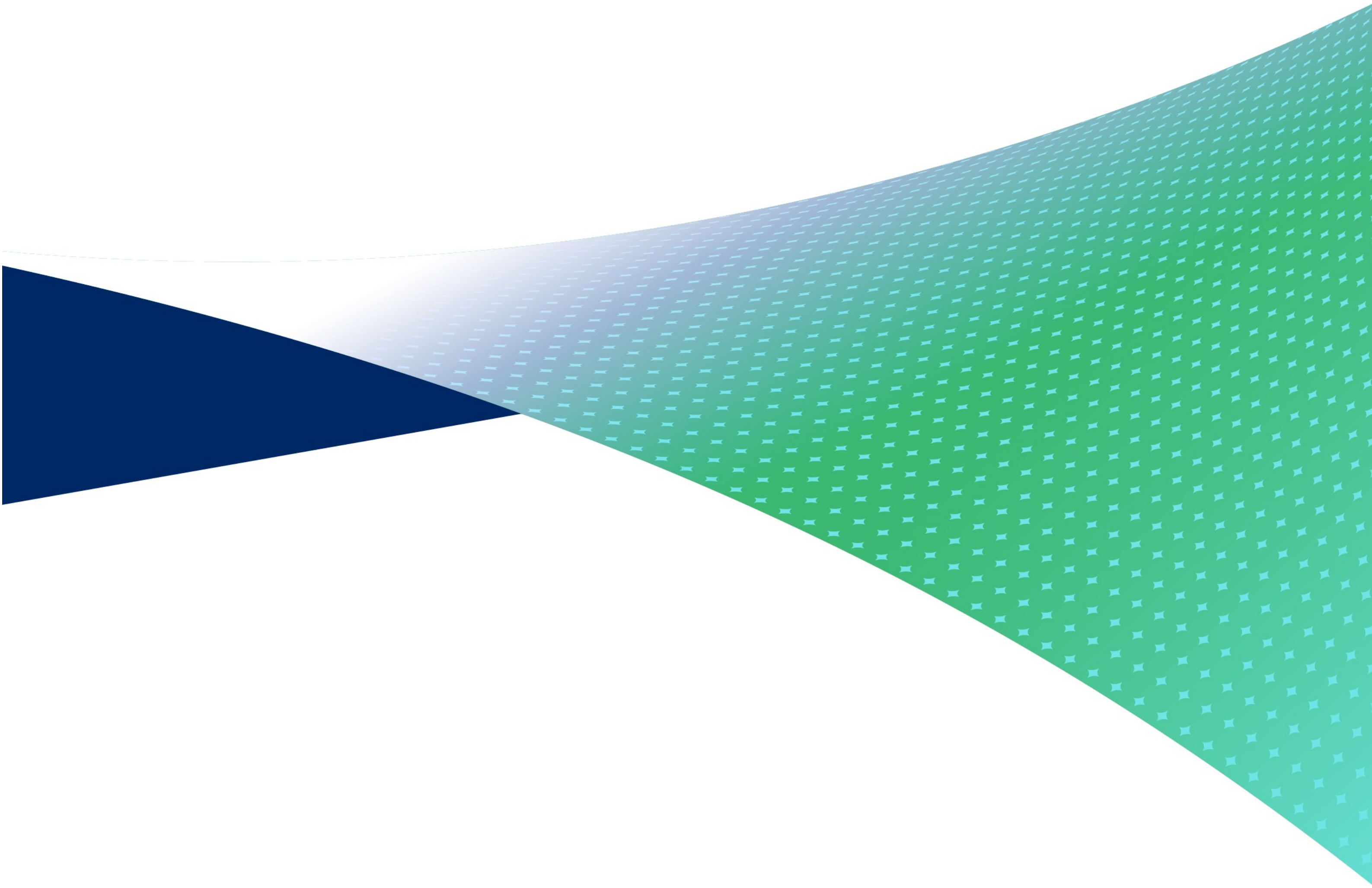


ABBYY® Timeline 6.1.3

Deployment Guide on Linux Systems

Table of Contents

About This Document

This deployment guide is intended for system administrators and engineers. It includes instructions for installation and configuration of ABBYY Timeline 6.1 on Linux.

Introducing ABBYY Timeline

After you complete all the installation steps, refer to the Accounts and Users in Timeline section. Here you will find basic instructions about users' roles and permissions in Timeline.

See also:

- Getting Started with Task Mining
- Getting Started with Process Analysis

System Requirements and Prerequisites

Operating system	Red Hat Enterprise Linux 7.7 Red Hat Enterprise Linux 8.5
CPU	4 cores or more
RAM	16 GB or more
HDD	512 GB or more Depends on the actual amount of data loaded into the application. Production environment may require more disk space, depending on the actual volume of data loaded into the application.
Browser (to access the ABBYY Timeline website)	• Google Chrome 118 or later • Microsoft Edge 118 or later
Additional software	**Included in the installer:** • Redis 6 • NodeJS 18.18.2 • Nginx 1.25 **Downloaded from the Internet:** **Important.** The installer automatically downloads and installs the following additional software from the Internet. If your machine is not connected to the Internet, the program will ask you to download it manually and prompt sources. • Docker Compose 1.27.4 • bitnami/minideb:bullseye docker-image **Important**. If you download additional software manually, e.g. in case of offline installation, you will need the exact version of the docker image displayed by the installer during the installation process.

	Depending on your operation system version: • **Red Hat Enterprise Linux 7**: ○ docker-ce 19.03.9-3 ○ docker-ce-cli 19.03.9-3 ○ containerd.io 1.3.7-3.1 ○ container-selinux 2.119.1-1 • **Red Hat Enterprise Linux 8**: ○ docker-ce 20.10.9-3 ○ docker-ce-cli 20.10.10-3 ○ docker-rootless-extras 20.10.10-3 ○ docker-scan-plugin 0.9.0-3 ○ containerd.io 1.4.11-3.1 ○ container-selinux 2.167.0-1 **Needs to be installed and configured before Timeline installation:** • SMTP Server ABBYY Timeline needs access to a running SMTP server to be able to send verification emails, notifications, invitations, and alerts, etc. • PostgreSQL 13 If you plan to use a remote database, make sure that you have a configured and running PostgreSQL 13 instance to which you will be connecting during Timeline installation. If you plan to use a local database, **PostgreSQL 13** is included in the installer, no additional actions are needed. • Twilio account You need to have a configured Twilio account if you want to enable SMS notifications feature in Timeline.
Other requirements	The target machine has to be connected to the Internet during the installation. If it is offline, you will have to download some additional software manually, in accordance with the installer prompts.

Scaling guidelines

The exact calculation of necessary hardware requires multiple parameters such as data volume and usage patterns. However, the general guidelines could be defined as following:

- If the number of concurrent users is less than 10 and the data update frequency is once per day or less, a single server should be sufficient.
- For more users or more frequent data updates, a separate server for DBMS is recommended.

Installation, Removal and Upgrade

This section provides instructions for installing ABBYY Timeline, updating, and removing it from your computers.

Installing Timeline

Before you begin

- Obtain the Timeline for Linux installer either from your ABBYY representative or ABBYY Technical Support by submitting a request on this page.
- Verify all Linux system requirements and prerequisites 6 before starting your Timeline installation.
- Ensure that any firewall installations are not blocking ports 80, 443 and 5432 or the ports you plan to setup for the Web Server and database. The installation will not work if firewall is blocking the ports that have been specified during the Timeline installation.
- If you intend to configure HTTPS, please visit the HTTPS Configuration 35 section.

Procedure

1. Copy the Timeline installer to the local disk, typically to **/tmp.f**
2. Open the shell.
   Important. You need root access to install Timeline. Without root, you won't have the necessary permissions to install it. Prefixing every command with **sudo** is cumbersome and it causes a problem with exported variables on the command line. If you are not using the host machine with the root user, start a new shell with root privileges using the command **sudo bash**.
3. Set the permissions of the **timeline-install-6.1.*.sh** file so that it is executable:
   chmod +x /path/to/timeline-install-6.1.*.sh

4. Execute the Timeline install script:
   path/to/timeline-install-6.1.*.sh
   If the script is in the current directory, then you need to specify the dot (./) before the script file name:
   ./timeline-install-6.1.*.sh
   Continue the installation when prompted.

5. **Read and accept the license agreement**
   Read the information in the End-User License Agreement. After reviewing the license agreement information, to indicate acceptance of the EULA, press the **Y** key. Any other input cancels the installation. After you accept the license agreement, installation proceeds.

6. **Check and install prerequisites**

   a. **PostgreSQL instance and database**
      Timeline needs access to PostgreSQL 13. You can install PostgreSQL on a computer along with Timeline or a separate computer.
      The program will ask you about using either local or remote database.
      If you already installed PostgreSQL on another computer, select **Remote**. This option is useful if you install the program in a production environment where the host machine is accessible from outside the corporate network. If you prefer to keep Timeline and the database on the same machine, select **Local.**

      i. **Local**
         If you want to use PostgreSQL on the host machine, select **Local**. The database will be set up by the installer and run inside the docker-container. This option is useful if you install the program for testing purposes or environments where the host machine is not accessible from outside the corporate network, and only the HTTP/HTTPS ports open.

         During the installation process, the following PostgreSQL databases are created:
         timeline
         The database contains all information about users, their activity, and projects.

         timeline-log
         The database contains detailed records of Timeline events such as security, errors, and notifications.

         timeline-000
         The database contains information about user repositories.

ii. **Remote**
When you select this option, the program will ask you about establishing a secure SSL connection to the remote PostgreSQL database. Press **Y** if you plan to use SSL, or **N** to reject.
For several databases, located on different servers provisioned by different certificate authorities, set SSL root certificate paths for them separately, as prompted by the installer.
Important. If your PostgreSQL is configured with SSL support and a root CA certificate file is used, you must provide the full path to the root CA certificate when configuring your connection settings. The certificate file will be copied to the **$TIMELINE_INSTALLATION_DIR/db-ssl** folder.
To use this option, you must prepare **timeline**, **timeline-log**, and **timeline-000** databases in the remote PostgreSQL in advance:

1. Launch PostgreSQL.

2. Create a user that can own database objects.
   For example, TimelineUser.

3. Create the following databases owned by the user you created in the previous step:
   timeline
   The database contains all information about users, their activity, and projects.

   timeline-log
   The database contains detailed records of Timeline events such as security, errors, and notifications.

   timeline-000
   The database contains information about user repositories.

   For setting up access to Timeline databases, you will be asked for the connection settings in one of the further installation steps.

b. **Docker and docker-compose**

Timeline runs in Docker containers so Docker and Docker-compose should be installed on the host machine. Docker is a Linux-based virtualization tool that helps to make complex applications more portable. You can install it manually or let the Timeline installer download and install it.

Important. Starting from Timeline 6.0, the installer automatically downloads Docker and its dependencies from the Internet. If your machine is not connected to the Internet, the program will ask you to download it manually and prompt sources.

7. **Configure web server**

a. **HTTP and HTTPS port**

Specify the TCP/IP port for the Timeline website. Make sure that the specified port is not being used by any other application. By default, the application listens on port 80 for HTTP and port 443 for HTTPS. If both ports are defined, HTTP requests will be redirected to HTTPS.

You will be asked whether to use both HTTP and HTTPS, HTTP only, or HTTPS only. Navigate to the needed option using the arrow keys and press Enter to select it.

i. **HTTP and HTTPS ports**

Define ports for both options as described in further steps.

ii. **HTTP port (80)**

Press **Enter** to use the default 80 port or enter the port number.

iii. **HTTPS port (443)**

Press **Enter** to use the default 443 port or enter the port number.

If **HTTP and HTTPS** or **HTTPS** options are selected, after specifying the ports you will be prompted to specify the SSL certificate and key (and optionally a key password file). Provide the absolute path to these files. Then these files will be copied to the appropriate location ($TIMELINE_INSTALLATION_DIR/nginx) and the **ssl.conf** set up accordingly.

Then you will be asked whether to set the root certificate. Agree if you use self-signed certificates, otherwise this step can be skipped.

For preconditions and HTTPS related troubleshooting instructions, please see the HTTPS Configuration with SSL 35 section.

You can change ports' configuration after installation. For more information, see Configuring ABBYY Timeline Using .env File 28 section.

b. **Base URL**

Enter the base URL that hosts Timeline or press **Enter** to use the default **https://127.0.0.1** one. It must be a public IP of the server or an external fully qualified URL. The lowercase pattern is recommended. Base URL also is used for links inside email messages sent by Timeline.

The Base URL must have the following syntax: **http[s]://hostname:port**
Important. Do not use extra spaces and forward slash '/' at the end of the base URL.

If you are using the default port (80 or 443), you do not need to add them to the base URL.

Examples:
The base URL of the HTTP endpoint, if a custom port is specified:
http://mytimeline.com:8080

The base URL of the HTTPS endpoint, if a custom port is specified:
https://mytimeline.com:30443

8. **Configure mail server**

Configure the SMTP server access to allow Timeline to send out emails in several features such as Alerting, User invitation, etc.
The installer asks if you want to use a custom NodeMailer configuration, further steps depend on your decision (Y/N):

a. **no** (default)

If this option is selected, you need to provide general information to configure SMTP mail server and specify its security options. To decide which options you have to select, please refer to the documentation of your mail server. The server's basic settings are set during installation. You can change the SMTP mail server configuration after installation. For more information, see Configuring ABBYY Timeline Using .env File 28 section.
Configure the following options right in the installer dialog:

i. **Host**

Specify server name where SMTP mail server is installed.

ii. **Port**

Enter SMTP mail server port number.

iii. **Username** and **Password**

Enter SMTP mail server access credentials.

iv. **E-Mail sender**

Enter the sender address that is used to fill the 'From' header field of emails.

v. **Use TLS? (Y/N)**

Enter **N** in case your SMTP server does not use TLS. It is a typical use case for mock, local mail services, for example, mailcatcher.

vi. **Require TLS (Y/N)**

Enter **Y** if the initial connection should happen over an unencrypted connection and then the STARTTLS command should be used to upgrade to a secure connection. For example, Microsoft Exchange.

vii. **Reject unauthorized (Y/N)**

Enter **Y** if your mail server uses SSL certificate issued by the Certification Authority (CA).

Enter **N** if your mail server uses an unauthorized, e.g., self-signed, SSL certificate.

b. **yes**

If this option is selected, you need to have a prepared file with mail server configuration in JSON format.

Important. If you have no configuration file prepared at this step, you can finish the current installation with some default mail server configuration (answer **no** as described above). After that, follow the additional steps to configure the JSON described in Custom NodeMailer Configuration 26.

If the configuration file is prepared, provide the following information in the installer dialog:

i. **Configuration file path**

Absolute path to the file created in advance, for example: *<path-to-directory>/mailServerConfig.json*

After validation, the file will be copied to the installation location. By default: **/opt/timeline/config**

ii. **E-Mail sender**

Enter the sender address that is used to fill the 'From' header field of emails.

9. **SMS service**

Configure Twilio SMS service to receive SMS notifications from Timeline containing verification codes, alert notifications, and error messages.

Important. Twilio account is required to configure and send SMS notifications.

a. **Do you want to use Twilio SMS service? (Y/N)**
   Enter **N** in case you don't want SMS notifications. Enter **Y** to proceed with SMS notifications configuration.

b. **Twilio account SID**
   Enter a String Identifier (SID), a unique key that will be used to identify your account when sending SMS notifications.

c. **Twilio Auth Token**
   Enter your **Auth Token**, an access token that Timeline needs to connect to your Twilio account.

d. **Phone number**
   Enter the phone number from your Twilio account. It will be the sender number.

10. **Configure admin user account**
    Enter a valid e-mail address using an existing domain name that is configured to receive emails, for example, **user@domain.com**, and a password for it. This will be the first user of Timeline and the one that will have access to the ABBYY Timeline website, where other users can be administered.
    The password you specified must contain only English letters and digits from 0 to 9.
    Note. If you are upgrading Timeline, you are not prompted to enter admin user credentials because previous settings are maintained.

11. **Database**
    This step appears if you choose **Remote** to connect to a remote PostgreSQL instance at the beginning of the installation process. The installer will ask for the settings for accessing the **Admin DB**, **Log DB**, **User DB** databases. For each of these databases, specify the connection parameters to **timeline**, **timeline-log**, and **timeline-000** databases located on the remote PostgreSQL.

    a. **PostgreSQL host**
       If you select **Connect to existing database** on the previous step, specify server name where PostgreSQL is installed. By default, **localhost** is used.

    b. **PostgreSQL port**
       Specify the TCP/IP port for PostgreSQL. By default, TCP/IP port **5432** is used. Make sure that it is not being used by any other application.

    c. **Database username**
       Provide the credentials of the PostgreSQL user who owns the Timeline databases. For example, TimelineUser.

d. **Database name**
- Enter **timeline** as the database name for the **Admin DB**.
- Enter **timeline-log** as the database name for the **Log DB**.
- Enter **timeline-** as the database name for the **User DB**. It is the prefix of the **timeline-000** database you created in the remote PostgreSQL.

12. Perform Timeline health check 16

Important. If you intend to configure HTTPS, you must set up SSL configuration after installation is complete. See HTTPS Configuration with SSL 35 for details.

Performing Health Check

Check that Timeline is working properly by doing the following:

1. Make sure all docker containers are running on the host machine by using:

   ```
   sudo docker ps -a
   ```

   Note. You can ignore the status of **timeline_migrate_1** container which is used only to migrate databases and is not running after Timeline start.

2. Open a browser and enter **{timelineURL}:{port}** in the address bar, where:
   {timelineUrl} is the Base URL you specified during the Timeline installation or the public IP address or the full name of the computer on which Timeline is installed.
   {port} is the custom port assigned to the Timeline website during the installation process.
   If you are using the default port (80 or 443), you do not need to add them to the {**timelineURL}**. By default, TCP/IP port 80 or 443 is used.

   Example: http://mytimeline:8080 or https://mytimeline:30443

3. If the installation was carried out correctly, the Timeline website will open.

4. Login using the Timeline admin credentials you specified during the installation process 15.

Installation in Unattended Mode

Timeline installation can run in unattended mode. This option becomes available after a usual Timeline installation by running the installer with an additional parameter and a configuration file. You can display the list of possible commands and parameters executable with Timeline installer script using the **--help** parameter:

```
<installer_script>.sh -- --help
```

Important. You will need to provide active consent to its terms during the installation in unattended mode as well, so we recommend familiarizing yourself with it in advance. You can additionally make sure to display the EULA text by running the installer with a special parameter:

```
<installer_script>.sh -- --show-eula
```

In order to do an unattended installation, follow the steps below:

1. Perform a usual installation by running the installer script with an additional parameter to create a JSON file with the data you provided as answers to the installer prompts:

   ```
   <installer_script>.sh -- --output <absolute_file_path>.json
   ```

2. Follow the installer steps providing configurations you require on the target machine(s) - those on which TL should be set up in unattended mode.

3. Make sure to save the output file in a convenient and secure location.

4. Run the installer in unattended mode on the target machine by providing to it the configuration file, created in the previous step. In the same command, provide the **--accept-eula** parameter, which is as an active consent to the EULA terms, since it cannot be inherited from the configuration file.

```
<installer_script>.sh -- --accept-eula --input <absolute_file_path>.json
```

Upgrading from Previous Versions

If you own an older Timeline version, you can upgrade to ABBYY Timeline 6.1 Depending on the Red Hat Enterprise Linux version you use, there are the following preconditions:

- RHEL7
  Upgrade from Timeline 5.2 is only possible within Red Hat Enterprise Linux 7 versions.
- RHEL8
  Under Red Hat Enterprise Linux 8 the minimal version for upgrade is Timeline 5.3, since previous versions do not support this operating system.
- Clean installation on a separate server
  If upgrade is not possible, or you need to do a clean installation on a new server, you can still connect a remote database used in the previous Timeline version by connecting to it in the **Connect to Database** step.

This means that you can install a new version of ABBYY Timeline and your databases and previous settings will be maintained.

Before you begin

If you are using a local database, before starting the upgrade procedure we recommend taking additional precautions to keep it intact and assure its functioning after the upgrade:

- **Backup local files**
  A simple manual backup will be sufficient. To do it, you need to copy the whole installation folder (**/opt/timeline**) to a separate location.
  You can delete the copied folder after you make sure that the upgrade was successful.
- **Backup remote database**
  If you are using a remote database, it is recommended to make a backup of it. Please see the official PostgreSQL documentation for instructions on how to do it - https://www.postgresql.org/docs/12/backup.html
- **Keep the installer of a previous version**
  We also recommend keeping the installer of the currently running version since it will be needed for restore, in case something went wrong during the upgrade. If you deleted it, you can request the installer for the previous version from the ABBYY Technical Support service on this page.

- **Prepare enough storage space**
  Make sure the size of the free space on the target server is at least 3 times greater than your database size. The upgrade includes switching to PostgreSQL 13, that involves the local database migration.

Although issues during the upgrade are unlikely, these actions will help you to additionally protect your data. If you nonetheless faced an upgrade issue, you will be able to restore the stable version. For instructions see the **Restore** section below.

Procedure

To update your Timeline installation to the latest version, you have to execute the following steps:

1. Backup your data as described in **Before you Begin** section, if needed.
2. Run the Timeline installation as described in the Installing ABBYY Timeline 9 section and follow the instructions of the Installation Wizard. Press **Y** when the program will prompt you to upgrade.
3. When prompted **Import existing Timeline installation** select **/opt/timeline** or **custom path** depending on where the program is already installed.
4. Select PostgreSQL location when prompted **Do you want ABBYY Timeline to use a local PostgreSQL instance or connect to a remote database?**

   - When upgrading from any supported version, database settings from any location are maintained.

   - If you are doing a clean installation of a new version but want to use a remote database that was installed and configured with one of the previous Timeline versions, specify the parameters for connecting to this remote database at the **Connect to Database** step. For this scenario, only the databases created in PostgreSQL 12 are supported.
     Note. If you choose the local instance option - a new database will be created.

5. If you plan to configure HTTPS with SSL specify HTTPS port when prompted.

6. To use existing databases, specify the values for connecting to them in the **Connect to Database** step. Depending on the database used, some additional actions or precautions should be made:

   a. **Local database**
   If your local database was migrated due to the PostgreSQL update, you will be notified by the installer. The notification prompts to check the data integrity after the installation. The installer does not remove your old database automatically, so you need to delete it

manually after you make sure it is migrated correctly.
Important. We strongly recommend to backup the installation folder (by default **/opt/timeline**) before starting the upgrade. This way your local database is backed up as well, making it easier for you to roll back to the previous Timeline version using the old database if you face any issues after the upgrade. For details, see Restore previous version 21.

b. **Remote database**
We recommend paying extra attention to the values entered. Incorrect user credentials (e.g. a typo in username) will cause a new database creation.

7. Complete the Timeline installation.

8. Perform Timeline health check 16.

9. If you have a local database migrated, check its integrity. If the migration was successful, manually delete the old database from the installation directory (by default **/opt/timeline**).

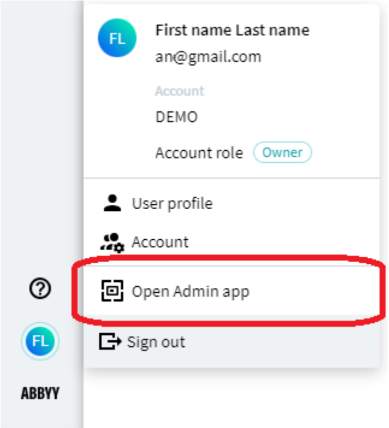
10. After the installation process is complete, you need to rebuild all old Task Mining projects so that they are available to work in the new Timeline version. For detailed instructions on rebuilding of the existing Task Mining project, see below.

How to Rebuild an existing Task Mining project

1. Open a browser and enter **{timelineURL}:{port}** in the address bar, where:
{TimelineUrl} is the Base URL you specified during the Timeline installation or the public IP address or the full name of the computer on which Timeline is installed.
{port} is a custom port assigned to the Timeline website during the installation process. If you are using the default port (80 or 443), you do not need to add them to the {**timelineURL}**. By default, TCP/IP port 80 or 443 is used.
Example: http://mytimeline:8080 or https://mytimeline:30443

2. Login using the Timeline admin credentials you specified in the 'Admin User Account' step during the Timeline installation process.

3. Click your user avatar at the bottom of the left bar, then select **Open Admin app**.



4. In the **Admin** app, go to the **Project** tab and click **Rerun all task mining cutting**.
   Important. Please do not refresh or close this browser page until the process is finished.

Restore previous version

If something went wrong during the upgrade, you can roll back to the previous version. To do it you will need:

- The installer for the restore version.
  Note. If you no longer have your old installer, request it from the ABBYY Technical Support service on this page.
- A backup of the old installation folder (**/opt/timeline**).

To restore the previous Timeline version, perform the following steps:

1. Delete the current installation folder (**/opt/timeline**).
2. Restore your old installation folder from the backup (copy the old folder to the current installation location).
3. Run the old installer as described in the Installing ABBYY Timeline 9 section and follow the instructions of the Installation Wizard. Press **Y** when the program will prompt you to upgrade.
4. Finish the installation and continue using the stable version.

If you faced issues during Timeline installation, contact the ABBYY Technical Support service about it, as described in the Technical Support 45 section.

Uninstalling Timeline

Before you begin

Your local databases are stored in the **/opt/timeline** folder and will be deleted during the Timeline uninstallation process. If you are planning to use these databases in the future, backup them. For detailed information on how to backup your databases, see PostgreSQL documentation - https://www.postgresql.org/docs/12/backup.html.

Procedure

To remove Timeline, execute the following commands as root to remove the docker containers and images, and other files. If you are not using the host machine with the root user, start a new shell with root privileges using the command **sudo bash**. Then follow the steps below:

1. Stop the application service if it is running at the moment, and remove it.

   a. Disable Timeline and stop its service.

```
systemctl disable timeline
systemctl stop timeline
```

   b. Remove the Timeline service.

```
rm -f /etc/systemd/system/timeline.service
```

2. Stop any running container.

```
test -n "$(docker ps -q)" && docker kill $(docker ps -q)
```

3. Clean up docker (containers, images, networks).

```
docker system prune -af
```

4. Remove Timeline application data.
   Note. Use the path to your actual Timeline installation folder, by default it is **/opt/timeline**.

```
rm -rf /opt/timeline
```

5. Stop docker service.

```
systemctl disable docker
systemctl stop docker
```

Note. The installed 3rd-party tools (docker, docker-compose) will remain on the machine. Remove them manually if you no longer need them.

Timeline 5.3.0 patch installation

If you are using the Timeline 5.3.0 version and upload from an ODBC data source fails, you need to download the patch-file. Click here to download.
This issue is fixed in later versions.

Prerequisites

- If the target machine (HOST) is not connected to the Internet, you will need an additional machine that has internet connection and docker installed (BUILDER). You need to have the **Dockerfile.odbcpatch** on the respective machine (HOST or BUILDER) depending on the HOST internet connection. All actions in the instruction are marked on which machine to perform them.
- Make sure you have root access on both machines.

Step 1 - Setup

1. HOST: Install the Timeline application.
2. HOST: Stop the timeline service:
   ```
   systemctl stop timeline
   ```

Step 2 - Patch

1. Patch with internet connection on HOST.
   a. HOST: Patch the **timeline/backend** image with the received dockerfile:
   ```
   cd <path_to_dockerfile> && docker build -f Dockerfile.odbcpatch -t
   timeline/backend:latest .
   ```
2. Patch without internet connection on HOST.
   a. HOST: Export the **timeline/backend** image:
   ```
   docker save -o timeline-backend-latest.tar timeline/backend:latest
   ```
   b. Move the exported **timeline-backend-latest.tar** to the BUILDER machine.
   c. BUILDER: Load the **timeline/backend** image:
   ```
   docker load --input <path_to_image_tar>/timeline-backend-latest.tar
   ```
   d. BUILDER: Patch the **timeline/backend** image with the received **dockerfile**:
   ```
   cd <path_to_dockerfile> && docker build -f Dockerfile.odbcpatch -t
   timeline/backend:latest .
   ```

e. BUILDER: Export the patched **timeline/backend** image:

```
docker save -o timeline-backend-latest-patched.tar timeline/backend:latest
```

f. Move the exported **timeline-backend-latest-patched.tar** to the HOST machine

g. HOST: Load the patched **timeline/backend** image:

```
docker load --input <path_to_image_tar>/timeline-backend-latest-
patched.tar
```

Step 3 - Clean-up and start Timeline service

Perform these actions on the machine you have used for patch installation.

1. (Optional) HOST/BUILDER: Remove the exported image files
2. (Optional) HOST/BUILDER: Find the old **timeline/backend** image (repository: timeline/backend, tag: <none>):
   ```
   docker image ls
   ```
3. (Optional) HOST/BUILDER: Delete the old **timeline/backend** image by id:
   ```
   docker image rm <image_id_of_old_backend_image>
   ```
4. HOST: Restart timeline service:
   ```
   systemctl start timeline
   ```

About Timeline Licenses

When installing ABBYY Timeline, the license copies to the computer on which Timeline is being installed. Your license determines the Timeline subscription plan. You need to purchase a license update in order to add support for new features, extend the license period, the maximum number of users you can add to your Timeline account, or change other license parameters.

To get more information about subscription plans or purchase a license, contact your local ABBYY sales representative or submit a request to the ABBYY technical support service on this page.

Updating a License

After renewing your Timeline license, you need to update the license file on your host machine. To do it, proceed with the following steps:

1. Start the shell with root privileges using the `sudo bash` command.
2. Go to the **/opt/timeline/license** folder.
3. Backup the existing **timelinepi.lic** file.
4. Replace the **timelinepi.lic** file with the new one.
5. Restart the timeline service:
   ```
   systemctl restart timeline
   ```

Administering

Chapter contents

Custom NodeMailer Configuration

You can set up a custom NodeMailer configuration for the Timeline emails (alerts, invitations etc.) To do it, you need to create a configuration file in JSON format and set it up using the Timeline installer.

1. Install Timeline with some default mail server settings:
   At the step **Do you want to use a custom NodeMailer configuration** answer **no**. Then provide some temporary information when requested by the installer.

2. After Timeline is installed, go to the **installation directory > /templates/nodemailer** (the installation directory is **/opt/timeline** by default). There you will find different JSON templates that you can use to make sure the correctness of the configuration.

3. Create your configuration JSON and save it with any descriptive name.

4. Stop the Timeline service:

```
systemctl stop timeline
```

5. Re-launch the installer. At the **Mail server** step, answer **no** when asked if you want to keep the existing configuration. Then provide the absolute path for your configuration file.

6. Complete the installation.

gmail.json configuration file example

```
{

    "service": "gmail",

    "auth": {

        "type": "OAuth2",

        "user": "your.email.address@gmail.com",

        "clientId": "856224486372-
65sample9f6fbk65m2vm255bff9vh9ev.apps.googleusercontent.com",

        "clientSecret": "GOCSPX-wcho0sAMPlEGVR9P3l-dwsDLpZyT_",

        "accessToken": "ya29.a0SAMPLElCUaAC_6WdEHtgPwsO5Hqb9ECix2-
7zLNI5d542qB1CoSTpuN6Uj8wxfOPhcT4adsqsJD_N1wm_Kl-6SwvfCOLLsAoUr4isjubkxG-
4AVBlokzGiRofAeQB7EMciyHH37kMgnU9_-
gbqcIRBe6Bh8MaCgYKAUISARASFQG1tDrp_XyUZWP88EHYl_ndoQVPHg0163",

        "refreshToken": "1//04B3J58Q_azs_CgSAMPLEGAQSNwF-L9IrMd2NXD04KId2rhDP-
UqZNy1kiUdGrlmT4oPU7uYdMZzFAVUKD8hwrc9k4sA5T3UPTxA"

    }

}
```

Updating configuration file

If the initial configuration file was created with some errors, you can fix it without relaunching the Timeline installer again.
Important. These instructions are only valid if you have Timeline installed, with a path to the mail server configuration JSON provided.

To fix the configuration file:

1. Make the required adjustments to the existing configuration file.
   After the installation, a copy of the configuration file is placed in the **config** subfolder under your installation path (by default **opt/timeline/config**).
   Then save it without changing the file name.

2. After all the needed adjustments are made, restart the Timeline application:

```
systemctl restart timeline
```

Configuring Timeline Using Environment File

The Timeline settings may be configured after the installation.

At the system hosting Timeline, open the **opt/timeline/.env** file in any editor and set the following environment variables:

Parameters	Information	
Database connection settings		
ADMIN_DATABASE_URL LOG_DATABASE_URL USER_DATABASE_URL_PREFIX	Description	Configures access to **timeline**, **timeline-log** and **timeline-000** databases.
	Format	• **timeline** and **timeline-log** database URLs have the following format: `postgres://<username>:<password>@<IP address or postgres hostname>:<Port>/<Database name: timeline or timeline-log>` • **timeline-000** database has a similar format with the difference that the last part defining the database should not contain the number '000': `postgres://<username>:<password>@<IP address or postgres hostname>:<Port>/<Database name prefix: timeline->` **<IP address or postgres hostname>** should be the machine's IP or public name so it can be accessed from Docker containers. By default, PostgreSQL uses port **5432**. Make sure that the configured port is not being used by any other application and is open on the firewall. If using the default PostgreSQL port, it can be done by: **firewall-cmd --add-service=postgresql** and **firewall-cmd --runtime-to-permanent**

Parameters	Information	
	Example	*ADMIN_DATABASE_URL=postgres://trx:x@172.18.0.1:5432/timeline* *LOG_DATABASE_URL=postgres://trx:x@172.18.0.1:5432/timeline-log* *USER_DATABASE_URL_PREFIX=postgres://trx:x@172.18.0.1:5432/timeline-*
Web server configuration		
PROXY_PORT PROXY_SSL_PORT	Description	Specifies the ports configuration available for the application on the host machine. By default, the application listens on port 80 for HTTP and port 443 for HTTPS. If both ports are defined, HTTP requests will be redirected to HTTPS. For details on SSL configuration, see section 'HTTPS configuration 35'. **Important**. • Make sure that the configured ports are open on the firewall and not being used by any other application. • If you install the application in a production environment, it is strongly recommended to use HTTPS and highly discouraged HTTP.
	Format	*PROXY_PORT=<HTTP port>* *PROXY_SSL_PORT=<HTTPS port>* 0 (zero) means the port is disabled.
	Example	*PROXY_PORT=0* *PROXY_SSL_PORT=443*

Parameters	Information	
BASE_URL	Description	Specifies the Base URL that hosts Timeline. The hostname should include the port number if it is not the default and the protocol (http/https) of the server where the application is going to run. The BASE_URL variable is used for links inside email messages sent by Timeline.
	Format	*BASE_URL={protocol}://hostname[:port]*
	Example	*BASE_URL=http://10.15.61.165* (if use HTTP) *BASE_URL=https://mytimeline.com* (if use HTTPS)
Mail server configuration		
MAIL_SERVER_HOST MAIL_SERVER_PORT MAIL_SERVER_USERNAME MAIL_SERVER_PASSWORD MAIL_SERVER_TLS_CONNECTION MAIL_SERVER_REQUIRE_TLS MAIL_SERVER_REJECT_UNAUTHORIZED EMAIL_SENDER MAIL_SERVER_CUSTOM_CONFIG_FILE	Description	Specifies SMTP server access to allow Timeline to send out emails in several features such as Alerting, User invitation, etc. Provide SMTP mail server access credentials such as host, port, username, password, e-mail sender address, and mail server security options. • **MAIL_SERVER_USERNAME MAIL_SERVER_PASSWORD** Keep these fields empty if the mail server requires no authentication. • **MAIL_SERVER_TLS_CONNECTION MAIL_SERVER_TLS_CONNECTION=true** Makes the app connect to the mail server using TLS right from the start. This is the most secure option. Unfortunately, not all mail servers support this. E.g., Exchange requires unencrypted connection, and then

Parameters	Information	
		use the STARTTLS command to upgrade. In this case, use: **MAIL_SERVER_TLS_CONNECTION=false** and **MAIL_SERVER_REQUIRE_TLS=true**. • **MAIL_SERVER_REQUIRE_TLS** To enable/disable TLS set **MAIL_SERVER_REQUIRE_TLS** to **true/false**. • **MAIL_SERVER_REJECT_UNAUTHORIZED** Set **MAIL_SERVER_REJECT_UNAUTHORIZED** to **false** if your mail server uses a self-signed certificate. Default value is true. • **EMAIL_SENDER** **EMAIL_SENDER** is used to fill the 'From' header field of e-mails. • **MAIL_SERVER_CUSTOM_CONFIG_FILE** Appears only if you chose to use a custom NodeMailer configuration. This parameter's value will be the JSON file, whose path you provided during the installation.
	Format	*MAIL_SERVER_HOST=<mail server IP address or hostname>* *MAIL_SERVER_PORT=<mail server port>* *MAIL_SERVER_USERNAME=<mail server username>* *MAIL_SERVER_PASSWORD=<mail server password>* *MAIL_SERVER_TLS_CONNECTION=<true/false>* *MAIL_SERVER_REQUIRE_TLS=<true/false>*

Parameters	Information	
		MAIL_SERVER_REJECT_UNAUTHORIZED=<true/false> *EMAIL_SENDER=<mail sender e-mail>* *MAIL_SERVER_CUSTOM_CONFIG_FILE=<config_file_name.json>*
	Example	*MAIL_SERVER_HOST=example.smtp.server.com* *MAIL_SERVER_PORT=465* *MAIL_SERVER_USERNAME=mail_user* *MAIL_SERVER_PASSWORD=mail_password* *MAIL_SERVER_TLS_CONNECTION=false* *MAIL_SERVER_REQUIRE_TLS=true* *MAIL_SERVER_REJECT_UNAUTHORIZED=false* *EMAIL_SENDER=timeline-support@example.com* *MAIL_SERVER_CUSTOM_CONFIG_FILE=mailServerConfig.json*
SMS service (Twilio account)		
TWILIO_ACCOUNT_SID TWILIO_AUTH_TOKEN TWILIO_PHONE_NUMBER	Description	These properties appear if Twilio service is enabled upon installation. Specifies Twilio account access to allow Timeline to send SMS notifications containing verification codes, alert notifications, and error messages. Provide Twilio account credentials such as SID, Auth Token, sender phone number. All fields are mandatory, for correct configuration all fields should be filled.

Parameters	Information	
		• **TWILIO_ACCOUNT_SID** Is used to identify your Twilio account and serves as its username. • **TWILIO_AUTH_TOKEN** Is an access token that Timeline needs to connect to your **Twilio** account. • **TWILIO_PHONE_NUMBER** Valid phone number from which SMS notifications are sent.
	Format	*TWILIO_ACCOUNT_SID=<your Twilio account SID>* *TWILIO_AUTH_TOKEN=<Authorization token belonging to your Twilio account>* *TWILIO_PHONE_NUMBER=<PHONE_NUMBER>*
	Example	*TWILIO_ACCOUNT_SID=AC3f84d59206412725a03114dfb5163e33* *TWILIO_AUTH_TOKEN=ae356b78c7ch1293h123n2afe6a9* *TWILIO_PHONE_NUMBER=+121313141516*
Timeline folders		
LOGS NGINX_CONF DB_SSL STORAGE LICENSE PG_SSL_ROOT_CERT_ADMIN PG_SSL_ROOT_CERT_LOG PG_SSL_ROOT_CERT_USER	Description	Specifies the locations of directories the app saves data to. Each of these should be directories on the host machine. If you specify relative paths, they will refer to the installation directory. • **LOGS** All Timeline logs will be placed here. Default value: **/opt/timeline/logs**

Parameters	Information	
CUSTOM_CONF		• **NGINX_CONF** This is a directory for SSL configuration and certificates. Default value: **/opt/timeline/nginx** For details on SSL configuration, see section 'HTTPS configuration 35'. • **DB_SSL** This is a directory for a database certificate file. If your remote PostgreSQL is configured with SSL support and a CA Root certificate file is not presented, the certificate file must be copied to the host machine into this directory. Default value: **/opt/timeline/db-ssl** • **STORAGE** This directory is used by different parts of the application to permanently or temporarily store data. Make sure that the directories are not world readable and that they are backed up regularly. Default value: **/opt/timeline/storage** • **LICENSE** The path to the directory where the license file is located relative to the installation directory. Default value: **/opt/timeline/license** • **PG_SSL_ROOT_CERT_ADMIN** **PG_SSL_ROOT_CERT_LOG** **PG_SSL_ROOT_CERT_USER** These are the names of the database CA Root certificate files located in the **DB_SSL** folder. The file names are hashed to avoid name collision.

Parameters	Information	
		If your remote databases are configured with SSL support and a CA Root certificate files are used, these root certificate files must be specified in these keys. • **CUSTOM_CONF** A variable that points to **/opt/timeline/config** - the intended directory for the custom-configuration files. Do not change this value! By default, all directories are under the installation directory.
	Example	*LOGS=/opt/timeline/logs* *NGINX_CONF=/opt/timeline/nginx* *STORAGE_DIR=/opt/timeline/storage* *LICENSE=/opt/timeline/license* *PG_SSL_ROOT_CERT_ADMIN=bd469b5612d1807776be854922291ffd.pem* *PG_SSL_ROOT_CERT_LOG=bd469b5612d1807776be854922291ffd.pem* *PG_SSL_ROOT_CERT_USER=bd469b5612d1807776be854922291ffd.pem* *CUSTOM_CONF=opt/timeline/config*

HTTPS Configuration with SSL

HTTPS with SSL options is configured within the installation steps. If you are having issues with HTTPS configuration or you want to change its settings, you can use this article as a troubleshooting guide.

HTTPS configuration preconditions

The application uses NGINX proxy to deliver HTTP requests from the browsers to the backend services. This proxy is responsible for SSL termination too.

To configure HTTPS, you need SSL certificates for Timeline. You can choose one of the following options:

1. Use SSL certificate issued by the Certification Authority (CA).
   This is the recommended approach for the application installation that is intended for a production environment. The connection to the server will be secure and users will not get any warnings from the browser.

2. Use a self-signed SSL certificate.
   If you do not have a signed certificate or if you only require a certificate for testing purposes, use a self-signed SSL certificate. However, in this case users will get warnings from the web browser about the use of a self-signed certificate as the server will not be considered secure.
   Note. For self-signed HTTPS certificates, the root certificate is required.

Important. If you install the program in a production environment, it is strongly recommended to use HTTPS and highly discouraged HTTP.

Procedure

1. Obtain an SSL certificate and a private key.

2. Run the Timeline installation and follow the Installation Wizard. To enable SSL between application and client specify HTTPS port and Base URL for HTTPS port in the **Web Server** step.
   For more information, see Installing Timeline 9.

3. After the Timeline installation process is complete, do the following:

   a. Find the **ssl.conf.tpl** and **ssl.conf** files in the $TIMELINE_INSTALLATION_DIR/nginx folder and rename the **ssl.conf.tpl** file to **ssl.conf**. Alternatively, merge the **ssl.conf.tpl** file with **ssl.conf**, if you made any changes in the **ssl.conf** file for the previous Timeline version**.**
   Note. These files are copied to the $TIMELINE_INSTALLATION_DIR/nginx folder

during the upgrade process. The folder is specified in the NGINX_CONF variable in .env 33. The **ssl.conf.tpl** file stores the latest SSL configuration settings.

b. Copy your SSL certificate and private key files to the $TIMELINE_INSTALLATION_DIR/nginx folder.

   i. If your private key and certificate files are not named **cert.key** and **cert.pem**, respectively, you should change the **ssl_certificate** and **ssl_certificate_key** entries in **ssl.conf** accordingly.

   ii. If you have a password file for the SSL key, uncomment the line #ssl_password_file $TIMELINE_INSTALLATION_DIR/nginx/conf/pass.file; in **ssl.conf**, and copy your **pass.file** to the $TIMELINE_INSTALLATION_DIR/nginx folder. If necessary, change the path to the folder you specified during the installation process.

   iii. If intermediate certificates should be specified in addition to a primary certificate, they should be specified in the same **cert.pem** file in the following order: the primary certificate comes first, then the intermediate certificates.

c. Open **.env** file and check the following environment variables:

   i. PROXY_SSL_PORT
   Make sure the HTTPS port you want to use is specified in the PROXY_SSL_PORT variable.
   Example: PROXY_SSL_PORT=443

   ii. BASE_URL
   Make sure the HTTPS protocol is specified in the BASE_URL variable.
   Example: BASE_URL=https://mytimeline.com

4. Restart the Timeline application to apply all the changes:

```
systemctl restart timeline
```

5. Perform a health check 16.

Network Connection Settings

The table below lists the ports that are used by default to access Timeline. If you are using a software or hardware firewall, make sure that the exception settings for Timeline have been set up accordingly on the computer where it is installed.

If you reassign port numbers in PROXY_PORT and/or PROXY_SSL_PORT variables in the .env file 29, you will need to make changes to the appropriate firewall rules that you are using.

Application name	Protocol type	Port	Traffic direction	Use
Timeline	TCP/IP	80 or the port specified during the installation (if use HTTP) 443 or the port specified during the installation (if use HTTPS) 80 and 443 or the ports specified during the installation (if use both HTTP and HTTPS)	Inbound	HTTP and HTTPS connections to the Timeline website.
PostgreSQL	TCP/IP	5432	Inbound	Connections to a PostgreSQL database server from the computer where Timeline is hosted.

Background Upload of Zipped CSV Files to Timeline

The background-upload feature involves a folder that is monitored for files copied there. Whenever a new ZIP file is detected in that folder, the application grabs it and interprets it as an uploaded archive. The folder is defined as STORAGE/sftp, where STORAGE is the variable in the .env file 33.

The upload file can be copied to the specified folder by any means. It can be the target of an SFTP upload, or it can be an otherwise shared folder.

Log Rotation

The log file generated by the application can quickly increase in size, and if you want to make sure it doesn't take up too much disk space, you can introduce log rotation. Log rotation will periodically clear the old logs, thus preventing the log file from taking up all the disk space.

On most Linux systems, the **logrotate** command is already located at **/usr/sbin/logrotate**. The way to set up log rotation can differ based on the kind of Linux distribution you use, whether you set up the application as root or as a simple user, whether you placed the application in **/opt** or in **/home**, and the exact location where the logs are placed. You will find 2 typical use cases below:

A) When the log files are placed inside /opt/timeline or some similar place, and docker is executed as a root user:

1. Create a log rotation config file, for example at: **/etc/logrotate.d/timeline**
   The file should contain the following:

   ```
   /opt/timeline/logs/* {
       size 1G
       copytruncate
       rotate 1
   }
   ```

   The path should point to the log file generated by the docker-compose up command. This particular configuration would clear the log file when it exceeds the size of 1 GB and copy its original content to another file called **/home/<USER>/timeline/logs/docker-compose.log.1**. The next time the log rotation runs and finds that the log size exceeds 1 GB again, it overrides the **docker-compose.log.1** with its new contents and clears the original log file.

2. This assumes that the Linux system already has a log rotation installed and registered as a cron job. You can verify this by checking that an **/etc/logrotate.conf** file exists, and it contains the line **include /etc/logrotate.d**, and also that there is a file called **/etc/cron.daily/logrotate** that runs the command **/usr/sbin/logrotate /etc/logrotate.conf**. Different Linux distributions might have these files arranged in a different way.

B) When the log files are placed inside /home/<USER>, and are written by a non-root user:

1. Create a log rotation config file, for example at: **/home/<USER>/logrotate.conf**
   The file should contain the following:

   ```
   /home/<USER>/timeline/logs/* {
       size 1G
       copytruncate
       rotate 1
   }
   ```

   The path should point to the log file generated by the docker-compose up command. This configuration works the same way as described in the previous case.

2. Register a cron job to run the log rotation procedure once a day.
   Run the following command to create a user-specific cron job:
   crontab -e
   This will open a text editor where you can register cron jobs by adding lines like the following:

   ```
   0 * * * * /usr/sbin/logrotate /home/$USER/logrotate.conf --
   state /home/$USER/logrotate-state.txt
   ```

   This line will result in the **logrotate** command executed once per day using the previously defined log rotation configuration, and storing its state in **logratate-state.txt** (this can be any file, and doesn't have to exist at the beginning)

Important. For log rotation to work correctly, you have to write the log files in append mode (in bash '>>' instead of just '>'), otherwise the log file cannot be cut, since the process would keep writing at its current offset at the location that used to be the end of the file, even after the file was cleared.

Known issues

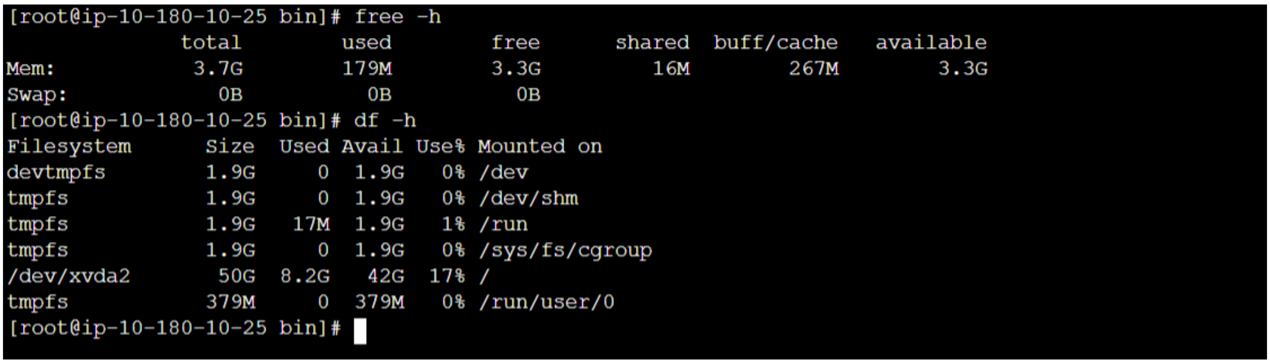
Not enough space for Timeline installation

Upon Timeline installation, large docker images are loaded. If there is not enough space to load them, that might cause the installer to fail. The lack of RAM may cause it either.

It is recommended to check the available memory and space before proceeding with the installation steps. To do it:

1. Open the shell.
2. Execute the following command to check how much memory is available on the machine:
   `free -h`
3. Execute the following command to check how much space is on the machine.
   `df -h`
   Important. If you have multiple partitions (like /var and /tmp on the image example below), those need free space too, in addition to the target one, where you are planning to install Timeline. It is recommended to have about 10 GB free on these partitions to ensure successful installation.
4. Check the Timeline system requirements to see if you have enough memory and space for the installation. To do it, please see System Requirements and Prerequisites 6.

Output example:



```
[root@ip-10-180-10-25 bin]# free -h
              total        used        free      shared  buff/cache   available
Mem:           3.7G        179M        3.3G         16M        267M        3.3G
Swap:            0B          0B          0B
[root@ip-10-180-10-25 bin]# df -h
Filesystem      Size  Used Avail Use% Mounted on
devtmpfs        1.9G     0  1.9G   0% /dev
tmpfs           1.9G     0  1.9G   0% /dev/shm
tmpfs           1.9G   17M  1.9G   1% /run
tmpfs           1.9G     0  1.9G   0% /sys/fs/cgroup
/dev/xvda2       50G  8.2G   42G  17% /
tmpfs           379M     0  379M   0% /run/user/0
[root@ip-10-180-10-25 bin]#
```

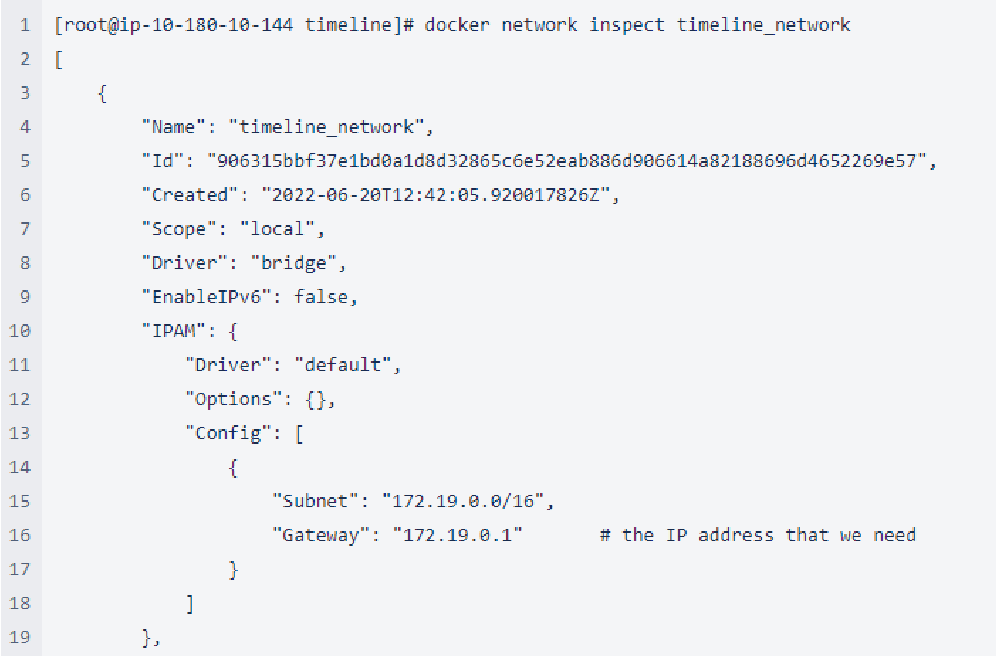
Timeline Application not accessible outside the installed machine under Red Hat Enterprise Linux

This issue only occurs on host machines running **Red Hat Enterprise Linux** as its installation uses docker network and includes the OS built-in firewall.

It can be identified when the application is not reachable from outside the network/machine, but is reachable from inside and the following command returns an HTML response:

```
curl localhost
```

In this case, please recreate the Docker network:

1. Stop the Timeline service, to make sure it does not try to use Docker:
   ```
   service timeline stop
   ```
2. Remove all containers using the command below, when asked for confirmation accept, select **yes**:
   ```
   docker container prune
   ```
3. List Docker networks:
   ```
   docker network ls
   ```
   a. Inspect the Docker network to get its gateway IP:
   ```
   docker network inspect timeline_network
   ```
   

```
[root@ip-10-180-10-144 timeline]# docker network inspect timeline_network
[
    {
        "Name": "timeline_network",
        "Id": "906315bbf37e1bd0a1d8d32865c6e52eab886d906614a82188696d4652269e57",
        "Created": "2022-06-20T12:42:05.920017826Z",
        "Scope": "local",
        "Driver": "bridge",
        "EnableIPv6": false,
        "IPAM": {
            "Driver": "default",
            "Options": {},
            "Config": [
                {
                    "Subnet": "172.19.0.0/16",
                    "Gateway": "172.19.0.1"       # the IP address that we need
                }
            ]
        },
```

4. Delete the network related to Timeline. Use the ID of **timeline_network**:
   ```
   docker network rm timeline_network
   ```
5. Make sure the **timeline_network** got deleted using command from step 3:
   ```
   docker network ls
   ```
6. Stop the Docker service:
   ```
   service docker stop
   ```
7. Stop the PostgreSQL service:
   ```
   service postgresql-12 stop
   ```
   Note. Perform this step if you are using a local database. Skip it if you are using a remote database.

8. Temporarily delete all firewall rules using this command:
   ```
   iptables --flush
   ```

9. Restart the firewall:
   ```
   service firewalld stop
   service firewalld start
   ```

10. Start the Docker service:
    ```
    service docker start
    ```

11. Once the Docker service is started, create a new Docker network:
    ```
    docker network create timeline_network
    ```

12. Flush the IP tables one more time after restart:
    ```
    iptables --flush
    ```

13. Inspect the network via Docker, the IP address of the gateway might change:
    ```
    network inspect timeline_network
    ```

14. Copy the gateway IP address from the network and make sure that you have consistent values in the **opt/timeline/.env** file:
    Check the values of the following variables and change them if needed:
    ADMIN_DATABASE_URL
    LOG_DATABASE_URL
    USER_DATABASE_URL_PREFIX

15. Perform the following steps if you are using a local database. Skip these steps if you are using a remote database.

    a. Copy the gateway IP address from the network and make sure that you have consistent values in the following files:

       i. **pg_hba.conf**
          Add an entry at the end to allow the connection:
          ```
          host all all $DOCKER_GATEWAY_IP md5
          ```
          Also add the IP mask. E.g.:
          ```
          host all all 172.10.0.1/24 md5
          ```
          Default path for PostgreSQL 12 conf files: **/var/lib/pgsql/12/data/**

       ii. **postgresql.conf**
          Change the listen address with the value of the new **DOCKER_GATEWAY_IP**.
          Default path for PostgreSQL 12 conf files: **/var/lib/pgsql/12/data/**

    b. Restart the PostgreSQL service:
       ```
       service postgresql-12 start
       ```

i. If you didn't stop your local PostgreSQL database service earlier, restart the service for it to use the new configuration files:

```
service postgresql-12 stop
```

then

```
service postgresql-12 start
```

16. Make sure that Docker service is running:

```
service docker status
```

17. Start the Timeline service:

```
service timeline start
```

18. Make sure that all the containers are up and running (it can take some time):

```
docker container ls -a
```

19. Check that the Timeline application is available. The following command should return an HTML response:

```
curl localhost
```

20. Make sure that the Timeline application is available outside, by opening the application on the DNS/hostname of the machine.

Upload from an ODBC data source fails in Timeline 5.3.0

If you are using the Timeline 5.3.0 version and upload from an ODBC data source fails, please download the patch-file to resolve this issue. For details and instructions, see Patch installation 23. This issue is fixed in later versions.

Remote database passwords not accepted

If you cannot connect to a remote database due to password rejection, possibly your password contains special characters not supported on our side. For remote database connections Timeline does not accept passwords with the '%' character. If the symbol cannot be avoided please replace every "**%**" character with "**%25**" in the password.

Technical Support

Should you have any questions regarding the use of ABBYY Timeline, first of all, consult the documentation provided with this product (this Help). Useful information can also be found in the technical support section of the ABBYY Web site at support.abbyy.com.

If you cannot find the answer to your question, submit a request to the ABBYY Technical Support service on this page. Please provide the following information when contacting technical support:

General information

- Your first and last name
- The name of your organization
- Your phone number (or fax, or e-mail)
- Your Timeline installation: On-Premises or Cloud
- The version of your operating system
- The version and build number
    - on the Timeline website click ? at the bottom of the left bar and then select **About**
    - on the Recording Service website click **About** at the bottom left of the window
- A description of the problem and the full text of the error message (if there was any)
- You may also wish to provide any additional information you consider important

Logs

The installation process generates a set of log files for the Timeline, Recording Service, and Recorder installations. You can use these files to verify that you installed applications successfully, or to troubleshoot your installation. You can also package these files so that they can be sent to ABBYY Technical Support for problem diagnosis. See below for the information on the location of the log files and how to collect them.

Timeline

To find logs go to the computer where Timeline is installed. You will find the log files in the following directories, depending on the OS involved:

- **Windows**
  %temp%\ABBYY_Timeline_YYYYMMDD<file number>.log
- **Linux**
  /opt/timeline/logs

Recording Service and Recorder

To find logs go to the computer where Recording Service or Recorder are installed. Use the Trace Collector application to gather the most recent log files automatically. To do it, follow the steps below:

1. Open the application, depending on the module you want the logs to be collected for:
   a. **Recording Service**
      Launch Trace Collector from the application folder. By default - **C:\inetpub\ABBYY Recording Service\Abbyy.RecordingService.TraceCollector.exe**

   b. **Recorder**
      Start Trace Collector from tray
      OR
      Launch it from the application folder. By default - **C:\Program Files\ABBYY Recorder\Abbyy.Recorder.TraceCollector.exe**
2. Click the **About** button.
3. Select **Diagnostic Report** in the appeared dialog.
4. In the opened application window, you will see the latest logs selected by default. No additional actions are needed.
5. Click the **Save as** button, then select the path for the resulting archive.
6. Send the archive to our support team with your request.

If for some reason you need to access the log directories manually, by default they are located in the following folders (Windows only):

- **Recorder**
  C:\Users\%username%\AppData\Roaming\ABBYY\Recorder\Logs
- **Recording Service**
  C:\inetpub\ABBYY Recording Service\logs