/Actions/ActivityLogger.php	115 +	
app/Actions/ActivityQueries.php	112 +	
app/Actions/ActivityService.php	197 --	
app/Actions/ActivityType.php	12 +	
app/Actions/Comment.php	11 +-	
app/Actions/CommentRepo.php	11 +-	
app/Actions/DispatchWebhookJob.php	112 +	
app/Actions/Tag.php	9 +	
app/Actions/TagRepo.php	55 +-	
app/Actions/Webhook.php	75 +	
app/Actions/WebhookTrackedEvent.php	18 +	
app/Api/ApiDocsGenerator.php	21 +-	
app/Api/ApiToken.php	2 +-	
app/Api/ApiTokenGuard.php	4 +-	
app/Auth/Access/ExternalBaseUserProvider.php	19 +-	
app/Auth/Access/{ExternalAuthService.php => GroupSyncService.php}	6 +-	
.../Guards/{Saml2SessionGuard.php => AsyncExternalBaseSessionGuard.php}	2 +-	
app/Auth/Access/Guards/LdapSessionGuard.php	2 +-	
app/Auth/Access/Ldap.php	19 +-	

app/Auth/Access/LdapService.php	17 +-
app/Auth/Access/LoginService.php	2 +-
...	

This time, I got a git hint at the beginning, which I will ignore for now and may come back to it in a separate article later.

Install with Composer

```
(www-data)$ composer install --no-dev
```

This will install or update required PHP dependencies in production mode (without dev dependencies) and produce similar output:

```
> @php -r "!file_exists('bootstrap/cache/services.php') || @unlink('bootstrap/cache/services.php');"
Installing dependencies from lock file
Verifying lock file contents can be installed on current platform.
Package operations: 20 installs, 42 updates, 10 removals
- Downloading composer/package-versions-deprecated (1.11.99.4)
- Downloading aws/aws-crt-php (v1.0.2)
- Downloading voku/portable-ascii (1.5.6)
- Downloading phpoption/phpooption (1.8.1)
- Downloading graham-campbell/result-type (v1.0.4)
- Downloading vlucas/phpdotenv (v5.4.1)
- Downloading symfony/css-selector (v5.4.0)
- Downloading tijsverkoyen/css-to-inline-styles (2.2.4)
- Downloading symfony/var-dumper (v5.4.1)
- Downloading symfony/deprecation-contracts (v2.5.0)
- Downloading symfony/routing (v5.4.0)
- Downloading symfony/process (v5.4.0)
- Downloading symfony/mime (v5.4.0)
- Downloading symfony/http-foundati
```

Update database with php artisan

Run `php artisan` to update the database and make any required changes.

```
(www-data)$ php artisan migrate
```

Output (type in yes):

```
*****
```

```
*   Application In Production!   *
```

```
*****
```

Do you really wish to run this command? (yes/no) [no]:

> yes

Migrating: 2021_06_30_173111_create_mfa_values_table

Migrated: 2021_06_30_173111_create_mfa_values_table (0.03 seconds)

Migrating: 2021_07_03_085038_add_mfa_enforced_to_roles_table

Migrated: 2021_07_03_085038_add_mfa_enforced_to_roles_table (0 seconds)

Migrating: 2021_08_28_161743_add_export_role_permission

Migrated: 2021_08_28_161743_add_export_role_permission (0.01 seconds)

You could also just run the previous commands in one line with this `git pull origin release && composer install --no-dev && php artisan migrate`

Search Index Update

According to the official [Updates](#) page, there have been some changes regarding search indexing and it is recommended to run

```
(www-data)$ php artisan bookstack:regenerate-search
```

to take advantage of these new changes.

🔧 Search Index Changes - Changes to search indexing and scoring were made in this release. It's recommended to run `php artisan bookstack:regenerate-search` to ensure a consistent search experience and take advantage of these changes.

Clear cache

It is also recommended to clean the cache:

```
(www-data)$ php artisan cache:clear
```

```
(www-data)$ php artisan config:clear
```

```
(www-data)$ php artisan view:clear
```

Exit the www-data shell

After you are done, exit the shell

```
(www-data)$ exit
```

```
user$
```