

# Print Multiple Mails into Single PDF

Two options are available to print multiple mails into single PDF: **Default** and **Merge**.

## Default Option

MBox Viewer concatenates headers and content of all mails into a single HTML file and requests Edge or Chrome Web Browser to convert HTML file into PDF. MBox Viewer's default solution is non-standard and in **rare cases** can affect font sizes and possibly other formatting in all mails. If the generated PDF file didn't meet expectation, please consider running "Merge" option.

Starting with version 1.0.3.32, MBox Viewer was enhanced to practically eliminate the impact of email concatenation on the font sizes in most cases and therefore you may need to rely on "Merge" option on rare occasions only.

Print to PDF Default option offers some benefits not available when using the "Merge" option. Multiple small mails can be placed on a single page while in the "Merge" option each mail will start new page.

Also, users can configure MBox Viewer to print page break after each mail or after each conversation thread of mails. Select "File-->Print Config --> PDF document options --> Page Break After Each Mail/Page or Break After Each Conversation Thread".

## Merge Option

Merge option applies to multiple mails only. Right-click on selected mails and select "Print Selected Mails To --> PDF --> Merge" option. This will print all selected mails into separate PDF files first and then merge them into a single target PDF file using free PDFBox tool.

Conversion of mails into PDF format by Edge or Chrome Browsers is typically high quality and the merging process typically preserves original quality. **Merged file is typically much larger** than the size of PDF file generated by Default option. It looks like that PDFBox tools is not able to reduce redundant font, etc definitions when merging.

Each mail starts at the beginning of a page in the merged PDF. This may be considered less than optimal for small mails.

In order to run Merge mode, users must install free java PDFBox command line tool and Java VM. Java VM is typically installed on Windows but PDFBox application must be downloaded from the following link [PDFBox](#).

Please download the latest pdfbox-app-3.\*.jar file and install in **the same directory as mboxview.exe**.

Also, check whether java.exe is installed on your system as follow:

Start Command Prompt and type **where java**. If java.exe is not listed in the output, you need to install java for Windows. You may also have to update PATH system environmental variable and restart Explorer and MBox Viewer.

Free Java 8 can be downloaded from [jdk8-downloads](#).

## Performance

The Maximum number of mails that can be merged by both options depends on the complexity and size of mails to be merged.

Merging may take minutes when merging relatively small plain text mails or it may take hours when merging a large number of business mails with hyperlinks, graphics, tables, etc.

Printing Simple Plain Text Mails Example

Print of 2673 of simple plain text mails in **Default** mode took 13 minutes (780 seconds) and generated the PDF file of **19MB** size.

Print of 2673 of simple plain text mails in **Merge** mode took 32 minutes (1,920 seconds) and generated the PDF file of **181MB** size.

User should always try first the Default mode and try the Merge mode only if Default mode has issues.

#### Printing of mix of Simple Plain Text Mails and Complex from Business Mails Example

Running Merge option, it took 3 hours to print 3926 mails, a mix of simple and business mails, into separate PDFs and another 40 minutes to merge them by PDFBox. Task Manager was showing that PDFBox process memory utilization was close to 8GB.

Default option never finished with the same set of mails. Test was canceled when it didn't finish within 5 hours.

### **Mail Printing to PDF files by Power Users**

Some users may need to print very large number of mails to a single PDF file. This is supported by Mbox Viewer but one or multiple manual steps are required. User must first print group of mails to separate HTML files and eventually to PDF files and then merge them into a single PDF file by running provided script.

The count of mails to merge into single HTML file is controlled by the following option:

“File-->General options Config-->Number of HTML mails to merge to increase scalability”

Merging multiple mails into single HTML file reduced time to convert all mails to PDF and also helps to reduce size of the final PDF file. The conversion time of HTML files to PDF files can be reduced further by utilizing multiple Chrome or Edge instances.

Follow the following steps to optimize merging of large number of files into single PDF:

1. Set “Number of HTML mails to merge to increase scalability” option to 100 for example. This number depends on the size and complexity of mails. This will reduce the total number of HTML files to convert to PDF by 100 times.
2. Install pdfbox-app-3.\*.jar file and Java VM as described below.
3. Open the target folder for PDF files as follow: a) Select any two mails, b) select “Print Selected Mails To --> PDF --> Merge” option, c) wait until Print is done and select Open File Location. Keep the folder open for the future use.
4. Select all or subset of mails to convert to single PDF file.
5. Right click on one of the selected files and select “Print Selected Mails To --> PDF --> Merge” option.
6. Wait until MBox Viewer finishes creating HTML files and begins to convert HTML files to PDF.
7. Select Cancel button and wait until Cancel is completed.

8. Copy the following scripts to the target folder for PDF files:
  - scripts/run-html2pdf-list.cmd
  - scripts/html2pdf-list.cmd
  - scripts/PDFMerge-pdfbox.cmd
9. Update run-html2pdf-list.cmd script to set NumberOfBrowsers and RootUserDataDir. It is recommended that NumberOfBrowsers is not set higher than number of physical cores on user's computer. Create sub-folders 0,1,2,etc, one per browser instance, under RootUserDataDir folder.
10. Left double click on run-html2pdf-list.cmd to start HTML to PDF conversion. This will create number of windows, some will be minimized. Once conversion of HTML files to PDF is complete, Close all windows created by run-html2pdf-list.cmd script.
11. Once conversion of HTML files to PDF is complete, left double click on PDFMerge-pdfbox.cmd to merge all PDF files into the target PDF created under PDF\_MERGE sub-folder.

The entire process may take many hours depending on the complexity of emails and the number of Browsers configured for conversion.

If more than one merged PDF file is created in the PDF\_MERGE sub-folder, PDFMerge-pdfbox.cmd script and pdfbox-app-3.\*.jar file need to be copied to that sub-folder and the script executed again until PDFMerge-pdfbox.cmd script creates single PDF file only.

Free PDFBox java tool can be downloaded from [pdfbox.apache.org](http://pdfbox.apache.org).

PDFBox command line tools usage example can be found in [pdfbox.apache.org commandline tools](http://pdfbox.apache.org/commandline-tools).

Java 8 can must be installed and can be downloaded from [jdk8-downloads](http://jdk8-downloads).

## **Viewing Large PDF files**

Chrome, Edge and Firefox browsers and even Adobe Acrobat viewer have problems handling large Gigabytes PDF files. The Okular viewer seems to be the best and also free viewer for viewing very large PDF files <https://okular.kde.org/> .