Sending service

Installation procedure

Version 2.3

Bourse de Luxembourg - July 2013
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1. Introduction

The **Sending Service** allow you to massively send files to authorities.

The functioning of the Sending Service is quite simple. You just need to drop files to be treated in the corresponding directories. At fixed intervals, the **Sending Service** checks the presence of new files and performs all the needed treatments before flagging files as ‘treated’.
2. Prerequisite

2.1. Network configuration

- You need to have access to the Internet (ISDN, ADSL), (minimal flow recommended: 128 KB/s)
- If you use a proxy\(^1\) or a firewall\(^2\), both ports 80 (http) and 443 (https) need to be opened.
- An access to the file system and/or ftp server where documents are stored must be available.

2.2. Minimal configuration of the computer

- Administrator’s rights to be able to install software on the computer.
- An Internet connection.
- Java Runtime Environment 1.6.0_14 at least installed
- OS: Windows (Microsoft Windows 2000 with Service Pack 4; Windows Server 2003 (32-bit or 64-bit editions) with Service Pack 1; Windows XP Professional, Home or 64-bit Editions with Service Pack 2; Windows Vista; Windows 7; Windows 8) or Linux
- Processor: Pentium 2 GHz or equivalent
- 1 GB of RAM
- 1 GB of free space on hard disk drive if the files are downloaded by ftp (In the case where files are locally stored, provide a free space above 100 MB or a regular purging)
- 1 GB of free space on hard drive disk for logs (foresee a regular purging)

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\(^1\) **Proxy**: Secure gateway device isolating the internal network of the company and the Internet network. It is possible to limit the available addresses as well as the users who can access these latters.

\(^2\) **Firewall**: A firewall is a physical (material) or logical (software) device used as an interface between one or more networks in order to control and eventually block data traffic.
3. Installation of the Sending Service

3.1. Controls before installation

- Check that the connected user is administrator of the computer.
- Have an e-file Sending service user (login and password) (e.g. : aacSD).

To check whether a Sending service user exists, log on as an e-file administrator. The following screen appears:
Choose User administration, the following screen appears:

The user linked to the Sending Service usually follows the below naming rules: three letters referring to the company (in lower case) following by “SD” in upper case. (e.g.: aacSD)

If the user doesn’t exist, you need to create one using the “Create user” button. Please refer to our installation guide available from the help page on the e-file’s website (Creation of an e-file user).

- Check that the computer has a JRE greater than the 1.6.0_14 version.
  Syntax of the DOS command: java -version
3.2. Installation procedure

This procedure is suitable for a new installation. In case of an update, please refer to the appropriate manual from our user manual download section. ([https://www.e-file.lu/docs/EN/ManuUtil_EFile_Maj_SD_EN.pdf](https://www.e-file.lu/docs/EN/ManuUtil_EFile_Maj_SD_EN.pdf))

In order to install the *Sending service* application, you need to:

1. **Download** the ZIP file containing the *Sending service* from [https://www.e-file.lu/download/SD.zip](https://www.e-file.lu/download/SD.zip)

2. **Extract and Copy** the entire content of the directory *ServiceDeposant* in the *Sending service* destination folder.

Note: Make sure that the directory is not *read only*.

Destination directory on the computer (example):
3. **Make a copy** of the `template_configInstall.properties` file and rename it as `[senderName].properties`.

This file is located in the *Sending service root directory*, as follows:

Then fill in the file following the 'Configuration of the Sending Service properties file' chapter.
4. **Put down the keystore file** (extension ".ks") in the directory called *keystores*, as follows:

5. **Install the Sending service**
   - Open a DOS window (Start > run => cmd)
   - Move to the *Sending service* directory  
     (e.g. : C:\Program Files\e-file\ServiceDeposant\)
• Launch the `Install.bat` command with the configuration file as a parameter:
  e.g.: `install aac.properties`

  ![Command Prompt - install aac.properties](image1)

• Fill in the JRE path:
  ex: C:\Program Files\Java\jre6
  or C:\Program Files\Java\jre7

  ![Command Prompt - install aac.properties](image2)

• Press the “Enter” key.
The following screen appears:

  ![Command Prompt](image3)

The installation is now finished.
If the message **BUILD SUCCESSFUL** appears, you can be sure that the installation was successfully completed.
Once the **Sending Service** is started (see chapter 6), all directories will be scanned at regular intervals as specified in the configuration file.
3.2.1 Installation as a Windows service

It is possible to complete the installation of the sending service creating a Windows service.

Just double click the `InstallServiceNT.bat` file located in the root directory `\ServiceDeposant`.

Note: The `InstallServiceNT.bat` file is only available after the Sending service installation...
A DOS window will briefly appear.

As a result, a new service called ‘ServiceDeposant’ will be available from your Windows services console (Start > Control Panel > Administrative Tools > Services)

Note: Should the **Sending service** already be installed as a Windows service, you will not be able to install a second instance. In such a situation you may need to uninstall the service by launching `UninstallServiceNT.bat`. However, if the service name is not changed, there is no need to reinstall it.

Finally, please note that the user associated to this Windows service must have Internet rights. To check that, go to the Log On tab of the Properties window right clicking the service
3.2.2 Installation on Unix/Linux

1. **Move to the ServiceDeposant directory**
   E.g. : /opt/ServiceDeposant/

2. **Check that you have execution rights (x) on the Install.sh file**
   E.g. : ls -l

3. **If not, just add this right using the chmod command**
   E.g. : chmod 755 install.sh

4. **Launch Install.sh with the configuration file as parameter**
   E.g. : install.sh config.properties

5. **Press the Enter key and enter the Java path when requested**
   E.g. : /usr/lib/jvm/java-6-openjdk/jre
6. Press the Enter key again and wait for the 'BUILD SUCCESSFUL' message.
4. Configuration of the Sending Service properties file

Before installing (or upgrading) the sending service, you must backup the `template_configInstall.properties` file and rename it as `senderName.properties`.

Finally, you must fill in the file like below.

- **E-file configuration**

```
# INFO
# Times are defined in milliseconds.
#
#
# E-file configuration
efile.hostname=
efile.userId.Login=
efile.userId.Password=
keystore.path=PROJECT_ROOT_PATHS/keystores/keystore.ks
keystore.password=
lang.code=FR/EN
```

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>efile.hostname</td>
<td>URL of the e-file server (e.g.: <code>www.e-file.lu</code> ).</td>
</tr>
<tr>
<td>efile.userId.Login</td>
<td>Sending service login. The sending service user is defined as an e-file one.</td>
</tr>
<tr>
<td>efile userId.Password</td>
<td>Sending service user's password</td>
</tr>
<tr>
<td>keystore.path</td>
<td>Keystore path</td>
</tr>
<tr>
<td>keystore.password</td>
<td>Keystore password</td>
</tr>
<tr>
<td>lang.code</td>
<td>FR / EN : specifies the language of the control acknowledgments</td>
</tr>
</tbody>
</table>

- **Proxy configuration**

```
# Configuration du proxy
proxy.required=True
proxy.host=
proxy.port=
proxy.user=
proxy.password=
```

If a proxy is used, you must set the variable `proxy.required=true`.
Fill in the other proxy parameters.
• Configuration of connection for the authorities acknowledgment

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>efile.listener.state</td>
<td>Up / down : activation of the acknowledgment reception</td>
</tr>
<tr>
<td>efile.replies.listener.state</td>
<td>Up / down : activation of the feedback</td>
</tr>
</tbody>
</table>

• Configuration of connections for files
For each types of reports you can send three types of information must be filled:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>reportingXXXX.state</td>
<td>Up / down : To enable (or not) this type of reporting</td>
</tr>
<tr>
<td>reportingXXXX.remoteDir</td>
<td>Path of the directory used when the corresponding state is up</td>
</tr>
<tr>
<td>reportingXXXX.scheduleTime</td>
<td>The directory will be scanned at this specified interval (in milliseconds).</td>
</tr>
</tbody>
</table>

- **Business environment properties**

```
<<< (FR) Propriétés métiers d'environnement ("config-transfers-deposant.xml")
<<< (EN) Business environment properties

domain.descr=????
domain.env.ac.id.cssf=????
domain.env.ac.id.bcl=????
domain.env.ac.pwd=????
domain.env.ac.cd_auth=????
```

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>domain.descr</td>
<td>Name of the central administration</td>
</tr>
<tr>
<td>domain.env.ac.id.cssf</td>
<td>CSSF Identifier (login) of the Central Administration. Information given by the sender</td>
</tr>
<tr>
<td>domain.env.ac.id.bcl</td>
<td>BCL Identifier (login) of the Central Administration. Information given by the sender</td>
</tr>
<tr>
<td>domain.env.ac.pwd</td>
<td>Password of the Central administration. Information given by the sender</td>
</tr>
<tr>
<td>domain.env.ac.cd_auth</td>
<td>Authentication code of the Central administration. Information given by the sender</td>
</tr>
</tbody>
</table>

- **Windows service configuration**

If the Sending Service is installed as a Windows service, then, both the name and the description are defined this way:

```
<<< (FR) configuration du service windows
<<< (EN) Windows service configuration
wrapper.app.long.name=serviceDeposant
wrapper.app.name=serviceDeposant
wrapper.app.description=Le service déposant est un module de la station cclux qui permet d'envoyer des rapports automatiquement.
AUTO_START OR DEMAND_START
wrapper.app.starttype=AUTO_START
```

The parameter `wrapper.app.starttype=DEMAND_START`, means that the service starts only on demand.
The parameter `wrapper.app.starttype=AUTO_START`, means that the service starts automatically when the server is launched (default value).
• Monitoring configuration

```
### (FR) Configuration du monitoring ("monitoringAppender.properties")
### (EN) Configuration of monitoring
mon.app.heartbeat=true
mon.app.origin=
mon.task.dist.period=60000
```

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>mon.app.heartbeat</td>
<td>true / false</td>
</tr>
<tr>
<td>mon.app.origin</td>
<td>Identifier of sending service given by the Bourse de Luxembourg</td>
</tr>
<tr>
<td>mon.task.dist.period</td>
<td>Frequency of the heartbeat (here 60000 milliseconds, 1 min). The interval between two monitoring (by the Bourse). At least one heartbeat must come in this interval otherwise the sending service is considered as down.</td>
</tr>
</tbody>
</table>
5. Several central administrations

An administrative and accountant agent may manage several central administrations. This case does not need a special configuration.

Reports are sent with the agent’s CSSF code.
6. Starting the Sending Service

To execute the Sending service, you need to:

1. Place all files to be processed/sent in the appropriate directories:

![File explorer screenshot]

2. Launch the Sending service.

   **Note 1:** It is of course possible to launch the Sending service even if no files need to be processed.

   **Note 2:** For a remote access, the user starts Sending Service must have the rights to read and write access to remote directories.
• **On Windows environment** :

Search the program "run.bat" (available on the *Sending service* root installation directory).

Double click on "run.bat", the following screen appears:

The message * fin OK *, means that the treatment has successfully finished.

In a general way, it is possible to check what happened in the log files in the directory `..\ServiceDeposant\log`.

• **Error.log**

Contain all the informations linked to the sending’s errors.
• Resume.log
  List the status of the sending.

For more information about this files please refer to the chapter 7.1.3 = Log files

When there is no file to process, the following message appears :
  => Pas de fichier à traiter ...

To stop the Sending service, you must use Ctrl + C, then enter Y.

• Alternative on Windows environment :

To launch the service, just go to the Windows services console (Start > Control Panel > Administrative Tools > Services), and right click the ‘ServiceDeposant’ service to start it.
By default the service is in an auto_start mode, meaning it will be launched while the servers boots.

- **On Unix environment**:

  Run the script "run.sh" (available on the Sending service root installation directory) by running the following command : ". /run.sh".
7. Using the Sending Service in semi automatic mode

The sending Service can be used in a semi automatic way for the UCI reporting. It is useful to visually check the data (PDF edition) or if you want to save data in a readable format. The sending is done after several steps.

1. First, the input file (flat file, XML) must be put down in the directory “ReportingDiffusion\OPC\envoi_SemiAutomatique\fichiersCCLUX_aTraiter” of the Sending Service.

Then, as soon as the file has been processed, it receives a “.trt” extension and a “.pdf”

2. File is created in the “fichiersPDF_aValider” folder.

This file will be named following the below convention:

```
Rapport_O1_1_14_1108_1_31012006_28022006_20070317_110851.pdf
```

Once the PDF is generated, you can edit it in order to visually verify the data. Should you discover a mistake, you can correct it and save the PDF.

3. Finally, you just need to move (or copy) the PDF to the “fichiersPDF_aEnvoyer” directory. It will be sent automatically.
8. Stopping the sending service

- **Windows environment** - Manually launched:

  If you did launch the Sending Service using the "run.bat" DOS command, you can stop it using Ctrl + C, and then pressing the ‘Y’ key.

- **Windows environment** - Launched as a Windows service:

  If the Sending Service was started via the Windows service you can stop with two ways.
  o Thanks to the "StopServiceNT.bat" programm available on the Sending Service root folder
  o Right clicking the service and selecting Stop in the Windows services control panel. (Start > Control Panel > Administrative Tools > Services)

- **Unix environment**:

  Run the script "stop.sh" (available at the root of the Sending Service installation directory) by running the following command: "./stop.sh".
9. Expected results

After the Sending service is started, you can check its functioning in different ways:

9.1. Generated files by the Sending service

9.1.1. In the "ReportingDiffusion" directory

Once the file is dropped in the appropriate folder, the Sending Service will process it renaming the latter with a "trt" extension.

Then, once the treatment is achieved, it generates an "acq" or an "err" file depending on the result.

- An acquiescence file which has the same name that the input file with the extension "acq". Depending on the report type, the content of this file may vary.
- An error file (with the "err" extension) containing the lines that do not fit the management rules defined for the type of document processed and a brief explanation.

Note 1: It may possible to have a "acq" file, a "err" file or both. The acquiescence file indicates that a part of the processing was done correctly. The error one indicates that some treatment has been problematic. That is to say both are not incompatible.

Note 2: Before the extension "acq", "err" or "trt", a sequence of numbers is added. It is the creation date of this file. The format is as follows: YYYYMMDDHHMMssmmm.

As a matter of fact, for the "trt" file, the timestamp is corresponding to the processing date.

In the case of an OPC reporting (O1.1, O4.1, O4.2) or a sending to the BCL (S1.3, TPT or S2.13), a technical acknowledgement file is sent by the authority. Actually, when the file has reached its destination (CSSF or BCL), the folder containing the file sent is completed by a file having the same name that the input one but with an "ack" extension.

This indicates that the authority has received the file sent.

9.1.2. Semi-automatic case

Like the automatic mode, when the report has been sent the Sending Service, create a "acq" or "err" file depends of the result.

- An acquiescence file which has the same name that the input file with the extension "acq". This file contains all the line numbers of the input file with respected business rules defined for type of document processing.
- An error file (with the "err" extension) containing the lines that do not fit the management rules defined for the type of document processed and a brief explanation. This file is only present if the treatments was not properly conducted because of a technical error or an incorrect line.

Note 1: It may possible to have a "acq" file, a "err" file or both. The acquiescence file indicates that a part of the processing was done correctly. The
error one indicates that some treatment has been problematic. That is to say both are not incompatible.

**Remarque 2 :** Before the extension ".acq", ".err" or ".trt", a sequence of numbers is added. It is the creation date of this file. The format is as follows: YYYYMMDDHHMMssmmm.

As a matter of fact, for the ".trt" file, the timestamp is corresponding to the processing date.

Once the file has reached its destination, the directory containing the file being sent is completed by:

- an acknowledgment file that has the same name as the input file with the extension ".ack" This file indicates that the authorities have received the file sent.

**Note :** Note that these files are accused techniques. For more information about the accused sent by the authorities refer to the documentation on the e-file under ‘user manuals’ (Return of the authorities’ responses to the Service Applicant)

Il est à noter que ces fichiers sont des accusés techniques. Pour avoir plus d’informations sur les accusés envoyés par les autorités se reporter à la documentation présente sur le site e-file dans la section ‘Les manuels utilisateurs’ (Return of Authorities Responses to the Sending Service)

9.1.3. **Logs files**

To check the Sending service state, the user also has access to a set of log files available in the “log” directory. This directory contains the following files:

- **sending_service.log**: contains the entire information related to the Sending service treatments.
  
  A new file is generated every day. The current file has no date whereas archived files are suffixed with a date.

- **wrapper_<date of day>.log**: contains in the same time information of sending_service.log and information of the Windows service (if installed)

- **error.log**: contains the errors found in the sending_service.log.

  A new file is generated each day. The current file has no date whereas the archived files are suffixed with a date.

- **suivi_error.log**: by default its size is zero. This file is completed if the shipment tracking information on e-file failed.

- **resume.log**: this file contains the list of the treatments done by the Sending Service:
  
  o name of the processed file,
  o number of reports linked to the file,
  o number of reports generated,
  o number of reports sent,
  o name of any ".acq" and ".err" files generated.

9.2. **Cookie**

A cookie allow you to verify that the sending service is still up. The idea is to regularly update the modification date of the file.

To take advantage of this feature, you must update the file template_log4j.properties like explained below:
• Comment the line below adding a ‘#’ character:

```java
log4j.logger.lu.bourse.services.cci.scheduler.PingQuartzJobBean=INFO, MONITORING
```

• Uncomment the line below removing the ‘#’ character:

```java
#log4j.logger.lu.bourse.services.cci.scheduler.PingQuartzJobBean=INFO, MONITORING, EXT_HEARTBEAT
```

Result:

```java
log4j.logger.lu.bourse.services.cci.scheduler.PingQuartzJobBean=INFO, MONITORING
```

• Uncomment the line below removing the ‘#’ character:

```java
#log4j.logger.lu.bourse.services.cci.scheduler.PingQuartzJobBean=INFO, MONITORING, EXT_HEARTBEAT
```

```java
#log4j.appender.MONITORING=org.apache.log4j.DailyRollingFileAppender
#log4j.appender.MONITORING.File=@CHANGE_IT@
#log4j.appender.MONITORING.Append=false
#log4j.appender.MONITORING.layout=org.apache.log4j.PatternLayout
#log4j.appender.MONITORING.layout.ConversionPattern=%d{HH:mm:ss,SSS} [%-5p]-[%t]-%C{1}.%M%n=>%m%n
```

• Replace the variable @CHANGE_IT@ in the line below by its value (i.e. the path of file):

```java
log4j.appender.MONITORING.File=@CHANGE_IT@
```

Result:

```java
log4j.appender.MONITORING.File=@CHANGE_IT@
```
Instead of the variable @CHANGE_IT@, write the absolute path, like following:

```
#Fichier de log externe pour le heartbeat
log4j.appender.EXT_heartbeat=org.apache.log4j.RollingFileAppender
log4j.appender.EXT_heartbeat.File=e-file\Service\Deposant\log\tempoin.log
log4j.appender.EXT_heartbeat.Append=false
log4j.appender.EXT_heartbeat.layout=org.apache.log4j.PatternLayout
log4j.appender.EXT_heartbeat.layout.ConversionPattern=%d{MM-dd-yyyy HH:mm:ss} [%t] %-5p - [%C{2}] %m%n
```

Restart the **Sending service** to take those changes into account.