ezPAARSE Documentation

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Getting started

ezPAARSE is able to mine, analyse and enrich the locally collected logs generated by reverse proxies (ezProxy, Biblio PAM, Squid, Apache) which record access to academic and scientific publishers' platforms. What you'll find here is the technical documentation for the ezPAARSE software. For a more detailed documentation on the whole project, please consult the AnalogIST platform.

This documentation is organized into a few main sections :

- *Getting started*
- *Essential things to know*
- *Features*
- *Configuration*
- *Developer documentation*

CHAPTER 1

Demo Instances

There are two publicly available instances of ezPAARSE:

- http://demo.ezpaarse/org (called National Demo Instance, see below)
- http://ezpaarse-preprod.couperin.org (called Preproduction Demo Instance)

Those two instance are for test purposes only (and now identified as such: you'll see a banner indicating "This ezPAARSE instance is available as a demonstration tool") and should therefore not be used as production tools. They are very convenient to test small log files and play around with the software and discover its interface. The data you process is only kept for an hour and is then deleted.

Our advice is to use those demo instances to become familiar with the features and then install a local instance on a server hosted by your institution.

1.1 National Demo Instance (Stable)

The instance available on http://demo.ezpaarse/org is based on the latest stable version of the ezPAARSE software. The list of parsers is regularly updated. This instance is a good mirror of what you'll get if you install ezPAARSE locally.

1.2 Preproduction Demo Instance

The instance available on http://ezpaarse-preprod.couperin.org is based on the bleeding edge version of the ezPAARSE software (can be unstable).

This is were we test the latest features (and you can too!).

CHAPTER 2

Requirements

ezPAARSE can be installed on many Linux distributions, with the following prerequisites :

- Unix standard tools: **bash**, **make**, **grep**, **sed**, etc.
- **python**
- **gcc** and **g++**
- **curl** (used by **nvm**)
- **git** >= 1.7.10 (needed by github)
- **MongoDB** >= 3.2

If using the docker version of ezpaarse you will only need:

- Docker (Version >= 1.12)
- Docker Compose (Version >= 1.7)

2.1 Libraries

2.1.1 Ubuntu

Starting from a ubuntu image loaded in a virtual machine, with root privileges or via sudo.

```
apt-get install git make curl python gcc build-essential
```

2.1.2 Fedora

Starting from a fedora image loaded in a virtual machine, with root privileges or via sudo.

```
yum install tar git make curl python gcc-c++
```

2.1.3 SUSE

(to be verified)

```
zypper install git make curl python gcc-c++
```

2.1.4 Mac OS X

On your Mac, install **Xcode** and **git**

2.1.5 Windows

Windows support has been **discontinued**, however you can use a virtual machine or a Docker container to run ezPAARSE in a linux environment.

2.2 MongoDB

We only document the procedure for Debian and Ubuntu based systems (see below). The installation instructions for other OSes are available in the official MongoDB documentation.

2.2.1 Ubuntu 14.04 or newer

```
sudo apt-get install mongodb
```

2.2.2 Ubuntu 9.10 or older

```
sudo apt-key adv --keyserver hkp://keyserver.ubuntu.com:80 --recv 7F0CEB10
echo 'deb http://downloads-distro.mongodb.org/repo/ubuntu-upstart dist 10gen' | sudo␣
↪tee /etc/apt/sources.list.d/mongodb.list
sudo apt-get update
sudo apt-get install -y mongodb-org
sudo service mongod start
```

2.2.3 Debian

Please use the official MongoDB doc for Debian

CHAPTER 3

Installation

Make sure you fulfilled the requirements before going any further.

For an ezPAARSE installation on a **Windows** OS, you will have to use a dockerized container, please see below.

3.1 Stable version

To install the last stable version on a Unix system, open a console and enter:

```
git clone https://github.com/ezpaarse-project/ezpaarse.git
cd ezpaarse
git checkout `git describe --tags --abbrev=0`
make
```

3.1.1 Video Demonstration

This screencast demonstrates the previous instructions.

3.2 Development version

If you wish to install the development version, open a console and enter:

```
git clone https://github.com/ezpaarse-project/ezpaarse.git
cd ezpaarse
make
```

3.3 Docker and Compose

ezPAARSE is available as a docker image.

To run it with docker, you will need to install Docker and Docker-Compose.

Then, you can either grab the 'docker-compose.yml' file alone and start the containers:

```
mkdir ezpaarse/
wget https://raw.githubusercontent.com/ezpaarse-project/ezpaarse/master/docker-
↪compose.yml
docker-compose up -d
```

or simply start the containers from your local github cloned repository:

```
git clone https://github.com/ezpaarse-project/ezpaarse.git
cd ezpaarse
docker-compose up -d
```

3.4 Uninstall ezPAARSE

Remove the ezpaarse folder:

```
rm -rf ezpaarse
```

Delete the database:

```
mongo ezpaarse
db.dropDatabase()
```

If using the docker version, delete the Docker containers:

```
docker rm -f ezpaarse ezpaarse_db
```

CHAPTER 4

How to Use ezPAARSE

4.1 Run the server

ezPAARSE launches from the command line.

Use the following commands from the installation directory to start and stop the server:

```
make start   # start the server
make stop    # stop the server
make restart # restart the server
make status  # check the server status
```

4.2 Let's Parse !

Visit http://localhost:59599/ and create the first administrator of your local ezPAARSE instance. Administrators can manage the registered users and trigger updates from the web interface.

Once logged in, try drag-and-dropping a log file on the online form and processing it. If your logs are standard, you should be able to get a result immediately and see what ezPAARSE can produce for you.

Now you're up and ready to use ezPAARSE. Head onto the next section to learn about the basics.

CHAPTER 5

Consultation/Access Events

A consultation event (also known as "access event") is what ezPAARSE produces when it detects an actual consultation of e-resource in the logs. Each consultation event is generated with some generic data found in the original log line (date, user login, URL of the resource...), and is enriched with various methods.

By default, ezPAARSE produces a CSV output with a limited amount of fields. You can add or remove some fields by using the Output-Fields header. You can also choose a JSON output to get access events with all their properties.

Here is a list of fields that can be found in the consultation events :

5.1 Typical Properties of an Access Event

For more information, see all the fields you can request.

5.2 Resources' identifiers

The identifier of a resource allows to characterize the access events associated with it. It can take the values defined in the table below (loaded from the settings of ezPAARSE). A resource can also be characterized by several identifiers at the same time (eg. a proprietary identifier and an ISBN).

5.2.1 UnitId

The unitid contains the most accurate identifier for a consultation event on a platform (ie. which describes it with the finest granularity). This identifier does not exclude the use of other identifiers. It is used for the deduplication of access events according to the COUNTER standard in use and provides librarians with useful indicators.

This may be the `DOI` or a more complex identifier that will spot as precisely as possible what has been consulted (eg. a paragraph of an article of a page of a book).

5.3 Resources Types (rtype)

The type of a resource allows to know the nature of a resource and characterize the associated access event. It can take one of the values defined in the table below (loaded from settings of ezPAARSE).

5.4 Resources Formats (mime)

The format of a resource allows to characterize the associated access event. It can take one of the values defined in the table below (loaded from the settings of ezPAARSE).

CHAPTER 6

Set your log format

ezPAARSE allows its users to specify their proxy log format by using the HTTP header *Log-Format-xxx*, where *xxx* is the model of the proxy (for example: `ezproxy`, `apache`, `bibliopam`).

The different syntaxes mirror those used by the proxy. It is thus often as easy as directly copy-and-pasting the format declared in your proxy configuration. Beware though, **settings are not included in their entirety** on ezPAARSE's side.

6.1 EZProxy syntax

- `%h`: host IP, from where the request originates
- `%u`: login used during authentication
- `%l`: distant user name, obtained with identd (always "-")
- `%b`: bytes transfered
- `%U`: requested URL *(e.g. http://www.somedb.com/)*.
- `%m`: request's method *(e.g. GET, POST)*.
- `%r`: complete request *(e.g. GET http://www.somedb.com HTTP/1.0)*.
- `%t`: date/time of the request. The format can be specified in the *Date-Format* request.
- `%s`: HTTP request status code

6.1.1 Regular expressions generated for the EZProxy fields

Each of the above parameters is converted into a regular expression:

- `%h` (host) : ([a-zA-Z0-9\.\-]+(?:, ?[a-zA-Z0-9\.\-]+)*)
- `%u` (login) : ([a-zA-Z0-9@\.\-_%,=]+)
- `%l` (identd) : ([a-zA-Z0-9\-]+|\-)

- `%b` (size) : ([0-9]+)
- `%U` (url) : ([^]+)
- `%m` (method) : ([A-Z]+)
- `%r` (url) : [A-Z]+ ([^]+) [^]+
- `%t` (datetime) : \[([^\]]+)\]
- `%s` (status) : ([0-9]+)

6.2 Apache Syntax

- `%h` : host IP (from where the request originates)
- `%u` : login used during authentication
- `%l` : distant user name, obtained with identd (always "-")
- `%b` : bytes transfered
- `%U` : requested URL *(e.g. http://www.somedb.com/)*.
- `%r` : complete request *(e.g. GET http://www.somedb.com HTTP/1.0)*.
- `%t` : date/time of the request. The format can be specified in the *Date-Format* request.
- `%>s` : HTTP request status code

6.3 Squid Syntax

- `%ts` : resquest's timestamp (in seconds).
- `%tu` : timestamp's milliseconds
- `%tr` : server's response time
- `%tl` : date/time of the request. The format can be specified in the *Date-Format* request.
- `%>a` : host IP, from where the request originates
- `%<a` : IP address for the last connection
- `%<A` : domain name from the request
- `%lp` : port number from the request
- `%Ss` : squid status for the request *(TCP_MISS, ..)*.
- `%>Hs` : HTTP request status code for the request
- `%<st` : response size (headers included).
- `%rm` : request method *(e.g. GET, POST)*.
- `%rv` : protocol version number
- `%ru` : requested URL *(e.g. http://www.somedb.com/)*.
- `%[un` : login used to authenticate
- `%Sh` : squid hierarchical status *(DEFAULT_PARENT, ..)*.
- `%mt` : MIME type of the content

- `%ui` : distant user name, obtained with identd

6.4 Personalized parameters

Using custom settings allows the retrieval of information from the log lines that do not match with EZProxy standards. Conversely, it is possible to ignore some information that you don't want to see appear in the consultation events generated by ezPAARSE.

There are three ways of expressing a parameter:

- %{**field_name**}<**regexp**>: retrieves the field corresponding to the specified regexp and adds it to the consultation event with the given field name
- %{**field_name**}: retrieves an alphanumeric string (hyphens permitted) and adds it to the consultation event with the specified field name
- %<**regexp**>: ignores the part of the log line that matches the corresponding regexp.

6.4.1 Some examples with regular expressions

The following example would capture a datetime formatted as YYYY/MM/DD:hh:mm:ss

```
%{datetime}<\d{4}/\d{2}/\d{2}:\d{2}:\d{2}:\d{2}>
```

The following example would recognize a tabulation used as a separator between two fields(%h and %u)

```
%h%<\t>%u
```

NB: you should use non-capturing parentheses **(?:x)** for complex regexps.

6.4.2 Some examples of specific fields

6.4.3 Example of a request

```
curl -X POST --proxy "" --no-buffer -H 'Log-Format-ezproxy: %h %<[-]> %u [%t] "%r" %s
↪%b' --data-binary @test/dataset/sd.2012-11-30.300.log  http://127.0.0.1:59599 -v
```

6.4.4 Some concrete cases

6.4.5 Video Demonstration

This screencast demonstrate how to use the GUI to discover the log file format in order to let ezPAARSE correctly process your log files

CHAPTER 7

Knowledge bases

7.1 What is a knowledge base?

A **PKB** (read *Publisher Knowledge Base*) is simply an organized list making the link between normalized metadata (eg. ISSN, DOI, journal title, etc.) and proprietary resource identifier(s) used by a vendor.

A **PKB** is composed of one or more tab separed value text files that conforms to the KBART format

The KBART field named **title_id** represents the vendor's identifier that will be linked to a normalized identifier like **print_identifier** (very often: print ISSN) or **online_identifier**.

The KBART files used by ezPAARSE can contain additional non-KBART fields (that will be prefixed with `pkb-`, like: `pkb-domain`), depending on the richness of the metadata available.

In order to be taken in account by ezPAARSE, the PKB files need to respect the KBART standard file naming pattern: **[ProviderName]_*[Region/Consortium]_*[PackageName]_[YYYY-MM-DD].txt, and be located in a folder named after the platform's parser.

For example:

- cairn/cairn_ebooks_2014-02-13.txt
- cairn/cairn_journals_part1_2014-02-13.txt

Warning : PKB identifiers **must be unique**. If an identifier appears more than once (in one or more PKB files), **only one occurrence** will be taken in account.

7.2 How is a Knowledge Base used?

7.2.1 ezPAARSE < 2.1.0

When a resource carrying a vendor identifier `title_id` is met, the associated knowledge base is built from the KBART files and loaded to memory. ezPAARSE can then link the proprietary identifier with all the metadata available and add it to the access event that has been generated.

7.2.2 ezPAARSE since 2.1.0

As knowledge bases are growing and take too much RAM space, ezPAARSE stores them in a mongoDB database to query the metadata associated with the proprietary identifiers. For that purpose, ezPAARSE runs CastorJS in the background to keep the database and PKB files synchronized. This keeps the memory footprint of ezPAARSE at a minimum, but also requires additional startup time to perform the synchronization, especially on first startup.

Please note that processing logs without waiting for the initial synchronization to be over may result in incomplete enrichment of the access events.

Warning: some ezPAARSE output formats will force you to explicitely ask for some information you are interested in. If you don't, you will only get a minimal set of information as a result. This is the case with the CSV output. Other output formats, like JSON, will automatically return all the data available.

CHAPTER 8

Job reports

ezPAARSE generates an execution report, everytime it processes a log file. The various sections of this report are documented below.

- *General*: contains general information related to the processing
- *Rejects*: lists all rejects, how much they are and the links to the files containing the rejected lines
- *Statistics*: provides the first global figures
- *Alerts*: lists the active alerts
- *Notifications*: lists the email for the recipients of processing notifications
- *Duplicates*: algorithm used for deduplication
- *File*: list of processed log files
- *First consultation*: content of the first access event

There is also a special file called `domains.miss.csv`, located at the root of the `/ezpaarse` where unknown domains get stored (deduplicated and sorted). This file persists between every processing job. See *below* for details.

8.1 General

8.2 Rejects

8.3 Statistics

8.4 Alerts

8.5 Notifications

8.6 Deduplicating

8.7 Files

8.8 First consultation event

8.9 Unknown Domains

The `domains.miss.csv` file persists between every processing job. It is where the unknown domains (ie domains for which no parser gets started) get stored, deduplicated and sorted: if URLs present in that file correspond to a provider's platform that should be analysed by ezPAARSE, you have to check on the Analogist platform analysis website if the platform is already listed and you will also get an indication of how advanced its analysis is.

CHAPTER 9

Updates

9.1 Core

The following commands update and rebuild the core of ezPAARSE. They also update the working materials (parsers, knowledge bases, scrapers, robots lists and predefined settings).

```
make update          # latest stable version
make update-latest   # latest development version
```

9.1.1 Video Demonstration

This screencast demonstrates the update command. It is also possible to update ezPAARSE directly from the GUI, see this screencast to learn more.

9.2 Working materials

The following commands update the materials needed by ezPAARSE. There is one distinct command per material type, see comments.

```
make platforms-update    # update parsers, knowledge bases, scrapers
make exclusions-update   # update the lists of hosts identified as robots
make resources-update    # update predefined settings, default proxy formats
```

CHAPTER 10

Output Fields

The `Output-Fields` header adds or removes fields to those ezPAARSE returns by default when it generates access events.

By default, the fields returned are those present in the `EZPAARSE_OUTPUT_FIELDS` parameter configuration file (config.json) to which the ones already present in the log format triggered for the processing are added.

This parameter can be used to add custom fields (that some parsers would be able to extract and return). For example, the "btype" field is not added by default and can be used to trace back advanced information on some database consultations.

You can also add internal ezPAARSE fields as:

- **Datetime**: for the full date (hour, minute and second included) of the consultation event
- **Timestamp**: the date in a computer format for the consultation event

Please note that the personalized fields in the log format will automatically be added to the `Output-Fields` list: there is no need to declare them with this `Output-Fields` header.

The `Output-Fields` header is composed with a list of comma separated fields, each one preceded with a **+** or **-** signs, depending on whether it has to be added or removed.

10.1 Example

```
curl -X POST --proxy "" --no-buffer -H 'Output-Fields: -host,-login,+datetime' --data-
↪binary @test/dataset/sd.2012-11-30.300.log  http://127.0.0.1:59599 -v
```

CHAPTER 11

Metadata enrichment

Middlewares can be used to enrich access events by querying external APIs. By default, ezPAARSE is configured for using 4 enrichment middlewares:

- istex
- crossref
- sudoc
- hal

For more details on middlewares, you can read the dedicated section.

11.1 Important Caveats

11.1.1 Accessing external APIs: availability, authorization

When sending requests to an external API, things can go wrong and ezPAARSE will stop working after 5 failures in a row.

Firstly, the API has to be available: if it is not the case, our advice is to wait a bit and launch an ezPAARSE job again.

Secondly, your ezPAARSE instance has to be authorized reaching out to the external API. If you work behind a proxy (the proxy being at your institution level) it should be declared in your environment variables: you have to check that HTTP_PROXY and HTTPS_PROXY (and their lowercase counterparts) are known from the machine where your ezpaarse instance is installed. Once checked, you will have to restart your instance (`make stop`, then `make start`) so they are taken in account by the crossref middleware used by ezpaarse

Less probably, if your proxy is correctly declared in the environments variables but won't let the queries go out: there is a tweak to be made at the institution proxy level. You can correctly process logs as soon as the proxy is configured to let those queries go out.

11.1.2 Impact on the Speed of Processing

Using those enrichment middlewares may slow the process down, as the number of queries is limited over time.

However, the results are temporarily cached in the mongoDB database, to prevent multiple occurrences of a document from generating further requests. The actual number of requests (i.e. excluding cached ones) is available in the report under `general -> <middleware>-queries`. Where `<middleware>` is the name of the middleware involved.

11.2 Configuring Crossref Middleware Call

The Crossref middleware uses the `DOI` found in access events to request metadata using the node-crossref module.

11.2.1 Headers

- **crossref-Enrich**: set to `false` to disable crossref enrichment. Enabled by default.
- **crossref-TTL**: lifetime of cached documents, in seconds. Defaults to `7 days (3600 * 24 * 7)`
- **crossref-throttle**: minimum time to wait between queries, in milliseconds. Defaults to `200`ms
- **crossref-paquet-size**: maximum number of identifiers to send for query in a single request. Defaults to `50`
- **crossref-buffer-size**: maximum number of memorised access events before sending a request. Defaults to `1000`
- **crossref-license**: set to `true` to get the `license` field as JSON. Disabled by default.

11.3 Configuring Sudoc Middleware Call

11.3.1 Headers

- **sudoc-Enrich**: set to `true` to enable Sudoc enrichment. Disabled by default.
- **sudoc-TTL**: lifetime of cached documents, in seconds. Defaults to `7 days (3600 * 24 * 7).`
- **sudoc-Throttle** : minimum time to wait between queries, in milliseconds. Defaults to `500`.

11.4 Configuring HAL Middleware Call

The HAL middleware uses the `hal-identifier` found in the access events to request metadata using the node-hal

11.4.1 Headers

- **HAL-Enrich**: set to `true` to enable HAL enrichment. Disabled by default.
- **HAL-TTL**: lifetime of cached documents, in seconds. Defaults to `7 days (3600 * 24 * 7).`
- **HAL-Throttle**: minimum time to wait between queries, in milliseconds. Defaults to `500`.

11.5 Configuring ISTEX Middleware Call

The ISTEX middleware uses the `istex-identifier` found in the access events to request metadata using the node-istex

ISTEX middleware is automatically activated on ISTEX logs

11.5.1 Headers

- **istex-enrich** : set to `true` to enable ISTEX enrichment. Disabled by default.
- **istex-ttl** : lifetime of cached documents, in seconds. Defaults to `7 days (3600 * 24 * 7)`.
- **istex-throttle** : minimum time to wait between queries, in milliseconds. Defaults to `500`.

11.6 Configuring Unpaywall Middleware Call

The Unpaywall middleware uses the `DOI` found in access events to request Open Acess metadata using the Unpaywall API. Limited to `100 000` DOIs per day.

11.6.1 Headers

- **unpaywall-cache**: set to `false` to disable result caching. Enabled by default.
- **unpaywall-TTL**: lifetime of cached documents, in seconds. Defaults to `7 days (3600 * 24 * 7)`
- **unpaywall-throttle**: minimum time to wait between each packet of queries, in milliseconds. Defaults to `100`ms
- **unpaywall-paquet-size**: maximum number of DOIs to request in parallel. Defaults to `5`
- **unpaywall-buffer-size**: maximum number of memorised access events before sending requests. Defaults to `100`
- **unpaywall-email**: the email to use for API calls. Defaults to `YOUR_EMAIL`.

CHAPTER 12

Bot Filtering & Unrelevant Domains#

ezPAARSE uses various filters to reduce the noise generated by the many non-pertinent log lines that are present in a typical logfile and that can represent up to 80-90% of the lines.

12.1 Excluding the Robots' Accesses

By default, a list of IP addresses is used to recognize and exclude the accesses made by **robots** *(spiders, indexing robots, etc.)*

The log lines generated by such accesses are thus **rejected**.

To complete the robots' list, you just have to create a file and place it in the `exclusions` folder. Its name has to start with `robots.`, and must contain one IP address per line.

12.2 Excluding Arbitrary IP Addresses

It is also possible to filter out some distinct IP addresses. The typical use case for this is when a training session takes place and you don't want to count those accesses: you declare the IP addresses for the computers used during the training session. The matched lines are rejected in a different file from the robots rejects.

To complete this list, you just have to create a file in the `exclusions` folder and its name must start with `hosts.`, and contain one IP address per line.

12.3 The Unrelevant Domains

Accesses to proxied domains that are of no interest for you can be **ignored** by ezPAARSE. Because they are not relevant to the electronic ressources usage you need to trace, they will simply be filtered out and counted as ignored. This can help slim down the rate of rejected lines.

To complete this list of unrelevant domains, you just have to create a file in the `exclusions` folder and name it with the `domains.` prefix. It must contain only one IP address per line.

By default, we already provide you with three exclusion files :

- `domains.default.txt`: containing a list of domains related to Google
- `domains.cdn.txt`: containing a list of Content Delivery Networks (CDN) subdomains
- `domains.static.txt`: containing a list of subdomains serving static resources (mostly images)

CHAPTER 13

COUNTER Reports

ezPAARSE can generate COUNTER reports based on the data collected in its results. To that effect, you use the parameter **COUNTER-Reports** and specify:

- the type of report (`JR1` is the only one available for now)
- the output format with the **COUNTER-Format** parameter

13.1 Parameters (headers)

- **COUNTER-Reports:** lists the COUNTER reports you want to generate (eg: `JR1`, `BR2`). The download links are accessible in the `stats` section from the processing report.
- **COUNTER-Format:** COUNTER reports output format : `XML` (by default) or `TSV`.
- **COUNTER-Customer:** client's name and/or email address that will appear in the reports, either `name`, `<email>` or `name<email>`. (`ezPAARSE<mail de l'administrateur>` by default)
- **COUNTER-Vendor:** vendor's name and/or email address that will appear in the reports, either `name`, `<email>` or `name<email>`. (`platform42` by default)

13.2 CLI Usage

```
curl -X POST http://localhost:59599 \
 -H "Accept:text/csv" \
 -H "Traces-Level:info" \
 -H "COUNTER-Reports:JR1" \
 -H "COUNTER-Format:csv" \
 -F "files[]=@fede.bibliovie.ezproxy.2014.06.10.log.gz;type=application/x-gzip"```

With cURL, the generated report can be downloaded at the URL given in the **Job-
↪Report-jr1** header (see below).
```

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```
<img src="../_static/images/ezPAARSE-SR18-04.jpg" alt="Commande cURL pour JR1" style=
↪"width: 750px"/>

## Usage through the online form ##

Using the online form, you can ask for the creation of COUNTER reports by adding␣
↪specific headers in the **Headers (advanced)** section (see below):

<img src="../_static/images/ezPAARSE-SR18-01.jpg" alt="COUNTER via formulaire" style=
↪"width: 750px"/>

When the processing of logs is finished, the COUNTER reports can be downloaded via␣
↪the link(s) in the stats section of the processing report, look for the **url-
↪counter-jr1** line (see below):

<img src="../_static/images/ezPAARSE-SR18-02.jpg" alt="COUNTER via formulaire" style=
↪"width: 750px"/>

## COUNTER reports ##

The COUNTER report(s) can be directly used in a spreadsheet program, depending on the␣
↪specified output format. You can see below a TSV file imported in Excel:

<img src="../_static/images/ezPAARSE-SR18-03.jpg" alt="COUNTER via formulaire" style=
↪"width: 750px"/>
```

CHAPTER 14

Alerts

14.1 Principles

When you process log files with ezPAARSE, a number of processing indicators are generated:

- number of log lines read,
- number of rejected log line,
- number of recognized platforms, etc.

Those indicators can be used to detect anomalies during the processing, based on figures considered as "normal".

14.2 How to know if alerts have been generated?

The list of alerts is available in the processing report. If the mail notification is activated, you'll also receive this list with the email that is sent when the processing has completed.

NB: the activation of the alert system needs a sufficient quantity of relevant log lines. The activation threshold is set in the `config.json` file, with the `activationThreshold` key. It can also be modified with the **Alerts-Activation-Threshold** header.

14.3 Available Alerts

14.3.1 Unknown Domains

This alert is generated when a domain frequently appears in the log lines but no associated parser has been found. The appearence rate is calculated with the sum of relevant log lines.

```
appearance_rate = appearance_sum / (total_of_loglines - ignored_lines) * 100
```

The activation threshold is set in the `config.json` file, with the `unknownDomainsRate` key. It can also be modified with the **Alerts-Unknown-Domains-Rate** header.

This alert simply means that ezPAARSE is not able to work for a certain amount of log lines you are providing it with. Most of the time, it is normal behavior because there is a lot more activity in logfiles that ezPAARSE is interested in.

The really important thing that has to be checked (especially when starting to use ezPAARSE) is the content of a file called `domains.miss.csv`. For more details on this file and its content, please refer to the corresponding Report section.

CHAPTER 15

Geolocation

The geolocation is based on the IP address found in the host field from the log files. The `Geoip` header allows to choose which data is to be added to the results, or to deactivate the geolocation altogether.

The library used for this is geoip-lite.

Geolocation Caveats : IP address geolocation is a method that links the IP address of a terminal connected to the internet with a geographical position. The level of precision is not always the same: city in the best of cases, country otherwise.

The geolocation data is informative and depends on the country as well as the internet access provider.

15.1 Parameters (headers)

Geoip: geolocation data that can be added to the results.

By default: `geoip-longitude, geoip-latitude, geoip-country`

- `all` can be used to include all possible fields
- `none` to deactivate the geolocation.

The available fields are:

- `geoip-host`: IP address being geolocalized
- `geoip-country`2 characters code indicating the country (eg: `FR` for `France`)
- `geoip-region`: 2 characters code indicating the region (eg: `A8` for `Île-de-France`)
- `geoip-city`: complete name of the city (eg: `Paris`)
- `geoip-latitude`: self-explanatory
- `geoip-longitude`: self-explanatory
- `geoip-coordinates`: concatenation of latitude and longitude between brackets (eg: `[48.8592,2.3417]`)

Usage example:

```
curl -v -X POST --proxy "" --no-buffer \
  -F "file=@test/dataset/geolocalize.log" \
  -H 'Geoip: all' \
        http://127.0.0.1:59599
```

Advanced usage example:

This example uses the ‘’csv2geojson” and ‘’geojsonio-cli” librairies.

```
npm install csv2geojson geojsonio-cli
```

It is then possible to directly visualize the results on a map.

```
curl -X POST http://127.0.0.1:59599 \
  --proxy "" \
  --no-buffer \
  --data-binary @./test/dataset/edp.2013-01-23.log  \
  -H 'Geoip: geoip-latitude, geoip-longitude' \
  -H 'Output-Fields: -doi,-identd,-url,-status,-size,+datetime' \
  | csv2geojson --lat "geoip-latitude" --lon "geoip-longitude" --delimiter ";" 2> /
↪dev/null \
  | geojsonio
```

That opens a web browser with the following graphical representation :

15.1.1 Video Demonstration

This screencast demonstrates the previous usage (ie geolocation information visualized on a map)

CHAPTER 16

Double-click deduplication

The `Double-Click` headers are optional. They set the deduplication applied to access events. By default, the deduplication is performed following the COUNTER algorithm (available on page 4 of Annex D)

They are written like follows *(in red: the editable zones)*:

- Double-Click-Removal: true
- Double-Click-HTML: 10
- Double-Click-PDF: 30
- Double-Click-MISC: 20
- Double-Click-Strategy: CLI
- Double-Click-C-field: CookieFieldName
- Double-Click-L-field: LoginFieldName
- Double-Click-I-field: HostFiledName

16.1 Parameters (headers)

- **Double-Click-Removal:** COUNTER deduplication activated *(true by default)*. If this header is used, it means the deduplication is not activated (with the *false* value) and the other Double-Click- headers are useless.
- **Double-Click-HTML:** sets the minimum delay (in seconds) between two requests considered identical to an HTML resource *(10 by default)*.
- **Double-Click-PDF:** sets the minimum delay (in seconds) between two requests considered identical to a PDF resource *(30 by default)*.
- **Double-Click-MISC:** sets the minimum delay (in seconds) between two requests considered identical to a MISC resource *(neither HTML, nor PDF) (20 by default)*.

- **Double-Click-MIXED:** sets the minimum delay (in seconds) between two requests considered identical to a resource, **whatever its format** (ie. the access to a same resource in HTML then in PDF can be considered as a double-click). The delays set for each format are then ignored.
- **Double-Click-Strategy:** the strategy (in the form of a sequence of ordered letters) used to define the uniqueness of the user accessing a resource. The fields are searched sequentially. If one field is lacking, the following one is used. The letter **C** corresponds to the field containing the **cookie** (or **session ID**). The letter **L** corresponds to the **login** of the user. The letter **I** corresponds to the **IP address** contained in the host field. *(CLI by default)*
  - **Double-Click-C-field:** field name that will be looked for in the logs. This field coming from the custom log format parameters will be used to trace the cookie identifying the user (or its session ID). By default, it is not possible for ezPAARSE to know the field if it's not specified in the custom log format parameter. *(ignored by default)*
  - **Double-Click-L-field:** field name that will be looked for in the logs to identify the user login *(corresponds to %u in the log format syntax). (%u by default).*
  - **Double-Click-I-field:** field name that will be looked for in the logs to identify the user host *(corresponds to %h in the log format syntax). (%h by default).*

Usage:

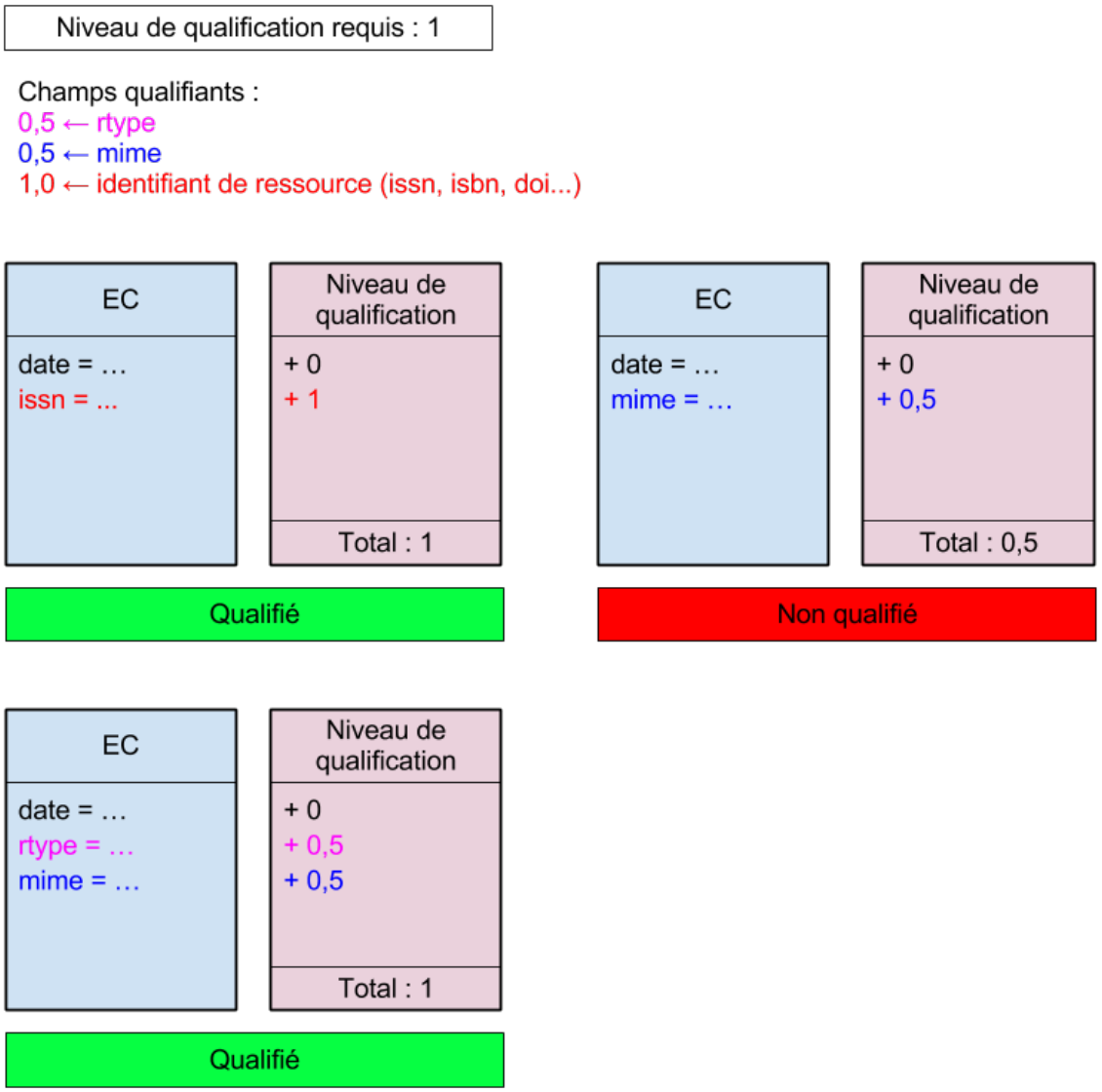
```
curl -v -X POST --proxy "" --no-buffer\
  -F "file=@test/dataset/sd.duplicates.log"\
  -H 'Log-Format-ezproxy: %h %u %{session}<[a-zA-Z0-9\\-]+> %t "%r" %s'\
  -H 'Double-Click-HTML: 15'\
  -H 'Double-Click-PDF: 30'\
  -H 'Double-Click-MISC: 40'\
     http://127.0.0.1:59599
```

CHAPTER 17

Access Events Qualification

The qualification level of an access event is based on the presence of so-called **qualifying** fields, weighted according to their importance.

An access event is considered **qualified** when the cumulative weight of its qualifying fields reaches a fixed threshold, ie when they possess enough information to be useful.



Qualification schema

CHAPTER 18

Configuration options

ezPAARSE comes with a `config.json` file (located at the root of the /ezpaarse directory) where some the configuration options for your instance can be set or modified.

18.1 EZPAARSE_ADMIN_MAIL

The default value is set to `ezpaarse@couperin.org`

18.2 EZPAARSE_PARENT_URL

To avoid the setup of a local SMTP server, you can delegate the management of user feedback (via the online form) to another ezPAARSE instance (called a "parent" instance). The default value is set to `http://ezpaarse-preprod.couperin.org`

18.3 EZPAARSE_FEEDBACK_RECIPIENTS

The mail adress where the users feedback get sent. The default value is set to `ezpaarse@couperin.org`

18.4 EZPAARSE_SUBSCRIPTION_MAIL

If you wish to receive a message everytime a user opens an account on your instance, set the value to `true`. The default value is set to `false`

18.5 EZPAARSE_MONGO_URL

The default value is set to `mongodb://localhost:27017/ezpaarse`

18.6 EZPAARSE_ENV

The default value is set to `production`

18.7 EZPAARSE_NODEJS_PORT

The default value is set to `59599`

18.8 EZPAARSE_NODEJS_VERSION

The default value is set to `6.6.0`

18.9 EZPAARSE_OUTPUT_FIELDS

Contains an array of field names that are going to be present in the result file produced by ezPAARSE. The default array contains the following fields:

```
[
"datetime",
"date",
"login",
"platform",
"platform_name",
"publisher_name",
"rtype",
"mime",
"print_identifier",
"online_identifier",
"title_id",
"doi",
"publication_title",
"unitid",
"domain"
]
```

18.10 EZPAARSE_DEMO

If `true`, it shows a warning informing users that the instance is a demo, and thus not adapted to process large log files. This warning now appears on our demo instance hosted on http://ezpaarse.couperin.org The default value is set to `false`.

18.11 EZPAARSE_MIDDLEWARES"

Contains an array of middleware names, in the order they are going to be launched by ezPAARSE during a process. The default array contains the following middlewares:

```
[
  "filter",
  "parser",
  "deduplicator",
  "enhancer",
  "istex",
  "crossref",
  "sudoc",
  "hal",
  "geolocalizer",
  "field-splitter",
  "qualifier",
  "cut",
  "anonymizer"
]
```

18.12 EZPAARSE_QUALIFYING_LEVEL

This sets the minimal value, under which ezPAARSE considers an EC is not qualified enough to be written to the results. The default value is set to `1`

18.13 EZPAARSE_QUALIFYING_FACTORS

```
{
    "internal": {
      "rtype": 0.5,
      "mime": 0.5
    },
    "external": [
      {
        "file": "platforms/fields.json",
        "sublist": "rid",
        "attribute": "code",
        "weight": 1
      }
    ]
  }
```

18.14 EZPAARSE_TMP_CYCLE

Determines how long ezPAARSE results remain accessible for downloading. The default value is set to `60min`

18.15 EZPAARSE_TMP_LIFETIME

Sets the maximal duration for the storage of result files. The default value is set to `1day`

18.16 EZPAARSE_IGNORED_DOMAINS

Contains an array of domains to be ignored (ie filtered out) by ezPAARSE.

```
[
  "www.google.fr",
  "www.google.com"
]
```

To avoid declaring too long a list, we advise you to declare unrelevant domains in dedicated exclusion files as documented in this section

18.17 EZPAARSE_GEOLOCALIZE_DEFAULT

The default value is set to `geoip-lookup`

18.18 EZPAARSE_GEOLOCALIZE_SEPARATOR

The default value is set to `.` (dot)

18.19 EZPAARSE_ALERTS

Contains an object with 2 member properties, listed here:

```
{
  "activationThreshold": 1000,
  "unknownDomainsRate": 10
}
```

The properties and their values are documented in further details in the relevant section

CHAPTER 19

Parameters

The ezPAARSE jobs can be configured using HTTP headers. Please find the list of available headers below.

19.1 Content-Encoding

Encoding of the data sent. *(supported: gzip, deflate)*

19.2 Response-Encoding

Encoding of the data sent back by server. *(supported: gzip, deflate)*

19.3 Accept

Output format. Supported:

- text/csv (by default)
- text/tab-separated-values (for a TSV output: as CSV but tab-delimited)
- application/json
- application/jsonstream (one JSON object per line)

19.4 Log-Format-xxx

Format of the log lines in input, depends on the proxy *xxx* used. See the available formats

19.5 Date-Format

Date format used in the logs sent. Default is: 'DD/MMM/YYYY:HH:mm:ss Z'.

19.6 Crypted-Fields

Comma-separated list of fields that will be crypted in the results, or `none` to disable crypting. Defaults to `host, login`.

Caution: each job uses a random salt for crypting, so crypted values for the same acces events but from distinct jobs are not identical.

19.7 Output-Fields

To specify the fields to include in the output (if the format allows it). (More information)

19.8 Traces-Level

To specify the verbosity level from ezPAARSE's feedback. The higher levels include the lower ones.

- **error**: blocking errors, abnormal treatment termination.
- **warn**: errors not fatal to the treatment.
- **info**: general informations (requested format, ending notification, number of access events generated...).
- **verbose**: more precise than info, gives more information about each stage of the treatment.
- **silly**: every detail of the treatment (parser not found, line ignored, unsuccessful search in a pkb...).

19.9 Reject-Files

List of the reject files to create, separated by commas.

Possible values are:

- `Unknown-Formats`
- `Ignored-Domains`
- `Unknown-Domains`
- `Unqualified-ECs`
- `Duplicate-ECs`
- `Unordered-ECs`
- `Filtered-ECs`
- `Ignored-Hosts`
- `Robots-ECs`

Set to `none` by default.

We recommend to set it to `all` when you start using ezPAARSE, to fully understand the filtering and exclusion system.

19.10 Double-Click-xxx

Parameters used for deduplication. (More information).

19.11 Request-Charset

Character map used for input. (see supported encodings).

19.12 Response-Charset

Character map used for output. (see supported encodings).

19.13 Max-Parse-Attempts

Maximum number of lines that ezPAARSE will attempt to parse in order to check the log format.

19.14 Clean-Only

If set to `true`, ezPAARSE will just filter out the lines we are sure are irrelevant and output only the relevant ones. The goal when using this parameter is to reduce the size of the log file, if you need to store it for further treatment.

19.14.1 Video Demonstration

This screencast demonstrates the usage of the Clean-Only parameter (ie the cleaning of a log file for size reduction and ease of storage)

19.15 Force-Parser

If URLs don't have 'domain' part, use this parameter to force right parser to be used. Usefull for Open Access log analysis which don't have domain part in URL (all URLs comes form the same domain). For example: Force-Parser: 'dspace'. Can be use in conjonction with Force-ECField-Publisher.

19.16 COUNTER-Reports

List of COUNTER reports to create (ex: JR1, BR2). Download links are accessible in the `stats` section of the treatment report. (More information)

19.17 COUNTER-Format

COUNTER report formats: `XML` (by default) ou `CSV`.

19.18 COUNTER-Customer

Name and/or email of the customer to include in the COUNTER reports, following the form `name`, `<email>` or `name<email>`. (By default :`ezPAARSE<admin email>`)

19.19 COUNTER-Vendor

Name and/or email of the publisher to include in the COUNTER reports, following the form `name`, `<email>` or `name<email>`. (By default :`platform42`, without email)

19.20 Geoip

Listing of the geolocation informations to be added to the results. By default `geoip-longitude, geoip-latitude, geoip-country`. `all` can be used to include every fiel available, or `none` to deactivate geolocation altogether. (More information)

19.21 ezPAARSE-Job-Notifications

Listing of notifications to send when treatment is done, written as `action<cible>` and separated by commas. Currently available: `mail<adress>`

19.22 ezPAARSE-Middlewares

Insert a list of middlewares that are not present in the base configuration (`EZPAARSE_MIDDLEWARES`). The value must be a list of middleware names separated with commas, in the order of use.

By default, they will be inserted at the end of the chain, before `qualifier`. You can prefix the list with the mention `(before <middleware name>)` or `(after <middleware name>)` to insert them at a more specific place, or `(only)` to only use the middlewares you want.

19.22.1 Examples

```
'ezPAARSE-Middlewares': 'user-agent-parser, sudoc'
```

```
'ezPAARSE-Middlewares': '(before istex) user-agent-parser'
```

```
'ezPAARSE-Middlewares': '(after sudoc) hal, istex'
```

```
'ezPAARSE-Middlewares': '(only) crossref'
```

19.23 ezPAARSE-Enrich

Set to `false` to deactivate data enrichment (geoip and knowledge bases). Any other value will leave the data enrichment active.

19.24 ezPAARSE-Predefined-Settings

Tells ezPAARSE to use a predefined set of parameters. For example: `inist` for INIST-CNRS parameters.

19.25 ezPAARSE-Filter-Redirects

Set to `false` to prevent lines with HTTP status codes 301, 302 from being filtered and discarded.

19.26 ezPAARSE-Filter-Status

Set to `false` to disable filtering on status codes.

19.27 Disable-Filters

Disable filters applying to robots or arbitrary hosts/domains. (defaults to `none`). Possible values (separated by commas): `robots`, `ignored-hosts`, `ignored-domains`. Set to `all` to disable all above filters.

NB: when robots are not filtered, add the `robot` field to the output in order to know which consultations were made by robots.

19.28 Force-ECField-Publisher

Set the publisher_name field to a predefined value. For example: Force-ECField-Publisher: 'IRevues'.

19.29 Session-ID-Fields

Change the fields used to generate session IDs and user IDs. By default, the generator uses either `login`, `cookie`, or a combination of `host` and `user-agent`, and store the generated IDs in `session_id` and `user_id`. You can customize those fields by providing a mapping separated by commas.

Default mapping :

```
  user: login, cookie: cookie, host: host, useragent: user-agent, session: session_id,
↪ userid: user_id
```

If your user login is in the `user_login` field :

```
  user: user_login
```

19.30 Extract

Extract values from a field and dispatch them in new fields. The syntax is the following : `source_field => extract_expression => destination_fields`

19.30.1 Examples:

The following examples assume we have a **login** field with the value **THEODORE_MCCLURE**. Here are multiple ways to create a **firstname** field containing **THEODORE** and **lastname** field containing **MCCLURE**.

Extracting with a regular expression:

If the extract expression is a regular expression (between slashes, with optional flags after the closing slash), it's applied to the source field and the captured groups are stored in the destination fields.

The following expression applies the regular expression `/^([a-z]+)_([a-z]+)$/i` on the **login** field, and puts the captured groups in the **firstname** and **lastname** fields.

```
  login => /^([a-z]+)_([a-z]+)$/i => firstname,lastname
```

Splitting over an expression:

If the extract expression is **split()**, then the source field will be splitted according to the expression between the parentheses.

The following splits the **login** field with the character `\_` and puts the parts in the **firstname** and **lastname** fields.

```
'Extract': 'login => split(_) => firstname,lastname'
```

The following splits the **login** field with the regular expression `/[\_]+/` and puts the parts in the **firstname** and **lastname** fields.

```
'Extract': 'login => split(/[_]+/) => firstname,lastname'
```

19.31 Metadata enrichment

The use of middlewares to enrich access events with metadata coming from external APIs is controlled by headers.

19.31.1 Crossref

(More information)

19.31.2 Sudoc

(More information)

19.31.3 HAL

(More information)

19.31.4 ISTEX

(More information)

CHAPTER 20

Process API

ezPAARSE is a RESTful application. **REST**: Representational State Transfer

20.1 Sending logs

The main route for ezPAARSE is the **root** of the web service. The **GET** method gives access to the logs submission form, and the **POST** method allows sending logs. The submitted files are parsed and access events are sent back, as a resulting stream.

20.1.1 The detailed POST request

POST / HTTP/1.1

Parameters (headers)

The parameters list

Body

Log lines generated by a proxy server.

EZProxy documentation Squid documentation

20.1.2 Response to a POST request

Status code

- **200 OK:** the logs have been successfully processed.

- **400 Bad Request:** a request element makes the processing of logs impossible.
- **406 Not Acceptable:** encoding or output format not supported.

Headers

- **Job-ID:** unique identifier associated to the current processing job.
- **Job-Report:** URL for the detailed processing report, including all of the headers sent by ezPAARSE.
- **ezPAARSE-Status:** return code if an error is raised.
- **ezPAARSE-Status-Message:** explanation message on the return code.

Headers containing the URLs for accessing the logs :

- **Job-Traces:** traces for the current ezPAARSE job (the verbosity level can be modified with the Traces-Level header)
- **Lines-Unknown-Formats:** lines for which the format has not been recognized.
- **Lines-Ignored-Domains:** lines for which the domain is ignored.
- **Lines-Unknown-Domains:** lines for which the domain is not associated to a parser.
- **Lines-Unqualified-ECs:** lines that generated access events with too few information. (More details)
- **Lines-PKB-Miss-ECs:** lines that generated identifiers that can't be found in the PKB for the corresponding platform.
- **Lines-Duplicate-ECs:** lines filtered out by the double-clicks detection algorithm.
- **Lines-Unordered-ECs:** lines rejected because they were not chronologically ordered
- **Lines-Robots-ECs:** lines generated by non-human agents (robots, crawlers, spides, etc.).
- **Lines-Ignored-Hosts:** lines that were filtered based on their IP address.
- **Lines-Unknown-Errors:** lines that were rejected due to unknown errors.

Body

CSV or JSON containing all of the generated access events.

Access event example:

```
{
  "host": "1234567d6b8dd5dddc87939c4a407987",
  "login": "IDEXEMPLE",
  "date": "2011-12-31T10:42:42+01:00",
  "url": "http://www.une-adresse.com/exemple.php?id=16",
  "status": "200",
  "size": "0",
  "domain": "www.une-adresse.com",
  "type": "PDF",
  "issn": "1111-1111"
}
```

20.1.3 Request examples

```
curl -X POST http://127.0.0.1:59599 --no-buffer --data-binary @file.log -v
curl -X POST --proxy "" --no-buffer --data-binary @test/dataset/sd.2012-11-30.log ␣
↪http://127.0.0.1:59599 -v
curl -X POST --proxy "" --no-buffer -H "Accept: application/json" --data-binary @test/
↪dataset/sd.2012-11-30.log  http://127.0.0.1:59599 -v
```

20.2 Access the traces and rejects

When ezPAARSE is processing a request (a job), it generates informative files bound to its activity. Those can be accessed by using the unique identifier attributed to the job.

- jobID: unique identifier attributed to the job.

20.3 General information

These routes are useful to get various information like: the list of platforms, the types of access events. They only respond to the *GET* method.

20.4 Administration

These routes are used to administrate ezPAARSE. For the most part, they can be used through the application's admin page. They require being authentified, except for /api/admin/register.

CHAPTER 21

Administration API

Every function listed in this page may be used directly from the administration section in the application.

21.1 Create an administrator

If no user has been registered yet, any attempt to connect triggers an admin creation form.

To create an administrator account without the help of the form, please use the following route :

21.1.1 Possible outputs

- **201 Created** : The admin has been created.
- **400 Bad Request** : Missing parameter.
- **409 Conflict** : There's already an admin.
- **500 Internal Server Error** : Creation failed.

21.1.2 Exemple curl

```
curl -X POST --data "userid=foo@foo.fr&password=bar&confirm=bar" http://
↪localhost:59599/api/admin/register
```

21.2 Get running jobs

Outputs a JSON table with the IDs of the jobs that are currently running.

21.2.1 Exemple curl

```
curl -X GET --proxy "" -u "admin:password" http://localhost:59599/api/admin/jobs
```

21.3 Users management

21.3.1 List users

Outputs a JSON table with the complete list of users.

Exemple curl

```
curl -X GET --proxy "" -u "admin:password" http://localhost:59599/api/admin/users
```

21.3.2 Add a user

Possible outputs

- **201 Created** : User has been created.
- **400 Bad Request** : Missing parameter.
- **409 Conflict** : User name already exists.
- **500 Internal Server Error** : Creation failed.

When the creation succeeds, the output contains a complete information about the user in JSON format.

Exemple curl

```
curl -X POST --proxy "" -u "admin:password" --data "userid=foo@foo.net&password=bar&
↪group=user" http://localhost:59599/api/admin/users/
```

21.3.3 Update a user

Possible outputs

- **200 OK** : User updated.
- **400 Bad Request** : Missing parameter.
- **404 Not Found** : User not found.
- **500 Internal Server Error** : Update failed.

When the update succeeds, the output contains the updated user in JSON format.

Exemple curl

```
curl -X POST --proxy "" -u "admin:password" --data "group=admin" http://
↪localhost:59599/api/admin/users/foo@foo.net
```

21.3.4 Delete a user

Possible output

- **204 No Content** : User has been deleted.
- **404 Not Found** : User not found.
- **403 Forbidden** : The admin has tried to delete the admin account.

Example curl

```
curl -v -X DELETE -u "admin:password" http://localhost:59599/api/admin/users/foo@foo.
↪net
```

21.3.5 Reset a password

Possible output

- **200 OK** : The password has been reset.
- **404 Not Found** : User not found.

Example curl

```
curl -v -X DELETE -u "admin:password" http://localhost:59599/api/admin/users/foo@foo.
↪net
```

21.4 Repositories update

The URLs below allow for updating the different parts of ezPAARSE.

21.4.1 Check the state of a repository

Possible feedbacks

- **200 OK** : Checking normally completed.
- **500 Internal Server Error** : Checking failed.

Response body

The server reply with a JSON response containing various things about the git status of the given repository.

Example:

```
{
  "current": "2.9.4-4-g9089308", # Current commit description
  "head": "2.9.4-4-g9089308",    # HEAD commit description
  "tag": "2.9.4",                # Current git tag (latest tag before the current␣
↪commit)
  "from-head": "uptodate",       # State of HEAD compared to origin (can be 'uptodate
↪' or 'outdated')
  "from-tag": "upward",          # State of current tag compared to origin (can be
↪'uptodate', 'outdated' or 'upward')
  "local-commits": false,        # Is there any unpushed local commit ?
  "local-changes": false         # Is there any uncommited local changes ?
}
```

Example curl

```
curl -X GET -u "admin:password" http://localhost:59599/api/admin/platforms/status
```

21.4.2 Update a repository

Example curl

```
curl -X PUT -u "admin:password" http://localhost:59599/api/adminplatforms/status
```

Possible outputs

- **200 OK** : Platforms have been updated
- **500 Internal Server Error** : Update failed.

CHAPTER 22

Makefile

The makefile is located in the root directory and is used, among others, to launch tests, to generate the documentation, to check that the coding rules are respected.

22.1 Node modules installation

```
make nodejs
```

Download, compile and configure the modules that are necessary for the application to run.

22.2 Mocha tests

```
make test
```

Runs all the non-regression tests. It is a simple way to ensure that ezPAARSE is correctly working.

The test files are located in the `test/` folder and all the filenames follow the pattern, finishing with `-test.js`.

Note : don't forget to restart the application if the source code has been modified.

```
make test-pkb
```

Checks that the knowledge base files used by the parsers are well formed and coherent.

```
make test-pkb-verbose
```

Checks that the knowledge base files used by the parsers are well formed and coherent with a detailed output.

22.3 Checking coding rules

```
make lint
```

Checks the syntax of the javascript files with the `eslint` utility.

The coding rules can be modified with a configuration file (`.eslintrc`). All the options are documented on the ESLint page.

CHAPTER 23

Application core

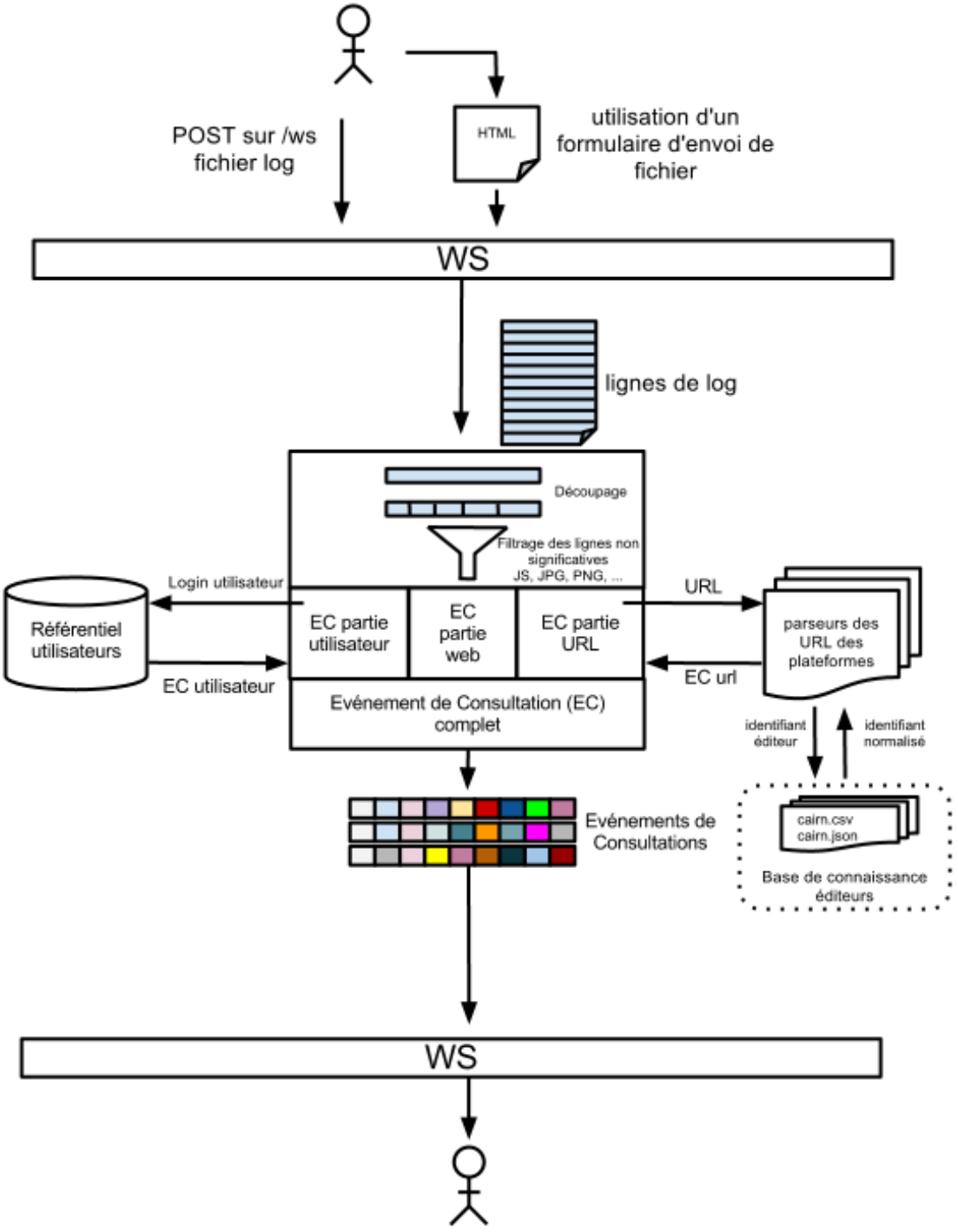
Developper-oriented documentation for ezPAARSE's core. The documentation dedicated to contributions for parsers, pkbs and scrapers can be found in this section.

23.1 Technologies used by ezPAARSE

- nodejs for the core of ezPAARSE (advanced streaming capabilities and performance).
- git to manage knowledge bases and source code.

23.2 How does the ezPAARSE engine work?

Simplified schemas of the internal architecture and general architecture are also available.



ezpaarse's engine working Schema

23.3 ezPAARSE's monitoring

The following options can be used to run ezPAARSE.

- `--memory`: shows the memory consumption of the ezPAARSE process every 5 seconds
- `--lsof`: displays the number of open file descriptors every 5 seconds

Example :

```
. ./bin/env
node app.js --memory
```

23.4 Launching the ezPAARSE's unit tests

Use the makefile to launch the tests:

```
  make test
```

To test a specific function, use mocha and indicate the path of the test file as a parameter

Eg for testing custom formats:

```
. ./bin/env
mocha ./test/custom-formats-test
```

To perform only one functionality test, use mocha and set the path of the test file as a parameter and then specify (with `-g`) the test number (two figures) like `@xx`.

For example, for the second test about the custom formats:

```
. ./bin/env
mocha ./test/custom-formats-test -g @02
```

23.5 Generate a new ezPAARSE version

To generate a new version of ezPAARSE you need to be member of the ezPAARSE Team.

If you are not a member, you can submit a pull request on github.

For the ezPAARSE Team:

- Check you are on the master version or run a `git checkout master`
- Use npm to generate the new version by using the appropriate options to tag the version

```
npm version [<newversion> | major | minor | patch | premajor | preminor | prepatch |␣
↪prerelease | from-git]
```

Example :

```
ubuntu@v-ubuntu:~/ezpaarse$ npm version patch
v2.9.4
git push
git push --tags
```

CHAPTER 24

Platforms

24.1 Prerequisites for the development: git(hub) user's guide

As a developer, you first have to sign up to Github to be able to contribute to ezPAARSE and:

- write a new parser
- maintain an existing parser
- contribute to improvements in the core of ezPAARSE's code

You then need to know a few git commands:

```
#get a local version of the github
git clone https://github.com/ezpaarse-project/ezpaarse.git

#if you already had the project, update it
cd ezpaarse/
git pull

#edit a file
cd ezpaarse/
echo "// my modification" >> ./app.js

#get an overview of which files have been modified/added/deleted (before a commit)
git status

#compare the local modifications with the local repository, line by line, before␣
↪saving the modifications
git diff

#send the modifications to you local repository
git commit ./app.js -m "a comment explaining my modification""

#display the list of commits
git log
```

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```
#add a new file
touch ./myexamplefile
git add ./myexamplefile
git commit ./myexamplefile -m "add an example file"

#send the (commmitted) modifications to the distant repository (authorization from␣
↪the distant repo needed).
git push
```

Note: unless you have a privileged access (from the ezPAARSE team), you must first "fork" the ezPAARSE github repository in order to work on that copy. Once you are satisfied with your changes, you can submit your work to the team by sending a "pull request". Your job will be reviewed and integrated by the team, if no problem is detected. The team then provides write access rights to regular contributors, in order to facilitate contributions.

24.2 How does a parser work?

A parser takes the form of an executable `parser.js` file accompanied by a description file manifest.json and a validation structure (contained in the `test` directory, see below).

The executable can take two kinds of input:

- a stream of URLs to analyze (one per line)
- or stream of JSON objects (one per line) with the `--json` option, each containing:
  - the URL to analyze
  - other information to qualify the access event (such as the size of the download)

The parser outputs a stream of JSON objects, one per line and for each analyzed URL. The object may be empty if the parser doesn't find anything.

Its usage is documented when you call it with the `--help` option. An example parser is available.

24.2.1 Usage Examples

```
echo "http://www.sciencedirect.com:80/science/bookseries/00652296" | ./parser.js
#{"unitid":"00652296","print_identifier":"0065-2296","title_id":"00652296","rtype":
↪"BOOKSERIE","mime":"MISC"}

echo '{ "url": "http://www.sciencedirect.com:80/science/bookseries/00652296", "status
↪": 200 }' | ./parser.js --json
#{"unitid":"00652296","print_identifier":"0065-2296","title_id":"00652296","rtype":
↪"BOOKSERIE","mime":"MISC"}
```

24.3 Writing a Parser

Parsers are written in **Javascript**. A good knowledge of the language is not really necessary to write a parser. Most of the code being outsourced in a common file for all parsers, only the URL analysis function must be adapted, making the code short and relatively simple. Most parsers still require a basic knowledge of **regular expressions**.

Writing a new parser thus consists of:

- creating the manifest.json file (see below)
- creating the test file, according to what is documented on the plaftform analysis page
- creating the parser so that its output is conform to the test file (see below)
- launch the validation tests (see below)

Once the parser passes the tests, it can be integrated into the github repo.

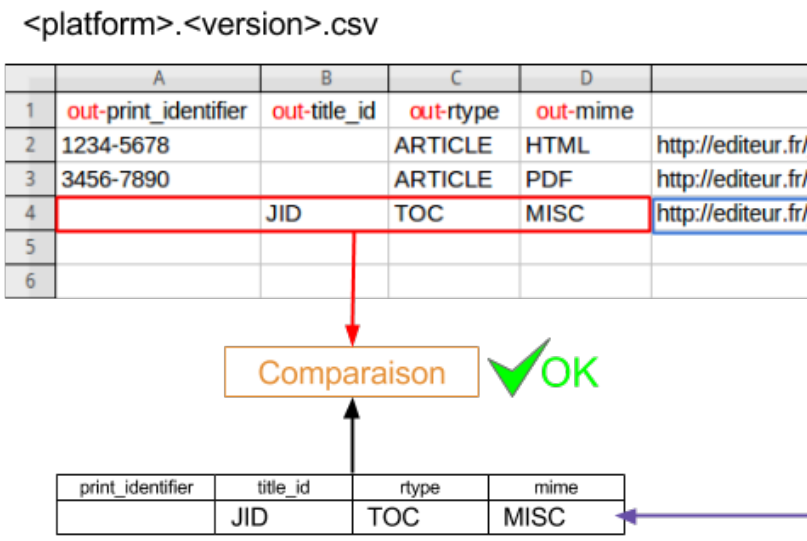
A skeleton can be used as a starting point. The directory structure and the files can be automatically generated by launching the platform-init command.

Some tools are available online to help you in the the writing of regular expressions.

A detailed procedure is available on AnalogIST.

24.4 Testing Parsers

Each parser comes with the necessary to be tested: one or more files located in the `test` subdirectory. These files are in CSV format and follow the `platform.version.csv` pattern.



The test principle is represented by the following diagram:
test

For each row, values from columns prefixed with `in-` are sent to the parser, and the result is compared with the values coming from columns prefixed with `out-`. These must be strictly identical.

More details about the identifiers returned by the parsers are available on this page.

When the parser only takes an input URL (ie. no other fields prefixed with `in-`), it is possible to manually run the test file with the following command (from the directory the platform):

```
#platform.version.csv is the test file
cat test/platform.version.csv | ../../bin/csvextractor --fields="in-url" -c --
↪noheader | ./parser.js
```

The tests are now integrated into ezPAARSE's platforms folder (instead of coming with the core of ezPAARSE). It means that ezPAARSE doesn't need to be running as the parsers' tests are now independent. Before you launch the platforms' tests, you need to setup the environment:

```
cd platforms/
make install
```

Then you can either test all parsers:

```
make test
```

or test only a selection, by naming them (use the shortnames). For example, if you want to test the parsers for Nature and ScienceDirect:

```
make test sd npg
```

See the ezpaarse-platforms README for more information.

24.5 Description of a parser

The parser is described by a `manifest.json` file, located in its root directory. This file contains the following information:

- **name**: the short name of the parser, used as a prefix to the file names. Care should be taken not to use a name already used.
- **version**: the current version of the parser. It is used in the validation file names parsers.
- **longname**: the long name of the parser, used in the documentation.
- **describe**: the description for the parser, can be a paragraph.
- **docurl**: the URL of the documentation on the analogist website (must end by /).
- **domains**: an array of domains that the parser can handle.
- **pkb-domains**: if the platform has a PKB and if domains are present, this field is the column that contains them,

24.6 Vendors' PKBs management principles

Knowledge bases are used to:

- match the identifiers found on publishers platforms (which can be specific and proprietary) and standardized identifiers (like ISSNs)
- include the titles of accessed resources in the results

Knowledge bases are saved as text file KBART format and are specific to each platform. The `platform_AllTitles.txt` file contains the mappings between identifiers of a specific platform and ISSN (or other standardized identifier). The KBART field called `title_id` is used to establish this correspondence with the `print_identifier` field (for paper resources) or `online_identifier` (electronic resources). The list of KBART fields and their meaning is available.

Knowledge bases are loaded by ezPAARSE and their structure must be previously controlled by the pkbvalidator tool

More on AnalogIST

24.7 Running a specific test

For testing a specific feature, use mocha and give the path of the test file as a parameter. For example, to test custom formats:

```
. ./bin/env
mocha ./test/custom-formats-test
```

For running only one feature test, use mocha and give the path of the test file and the two-digit number (`@xx`) of the test (with `-g`) as parameters.

For example, running only the second test of personalized formats will look like:

```
. ./bin/env
mocha ./test/custom-formats-test -g @02
```

CHAPTER 25

Middlewares

NB: The middlewares have their own dedicated repository.

25.1 What is a middleware ?

Middlewares are functions that constitute the processing chain. The middlewares are successively applied to the consultation events processed by ezPAARSE and turnthem into the definitive form they will have when the events are eventually written in the result file.

25.2 How to load a middleware ?

To become part of the processing chain, a middleware must have its name (*ie* the name of its file, without the `.js` suffix) added to the `EZPAARSE_MIDDLEWARES` array in the config file. The order of declaration in the array determines the order in which middlewares are called.

25.3 Existing Middlewares

25.3.1 anonymizer

Anonymizes a list of fields

25.3.2 crossref

Enriches consultation events with crossref data from their API

25.3.3 cut

Separates any unique field into two or more distinct fields, based on a given separator or regular expression

25.3.4 deduplicator

Removes duplicate consultation events, based on the COUNTER algorithm for double-clicks

25.3.5 enhancer

Enhances consultation events with information found in a pkb (issn, eissn, doi, title_id)

25.3.6 field-splitter

TO BE DEPRECATED

25.3.7 filter

Filters irrelevant consultation events

25.3.8 geolocalizer

Geolocalize consultation events based on an IP address

25.3.9 hal

Enriches consultation events with HAL data from their API

25.3.10 istex

Enriches consultation events with istex data from their API

25.3.11 on-campus-counter

Based on the idea that all onCampus accesses will come from IP addresses contained in the private ranges (documented here), this middelware adds an `on_campus` field on each EC and increments the `on-campus-accesses` counter in the general report.

25.3.12 parser

Parses the URL associated with a consultation event (by calling the appropriate parser)

25.3.13 qualifier

Checks consultation events' qualification. See the dedicated page for more detail.

25.3.14 session-id

Generate a COUNTER compliant user ID and session ID in the fields `user_id` and `session_id`.

The user ID can be one of the following, by order of priority :

- the user login (default field: login)
- the cookie ID (default field: cookie)
- both the IP (default field: host) and the user agent (default field: user-agent)

The session ID is generated by concatenating the date, hour of day, and user ID.

Default fields can be changed with the Session-ID-Fields header.

Examples of generated user IDs :

- john.doo
- 157.244.176.142|Opera/9.80 (X11; Linux i686; U; ru) Presto/2.8.131 Version/11.11

Examples of generated session IDs :

- 2019-06-09|08|john.doo
- 2018-12-25|00|157.244.176.142|Opera/9.80 (X11; Linux i686; U; ru) Presto/2.8.131 Version/11.11

25.3.15 unpaywall

Get OpenAccess metadata from Unpaywall. API usage is limited to `100 000` DOIs per day.

25.3.16 sudoc

Enriches consultation events with Sudoc data, especially the PPN (that identify Sudoc records)

25.3.17 throttler

Regulates the consultation events' stream

25.4 How to create a middleware ?

25.4.1 Specifications

Each middleware must have its own directory, with `index.js` as entrypoint, and must export a function that will serve as `initiator`. The initiator function must return either the actual processing function, or a `promise` that will then return it. In case of failure during the initialization, returning an `Error` object (or rejecting the `promise`) will abort the job. The error object should be extended with a `status` property that specify the status code to send back (defaults to **500**), and optionally a `code` property for the ezPAARSE-specific status (inserted in the header **ezPAARSE-Status**). The error message will be inserted in the header **ezPAARSE-Status-Message**.

The `processing function` takes the EC as first argument and a function to call when the EC should go on to the next middleware. Calling this function with an error will result in the EC being rejected. When there's no line left to read, the function will be called with `null` as EC.

The `initiator` and the `processing function` have the following properties in their context (this) :

- `request`: the request stream.
- `response`: the response stream.
- `job`: the job object.
- `logger`: a winston instance (shorthand for job.logger).
- `report`: a report object (shorthand for job.report).
- `saturate`: a function to call when the middleware is saturated.
- `drain`: a function to call when the middleware is not saturated anymore.

25.4.2 Example

Article counter

Here is an example of a very simple middleware that counts the articles and put the total in the report as `General -> nb-articles`:

```
module.exports = function articleCounter() {
  this.logger.verbose('Initializing article counter');

  this.report.set('general', 'nb-articles', 0);

  // Processing function
  return function count(ec, next) {
    if (!ec) { return next(); }

    if (ec.rtype === 'ARTICLE') {
      this.report.inc('general', 'nb-articles');
    }

    next();
  };
};
```

Mandatory field

This middleware is a bit more advanced. It's activated by giving a field name in the `Mandatory-Field` header and it filters any EC that doesn't have a value for this field. An error is thrown on startup if the header contains a space.

```
module.exports = function mandatoryField() {
  this.logger.verbose('Initializing mandatory field');

  let mandatoryField = req.header('Mandatory-Field');

  if (mandatoryField && mandatoryField.includes(' ')) {
    let err = new Error('space not allowed in mandatory field');
    err.status = 400;
    return err;
  }

  /**
   * Actual processing function
   * @param  {Object}   ec   the EC to process, null if no EC left
```

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```
   * @param  {Function} next the function to call when we are done with the given EC
   */
  return function process(ec, next) {
    if (!mandatoryField || !ec) { return next(); }

    if (ec[mandatoryField]) {
      next();
    } else {
      next(new Error(mandatoryField + ' is missing'));
    }
  };
};
```

Use of promises

```
module.exports = function mandatoryField() {

  return new Promise(function (resolve, reject) {
    if ('foo') {
      return reject(new Error('initialization failed for some reason'));
    }

    resolve(function process(ec, next) {
      // Processing function
    });
  })
};
```

CHAPTER 26

Ecosystem

26.1 platform-init

This Command Line Interactive (CLI) utility creates the structure for a platform's parser. It asks a series of questions and generates the repository structure for the parser with a manifest.json file, a parser's skeleton and an empty test file. The command is interactive and doesn't take any parameter.

Example:

```
cd ezpaarse/
. ./bin/env
platform-init
```

26.2 pkb-cleaner

Detects and deletes duplicates in the knowledge bases.

```
Usage: pkb-cleaner [-nvp] [DIR_TO_CLEAN]

Options:
  --platform, -p   Name of a platform whose PKB should be cleaned.(if provided,␣
↪ignore dir path)
  --norewrite, -n  If provided, do not rewrite files once the check is complete.
  --verbose, -v    Print all duplicated entries
```

Example:

```
pkb-cleaner ./path/to/some/directory
pkb-cleaner --platform=sd
```

26.3 scrape

Launches the scrapers for one or more platforms. The scrapers are little utility programs to assemble a knowledge base by scraping a publisher's website.

```
Usage: /home/yan/ezpaarse/bin/scrape [-alvfc] [Platform] [Platform] ...

Options:
  --all, -a      Execute all scrapers.
  --list, -l     Only list scrapers without executing them.
  --clean, -c    Clean PKB files when all scrapers has been executed.
  --force, -f    Overwrite PKB files if they already exist.
  --verbose, -v  Print scrapers output into the console.
```

Example:

```
scrape sd cbo # launches the scrapers for SD (ScienceDirect) and CBO
scrape -al    # lists all the existing scrapers without launching them
```

26.4 loginjector

Streams a log file to a local instance of ezPAARSE.

Example:

```
zcat monezproxy.log.gz | ./bin/loginjector
```

Usage:

```
Injects data into ezPAARSE and gets the response
Usage: node ./loginjector

Options:
  --input, -i     a file to inject into ezPAARSE (default: stdin)
  --output, -o    a file to send the result to (default: stdout)
  --server, -s    the server to send the request to (ex: http://ezpaarse.com:80). If␣
↪none, will send to a local instance.
  --proxy, -p     the proxy which generated the log file
  --format, -f    the format of log lines (ex: %h %u [%t] "%r")
  --encoding, -e  encoding of sent data (gzip, deflate)
  --accept, -a    wanted type for the response (text/csv, application/json)
```

This command eases the sending of log files to an ezPAARSE instance, compared to the cURL utility.

26.5 loganonymizer

Anonymizes a log file. The sensitive elements, like the login, machine name or IP address, are replaced with random values. The log file should be sent to the system input (stdin) of the command.

Example:

```
zcat monezproxy.log.gz | ./bin/loganonymizer
```

Usage:

```
Anonymize critical data in a log file
Usage: node ./loganonymizer --input=[string] --output=[string] --proxy=[string] --
↪format[string]

Options:
  --input, -i   the input data to clean
  --output, -o  the destination where to send the result to
  --proxy, -p   the proxy which generated the log file
  --format, -f  the format of log lines (ex: %h %u [%t] "%r")
```

This is useful for generating test files by removing sensitive items (related to the protection of personal data). Each value is replaced by the same random value so keeping associations and be able to deduplicate is guaranteed.

26.6 logextractor

Retrieves one or more fields in a log file. The log file should be sent to the system input (stdin) of the command.

Examples:

```
zcat monezproxy.log.gz | ./bin/logextractor --fields=url
zcat monezproxy.log.gz | ./bin/logextractor --fields=login,url --separator="|"
```

Usage:

```
Extract specific fields from a log stream
Usage: node ./logextractor --fields=[string] --separator=";"

Options:
  --fields, -f            fields to extract from log lines (ex: url,login,host) ␣
↪[required]
  --separator, --sep, -s  character to use between each field                    ␣
↪[required]  [default: "\t"]
  --input, -i             a file to extract the fields from (default: stdin)
  --output, -o            a file to write the result into (default: stdout)
  --proxy, -p             the proxy which generated the log file
  --format, -t            the format of log lines (ex: %h %u [%t] "%r")
```

This is useful for manipulating log files. A common use is extracting URLs from a log file in order to analyze a platform for a publisher. For example, here's how to get the URL for the ScienceDirect platform by sorting alphabetically and deduplicating them:

```
zcat monezproxy.log.gz | ./bin/logextractor --field=url | grep "sciencedirect" | sort␣
↪| uniq
```

26.7 csvextractor

Extracts content from a CSV file. The CSV file must be sent to the system input (stdin) of the command.

Example:

```
cat monfichier.csv | ./bin/csvextractor
```

Usage:

```
Parse a csv source into json.
  Usage: csvextractor [-sc] [-f string | -d string | -k string] [--no-header]

Options:
  --file, -f          A csv file to parse. If absent, will read from standard input.
  --fields, -d        A list of fields to extract. Default extract all fields. (Ex: --
↪fields issn,pid)
  --key, -k           If provided, the matching field will be used as a key in the␣
↪resulting json.
  --silent, -s        If provided, empty values or unexisting fields won't be showed␣
↪in the results.
  --csv, -c           If provided, the result will be a csv.
  --json, -j          If provided, the result will be a JSON.
  --jsonstream, --js  If provided, the result will be a JSON stream (one JSON per␣
↪line).
  --noheader          If provided, the result won't have a header line. (if csv␣
↪output)
```

This command is useful for testing the parser directly from the test file by extracting the URL column of the file.

Example (parser test):

```
cat ./test/npg.2013-01-16.csv | ../../bin/csvextractor --fields='url' -c --noheader |␣
↪./parser.js
```

26.8 csvtotalizer

Produces a summary on the content of a CSV file resulting from a processing of ezPAARSE. The CSV file must be sent to the system input (stdin) of the command.

Example:

```
cat monresultat.csv | ./bin/csvtotalizer
```

Usage:

```
Summarize fields from a CSV stream
Usage: node ./bin/csvtotalizer --fields=[string] --output="text|json"

Options:
  --output, -o  output : text or json                                          ␣
↪[required]  [default: "text"]
  --sort, -s    sort : asc or desc in text mode                                ␣
↪[required]  [default: "desc"]
  --fields, -f  fields to compute from the CSV (ex: domain;host;login;type)    ␣
↪[required]  [default: "domain;host;login;type"]
```

This is useful for getting a quick overview of a processing outcome of a log file ezPAARSE. By default, domain fields, host, login and type are available in text format. Here is how to know how many different consultation events have been recognized in a sample file:

```
cat ./test/dataset/sd.2012-11-30.300.log | ./bin/loginjector | ./bin/csvtotalizer
```

26.9 logfaker

Generates an output stream matching with log lines of a platform on stdout.

Example:

```
./logfaker | ./loginjector
```

Usage:

```
Usage: node ./logfaker --platform=[string] --nb=[num] --rate=[num] --duration=[num]

Options:
  --platform      the publisher platform code used as a source for generating url
↪[required]  [default: "sd"]
  --nb, -n        number of lines of log to generate
↪[required]  [default: "nolimit"]
  --rate, -r      number of lines of log to generate per second (max 1000)
↪[required]  [default: 10]
  --duration, -d  stop log generation after a specific number of seconds
↪[required]  [default: "nolimit"]
```

Useful to test the performance of ezPAARSE.

26.10 pkbvalidator

Checks the validity of a knowledge base for a publisher's platform. This file must conform to the KBART format.

This command checks the following:

- The presence of the .txt extension
- Uniqueness of title_id
- Minimal identification information available
- Syntax check of standardized identifiers (ISSN, ISBN, DOI)

Usage:

```
Check a platform knowledge base file.
  Usage: node ./bin/pkbvalidator [-cfsv] pkb_file1.txt [pkb_file2.txt]

Options:
  --silent, -s   If provided, no output generated.
  --csv, -c      If provided, the error-output will be a csv.
  --verbose, -v  show stats of checking.
```

26.11 ezp process

Let you process one or more files with an instance of ezPAARSE. If no files are provided, the command will listen to `stdin`. The results are printed to `stdout`, unless you set an output file with `--out`.

```
Options:
  --output, --out, -o       Output file
  --header, --headers, -H   Add a header to the request (ex: "`Reject-Files: all`")
  --download, -d            Download a file from the job directory
  --verbose, -v             Shows detailed operations.
  --settings, -s            Set a predefined setting.
```

Examples of use :

```
# Simple case, process ezproxy.log and write results to result.csv
ezp process ezproxy.log --out result.csv

# Same as above, and download the report file
ezp process ezproxy.log --out result.csv --download job-report.html

# Download the report file with a custom path
ezp process ezproxy.log --out result.csv --download job-report.html:./reports/report.
↪html

# Reading from stdin and redirecting stdout to file
cat ezproxy.log | ezp process > result.csv
```

26.12 ezp bulk

Process files in `sourceDir` and save results in `destDir`. If `destDir` is not provided, results will be stored in `sourceDir`, aside the source files. When processing files recursively with the `-r` option, `destDir` will mimic the structure of `sourceDir`. Files will use the same or Files with existing results are skipped, unless the `--force` flag is set. By default, the result file and the job report are downloaded, but you can get additionnal files from the job directory by using the `--download` option.

```
Options:
  --header, --headers, -H   Add a header to the request (ex: "`Reject-Files: all`")
  --settings, -s            Set a predefined setting.
  --recursive, -r           Look for log files into subdirectories
  --download, -d            Download a file from the job directory
  --overwrite, --force, -f  Overwrite existing files
  --verbose, -v             Shows detailed operations.
  --list, -l                Only list log files in the directory
```

Examples of use :

```
# Simple case, processing files recursively from ezproxy-logs and storing results in␣
↪ezproxy-results
ezp bulk -r ezproxy-logs/ ezproxy-results/

# Activating reject files and downloading unqualified log lines along results
ezp bulk -r ezproxy-logs/ ezproxy-results/ -H "Reject-Files: all" --download lines-
↪unqualified-ecs.log
```

A result file (`.ec.csv` extension) and a report in HTML format (extension `.report.html`) are generated in the output directory for each log file. If the destination directory is not specified, they are generated in the same directory as the file being processed. If an error occurs when processing a file, the incomplete result file is named with the `.ko` extension. Rejects files are not retained by ezPAARSE.

```
Inject files to ezPAARSE (for batch purpose)
  Usage: /home/yan/ezpaarse/bin/ecbulkmaker [-rflvH] SOURCE_DIR [RESULT_DIR]

Options:
  --recursive, -r  If provided, files in subdirectories will be processed. (preserves␣
↪the file tree)
  --list, -l       If provided, only list files.
  --force, -f      override existing result (default false).
  --header, -H     header parameter to use.
  --verbose, -v    Shows detailed operations.
```

26.12.1 Video Demonstration

This screencast demonstrates the usage of ecbulkmaker (ie process a directory containing log files and outputting a mirror directory with the results)

26.13 hostlocalize

Enriches a csv result file containing a host name with the geolocation of the IP address

Example:

```
./hostlocalize -f ezpaarsedata.csv > ezpaarsedatalocalised.csv
```

The input file is assumed to contain a field with the ip address for the location

```
Enrich a csv with geolocalisation from host ip.
  Usage: node ./bin/hostlocalize [-s] [-f string | -k string]

Options:
  --hostkey, -k  the field name containing host ip (default "host").
  --file, -f     A csv file to parse. If absent, will read from standard input.
```

CHAPTER 27

Documentation

In order to build the documentation locally, you need Sphinx and the Sphinx theme for ReadTheDocs. For convenience, the instructions below include a live-reload server.

First, install the dependencies :

```
sudo apt-get install python python-pip python-sphinx
sudo pip install sphinx_rtd_theme sphinx-autobuild
```

Then move to the `doc` directory and type :

```
make autobuild
```

Finally, visit http://localhost:8000/.

CHAPTER 28

Tree structure

CHAPTER 29

Website languages

ezPAARSE is available in french and in english.

The vue-i18n Vue.js plugin was chosen because it integrates well with Vue.js, used to generate the HTML pages of ezPAARSE.

The language files are located in the "client/locales" folder in the form of json files. Those filenames follow the pattern: *country_code.json* (eg: fr.json or en.json)

The language files contain series of keys. Each key is followed by a translation in the target language.

The context matches the name of the HTML page in which the label appears.

CHAPTER 30

Changelog

30.1 3.1.0

30.1.1 (2019/06/12)

- Security updates
- Dark theme
- Upload to ezMESURE from the web client
- Fix jobs history cleaning
- Improve software update page

30.2 3.0.0 - 3.0.6

30.2.1 2019/05/23

- Various client interface enhancements
- New format discovering feature
- Custom settings can be saved
- Code refactoring
- Fix Docker build
- Fix session handling when the user does not exist anymore
- Update Node.js (10.15.3)
- Downloading the result of an ongoing job is not possible anymore
- The API now sends consistent JSON errors

30.3 2.13.0 - 2.14.3

30.3.1 2019/01/31

- Display certifications (H and P) in platforms page
- Adding new methal module
- Fix csvextractor tests
- Update node version
- Update modules
- Replace mongo deprecated methods
- Fix pkb-cleaner
- Update DOC
- Update linter
- Update externals library
- Fix somes errors
- Update nvm installation

30.4 2.12.0 - 2.12.12

30.4.1 2018/08/22

- Update node version
- Adding ezp command
- Update bower
- Adding new fields in ECs (ezpaarse, middlewares, platforms version)
- Update ISTEX tests
- Update npm version
- Fix ISTEX tests
- Fix HAL tests
- Update node version
- Update DOC
- Formatting code
- Adding tests (csv files)

30.5 2.11.1

30.5.1 2017/06/15

- Update docker usage
- Update DOC

30.6 2.11.0

30.6.1 2017/06/06

- Adding test
- Update nvm version
- Fix mongo connection

30.7 2.9.6 - 2.10.1

30.7.1 2017/04/03

- Bug fix
- Update debian and mongo version
- Code refactoring
- Update DOC

30.8 2.9.5 - 2.9.6

30.8.1 2016/12/29

- Updated DOC
- Text update

30.9 2.9.4

30.9.1 2016/11/16

- Updated DOC

30.10 2.9.3

30.10.1 2016/09/27

- Updated NodeJS and dependencies

30.11 2.9.2

30.11.1 2016/09/12 - bug fix

- Bug fix: basic connection dialog poping up on the login page

30.12 2.9.1

30.12.1 2016/09/09 - bug fix

- Added compatibility with ezMASTER
- Bug fix: added missing dependency in production environments
- Bug fix: unstable results due to some problems in the read process

30.13 2.9.0

30.13.1 2016/08/30 - ezPLAAGE

- Bug fix: crash on startup when the PKBs had issues
- Access events have a new unique ID, created with a hash of their log line
- Similar values are now aggregated into a single field, no matter the source
- Ajax requests can now use all available headers
- Middlewares have been externalized

30.14 2.8.1

30.14.1 2016/06/03 - bug fix

- Serverside timeout increased and configurable

30.15 2.8.0

30.15.1 2016/05/31 - ezMESURE - Halte ! Kibana

- Bug fix: error on module dependencies
- Bug fix: remove timeout on diluated logs files
- New ISTEX and cut middleware

30.16 2.7.0

30.16.1 2015/11/05 - Cash Enrichment

- Data caching of API requests from middlewares
- Enrichment activated by default

30.17 2.6.0

30.17.1 2015/10/08 - New BACON scraper tool

- Minor doc updates
- New BACON scraper tool

30.18 2.5.0

30.18.1 2015/09/03 - EC enrichment via APIs

- Automatic access events enrichment with crossref and elsevier
- Light Windows version

30.19 2.4.0

30.19.1 2015/06/11 - Optimized Installation - Docker

- Introduction of Docker for deploiment process
- New Windows version
- Filtering by middleware functionality

30.20 2.3.0

30.20.1 2015/04/09 - Minimal Viable Product for Open Access repositories

- IP addresses exclusion for indexing robots and spiders
- New form tab for a log format helper tool
- Multi-format deduplication
- Storing predefined parameters in the local instances

30.21 2.2.0

30.21.1 2015/02/05 - Large volume PKB management

- Optimizing the management of NoSQL PKB via castor-js
- Improving the initialization time of the application
- Ergonomic improvements in the angular form (file name, advanced headers, alert messages)

30.22 2.1.0

30.22.1 2014/10/31 - embedded NoSQL

- Update of semantic-UI
- NoSQL embedded in the castor branch
- Added generic profiles in the pre-defined parameters
- Added new parsers (for legal resources)
- Downloading a deduplicated unknown-domains file now possible

30.23 2.0.0

30.23.1 2014/09/01 - PKB Administration

- Visualization interface for the PKBs
- PKB updates possible in the admin section
- Software update in the admin section
- Deduplicating the PKBs tool
- MVP of a “my profile” page
- Addition of publisher_name in access events (for COUNTER reports exports)

30.24 1.9.0

30.24.1 2014/06/23 - Parsathon

- 50 parsers are now available
- Open Access repositories first approach

30.25 1.8.0

30.25.1 2014/03/13 - Minimal Viable Product for anomalies alerts

- End of processing notification
- Alert on the unknown-domains while processing

30.26 1.7.0

30.26.1 2014/03/13 - Web interface Validation

- New Web interface validation
- Platform-plugin Refactoring

30.27 1.6.0

30.27.1 2014/03/13 - Web interface redesign

- Web interface redesign with AngularJS
- Access events' Geolocation

30.28 1.5.0

30.28.1 2014/02/01 - KBART standardization

- PKBs' KBART standardization
- LibreOffice macro rendering

30.29 1.4.0

30.29.1 2014/01/30 - COUNTER Export

- COUNTER JR1 export

- non-usage information (denied accesses) now taken in account

30.30 1.3.0

30.30.1 2013/12/19 - Multilingualism

- multilingualism (web interface, windows installer)
- MVP COUNTER export

30.31 1.2.0

30.31.1 2013/11/14 - Security

- securing access to the web form (password protection possibility)

30.32 1.1.0

30.32.1 2013/10/10 - Minimal Viable Product for synchronising the Platform Knowledge Bases

- Reorganization of the git repos
- new repo for scrapers
- Automatic synchronization of the PKBs

30.33 1.0.0

30.33.1 2013/09/09 - Version 1.0

- Windows packaging improvement, meeting the goal of demonstrating the steps from a log file to the macro rendering
- Browser bug correction

30.34 0.9.0

30.34.1 2013/08/08 - COUNTER deduplicating - candidate version 1

- Publisher knowledge base automation / ezPAARSE tools
- better code quality
- COUNTER deduplicating for consultation events

30.35 0.8.0

30.35.1 2013/06/27 - Minimal Viable Product for the User Knowledge Bases

- management of User-Fields
- management of advanced options and predefined values in the form
- translation to cURL for the form actions (to allow for task-automation)
- new traces and bug corrections

30.36 0.7.0

30.36.1 2013/06/05 - Consolidation of the software's core

- better access events definition (rtype, MIME, unitid)
- testing for large log quantities
- new parsers (BMC, lamyline, lextenso, lexisnexis)
- form redesign with dynamic metrics
- access to traces and reject files (not recognized formats, unknown domains, etc)

30.37 0.6.0

30.37.1 2013/04/18 - Consolidation of plaftorms' recognitions

- upgrade to node v0.10
- new parsers (dalloz, wiley)
- new execution traces

30.38 0.5.0

30.38.1 2013/03/27 - ezPAARSE usability

- a windows installer is provided
- a form for submitting logs is provided

30.39 0.4.0

30.39.1 2013/02/21 - More use cases

More log formats are accepted by ezPAARSE: EZproxy, Bibliopam, Squid

30.40 0.3.0

30.40.1 2013/01/31 - More parsers

- Clear documentation describing how accesses events are recognized
- New parsers developped for various platforms
- sd (Science Direct) : a parser without a knowledge base because a normalized identifier is found in the URL
- npg (Nature Publishing Group) : a parser with a knowledge base because the publisher's platform uses proprietary identifiers
- edp (EDP Sciences) : a parser for a platform that only publishes one journal (every journal is hosted on a distinct plaform but all platforms work the same way)

30.41 0.2.0

30.41.1 2012/12/20 - Generic installation

The MVP implemented in the first sprint can now be installed on various OSes: Ubuntu, fedora, RedHat, Suse

30.42 0.1.0

30.42.1 2012/12/06 - Minimum Viable Product

Accesses events are produced for ScienceDirect only from log files via a RESTful web service.