Retrieve waveforms via FDSN webservice

command: FDSNWS <network> <station> <location> <channel> <start> <seclength>
or
command: FDSNWS <circledef> <station> <location> <channel> <start> <seclength>
or
command: FDSNWS <bulkfile>

Retrieve waveform data from an FDSN webserver. In the current implementation of the request protocol the request is not routed or forwarded in any way, so the user needs to know which data are available at each server. Wildcards are supported also the station selection by area (see parameter descriptions).

parameters

- <network> *parameter type: string*
  Network code or comma separated list of network codes to request stations from. Examples "GR" or "GR,TH".

- <station> *parameter type: string*
  Station or comma separated list of stations data from. Accepts wildcards. Examples "GRA1", "GRA1,GRA2", "GR*" or "*".

- <location> *parameter type: string*
  Location code or comma separated list of location codes. Accepts wildcards. Examples ",00" or "*".

- <channel> *parameter type: string*
  Channel code. Accepts wildcards. Examples "BHZ", "BH*" or "*".

- <starttime> *parameter type: string*
  Start time in SH notation. Example "12-Jul-2015_06:30:22".

- <seclength> *parameter type: float*
  Length of requested data window in s.

- <circledef> *parameter type: list of float*
  Comma separated triple of floating point numbers, specifying latitude, longitude of a location on earth and radius in deg around this point. Data from all stations known to the FDSN server and located in this circle around point (latitude,longitude) are returned in this request. Example "49.,11.,1.".

- <bulkfile> *parameter type: string*
  File containing the data request to the FDSN server. Format see qualifier "/bulkline". Currently FDSN servers deliver data which are not properly aligned to the time windows specified, but contain complete SEED records.

qualifiers

- /addr
  Specify FDSN server or alias name. Default server is read from configuration file, section [fdsnws],

variable "default_data_source". Known server names are "BGR", "GFZ", "INGV", "IRIS" and others, see ObsPy? documentation.

- /bulkline
  Do not process the given request but return a line for a bulk request. Combined with the "echo" command a bulk request file can be assembled. Does not work with <circledef> parameter.

example

```
fdsnws gr gr* * bhz 17-aug-15_8:30 300 /addr=bgr
```
Reads five minutes of GRF array BHZ data from the BGR FDSN server.

```
fdsnws 51.,10.,2. * * bhz 7-aug-15_00:16:30 600
```
Reads ten minutes of BHZ data from the default FDSN server, take all stations with 1 deg distance from point (51.,10.). See "help;;" command for more examples.