FDSN EVENT HARVESTER DOCUMENT

Event datas can be retrieved from FDSN web services by using obspy.clients.fdsn package. Package enables to request data from the given web services below.

*BGR	http://eida.bgr.de
EMSC	http://www.seismicportal.eu
*ETH	http://eida.ethz.ch
GEONET	http://service.geonet.org.nz
GFZ	http://geofon.gfz-potsdam.de
*ICGC	http://ws.icgc.cat
INGV	http://webservices.ingv.it
IPGP	http://ws.ipgp.fr
IRIS	http://service.iris.edu
*ISC	http://isc-mirror.iris.washington.edu
*KNMI	http://rdsa.knmi.nl
*KOERI	http://eida.koeri.boun.edu.tr
*LMU	http://erde.geophysik.uni-muenchen.de
NCEDC	http://service.ncedc.org
*NIEP	http://eida-sc3.infp.ro
NOA	http://eida.gein.noa.gr
*ODC	http://www.orfeus-eu.org
*ORFEUS	http://www.orfeus-eu.org
*RASPISHAKE	http://fdsnws.raspberryshakedata.com
RESIF	http://ws.resif.fr
SCEDC	http://service.scedc.caltech.edu
*TEXNET	http://rtserve.beg.utexas.edu
*UIB-NORSAR	http://eida.geo.uib.no
USGS	http://earthquake.usgs.gov
*USP	http://sismo.iag.usp.br

Currently unavalible web services by this method marked by "" symbol.*

Used Parameters for Query

Event requests are made by using given parameters below.

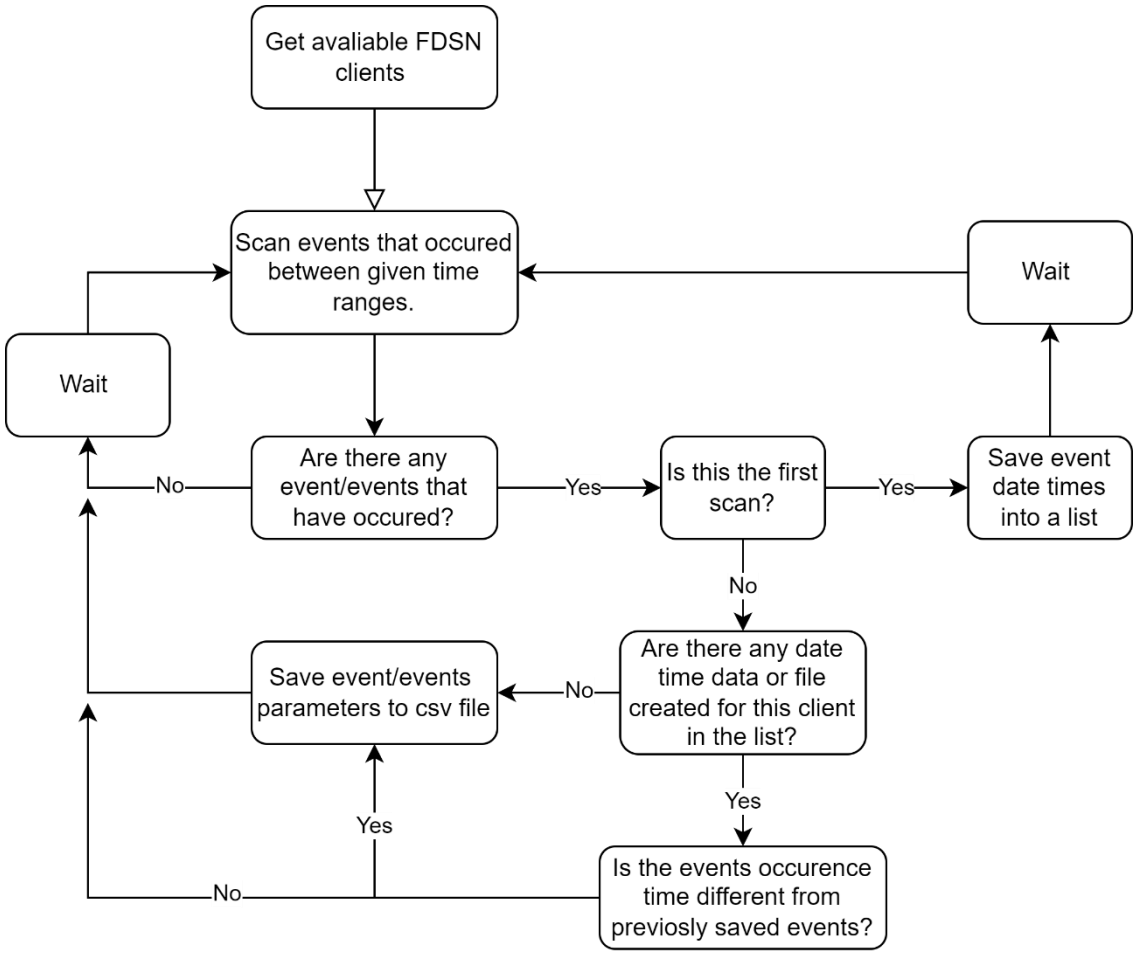
endtime : Limit to events before the specified start time.

starttime : Limit to events after the specified start time.

minmagnitude : Limit to events with magnitude larger than the given value.

Requests are made with 1 minute intervals. Start time of the events goes back 30 minutes from the current time (current time equal to endtime). Minimum earthquake magnitude selected 1 as default.

Request Loop Code Flow Diagram



Each loop starts with a request to clients. Event parameters obtained from the first scan is saved into a list for the purpose of avoiding duplicate events. When the event returned from the clients, event occurence time (eventtime) compared to previously obtained events. If the event is unique, it is saved to csv file. In case of no event data, program waits until the next request. This operation takes approximately 20 seconds depending on the internet connection.

Returned Event Parameter Format

When there is a unique event available for the client, parameters saved to csv files in the given format. Each client has it's own file.

starttime	endtime	eventtime	latitude	longitude	depth	magnitude	magnitude type
2022-07-22 07:58:46.094978	2022-07-22 08:28:46.094978	2022-07-22 08:06:54.797786	42.81824	2.83269	5000	2.65	ML