

EIDA Availability Report

Created at 14-02-2026 00:32

This document contains results of automated tests of the waveform availability of European EIDA stations and the responsiveness of the EIDA servers to metadata requests.

Description of waveform test program

Availability test of EIDA stations using Python obspy library.

- Conducts random waveform requests to single channels of EIDA stations.
- One request per minute.
- Requested time span randomly selected from last year, span length between 60 and 600 s.
- Station randomly selected from the subset of unrestricted European EIDA stations offering at least one out of channels HHZ, BHZ, EHZ or SHZ.
- Request full station metadata from selected station and choose channel randomly, restricted to channels HH?, BH?, EH? and SH?.
- On successful request apply a restitution to the waveform data.
- Evaluate and store result of request in a file database.
- Plot and statistically analyze content of file database.

The code does not use the waveform catalog, therefore empty waveform returns are due to data gaps or due to problems in data access and delivery.

Statistics on waveform tests

Statistics on random requests between 14-11-2025 and 14-02-2026 00:32 using station metadata valid since 14-02-2025.

Counters:

- unrestricted stations offering channels HHZ,BHZ,EHZ,SHZ: 3332
- evaluated stations: 3231
- number of requests: 125366

Waveform availability plot

Color coded plot of evaluated EIDA stations. Shows results of 125366 random requests between 14-11-2025 and 14-02-2026. The availability displayed is computed as the relative number of request results with status OK (see table below) compared to the number of all requests to this station.

EIDA waveform response statistics (260214)

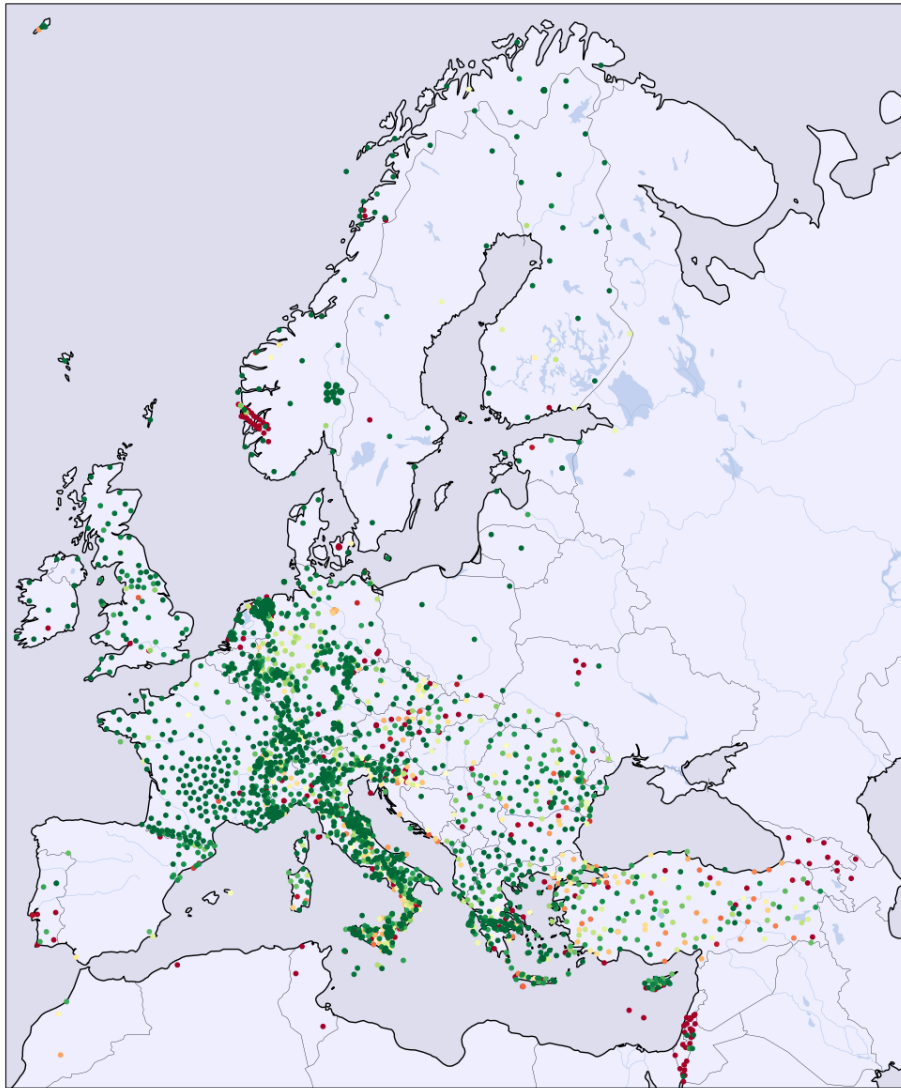


Figure 1: Availability of stations: green 100%, yellow 50%, red 0%

Request status statistics of networks:

net	OK	OK in %	NODATA	FRAGMENT	INCOMPL	METAFAIL	NOSERV	RESTFAIL
1D	71	84	10	0	0	0	3	0
1I	78	63	44	0	0	0	0	0
2D	186	76	35	0	0	0	23	0
2E	9	75	3	0	0	0	0	0
2I	217	82	47	0	0	0	0	0
3D	66	27	162	0	0	0	8	0
4P	403	57	278	5	13	0	0	7
5A	16	57	1	11	0	0	0	0
5B	38	95	2	0	0	0	0	0
5R	84	57	61	0	0	0	0	0
7B	573	53	498	2	5	0	0	0
7C	0	0	145	0	0	0	1	0
7F	131	97	3	0	0	0	1	0
8D	46	97	0	1	0	0	0	0
8N	36	53	30	1	0	0	0	0
9L	27	60	18	0	0	0	0	0
9S	52	57	36	1	0	0	1	0
AB	0	0	151	0	0	0	0	0
AC	419	92	31	0	1	0	4	0
BE	1241	95	58	0	1	0	0	0
BN	238	65	113	10	0	0	0	0
BQ	428	94	16	0	2	0	8	0
BS	719	64	384	13	4	0	0	0
BW	1876	78	500	0	0	0	0	0
C4	86	72	32	0	0	0	0	0
CA	812	82	144	16	2	0	10	0
CH	3498	92	218	86	0	0	0	0
CL	570	89	69	0	1	0	0	0
CP	0	0	93	0	0	0	3	0
CQ	414	55	322	12	1	0	0	0
CR	522	37	857	1	5	0	0	0
CZ	643	80	105	1	0	0	45	0
DK	585	40	789	0	5	0	83	0
DY	46	30	103	0	0	0	0	0
DZ	0	0	42	0	0	0	0	0
EB	35	89	4	0	0	0	0	0
EE	182	76	45	0	0	0	12	0
EI	388	87	35	0	0	0	20	0
ES	154	78	33	9	0	0	1	0
FN	373	93	3	0	0	0	25	0
FO	137	95	7	0	0	0	0	0
FR	7485	96	282	9	5	0	2	0
GB	2307	94	100	18	4	0	2	0
GE	2453	68	951	2	4	0	187	0

Request status statistics of networks (continued):

net	OK	OK in %	NODATA	FRAGMENT	INCOMPL	METAFAIL	NOSERV	RESTFAIL
GO	0	0	233	0	0	0	0	0
GQ	173	77	38	6	0	0	6	0
GR	3485	87	493	0	1	0	2	0
GU	1072	79	267	12	0	0	1	0
GX	112	82	10	3	1	0	10	0
HA	1245	92	94	0	1	0	0	0
HC	390	68	168	3	0	0	10	0
HE	666	76	164	0	0	0	35	0
HF	0	0	45	0	0	0	0	0
HL	1969	73	664	54	1	0	0	0
HP	802	92	42	24	1	0	0	0
HS	466	79	115	1	0	0	5	0
HT	1844	80	418	18	6	0	3	3
HU	543	82	80	0	1	0	35	0
IP	0	0	94	0	0	0	0	0
IS	0	0	1530	0	0	0	83	0
IV	14778	80	3341	193	24	0	5	41
IX	464	70	180	12	2	0	0	0
IY	508	64	253	12	2	0	7	0
JS	0	0	192	0	0	0	7	0
K3	21	87	3	0	0	0	0	0
KO	4363	62	776	1630	59	0	167	0
KQ	214	74	35	40	0	0	0	0
LC	0	0	46	0	0	0	0	0
LE	1409	92	105	0	0	0	2	0
LU	408	88	32	0	0	0	19	0
LX	67	61	42	0	0	0	0	0
M1	249	62	128	0	0	0	20	0
MD	112	88	15	0	0	0	0	0
ME	31	70	13	0	0	0	0	0
MK	350	99	2	0	0	0	0	0
ML	54	68	25	0	0	0	0	0
MN	725	65	358	20	0	0	0	0
MT	358	82	71	2	1	0	0	0
NH	354	69	152	1	0	0	5	0
NI	147	65	75	3	1	0	0	0
NL	9615	87	1228	116	26	0	3	0
NO	3412	87	203	9	6	0	281	0
NR	41	14	234	0	0	0	0	0
NS	1664	43	1873	0	0	0	298	0
OE	904	78	229	0	24	0	0	0
OT	567	80	97	6	1	0	0	37
OX	455	69	196	3	2	0	2	0
PL	332	92	2	0	1	0	23	0

Request status statistics of networks (continued):

net	OK	OK in %	NODATA	FRAGMENT	INCOMPL	METAFAIL	NOSERV	RESTFAIL
PM	33	12	207	0	0	0	18	0
QE	193	49	177	0	0	0	23	0
QM	274	75	88	0	0	0	0	0
RD	522	98	5	0	1	0	0	0
RF	49	98	1	0	0	0	0	0
RN	197	46	206	8	14	0	1	0
RO	4001	80	932	4	9	0	0	0
SI	131	53	112	0	0	0	0	0
SJ	442	72	130	7	4	0	28	0
SK	217	45	236	1	0	0	25	0
SL	1060	81	220	5	17	0	0	0
SS	32	86	5	0	0	0	0	0
ST	332	99	2	0	0	0	0	0
SX	599	70	246	1	0	0	5	0
TH	1401	88	152	2	0	0	20	0
TQ	199	47	198	8	0	0	18	0
TT	0	0	111	0	0	0	6	0
TU	101	22	356	0	1	0	0	0
TV	13	37	22	0	0	0	0	0
UD	77	32	154	3	0	0	1	0
UP	415	94	22	0	3	0	0	0
UR	291	72	107	4	0	0	0	0
UT	201	92	17	0	0	0	0	0
VI	287	83	50	4	2	0	0	0
VM	42	100	0	0	0	0	0	0
WE	0	0	30	0	0	0	0	0
WM	94	43	113	0	0	0	10	0
XE	230	61	145	0	0	0	0	0
XP	1494	99	5	0	0	0	1	0
Y8	197	83	40	0	0	0	0	0
YV	99	51	93	0	0	0	0	0
ZO	306	90	31	0	0	0	0	0

Status codes used in above statistics:

OK data delivery and restitution successful

OK in % Percentage of successful data delivery

NODATA no data available

FRAGMENT returned data not contiguous

INCOMPL returned time interval less than requested

METAFAIL restituted data contain illegal values (Nans)

NOSERV station metadata request failed

RESTFAIL removing response failed

Waveform requests, random hit distribution

How many stations have how many hits of random requests.

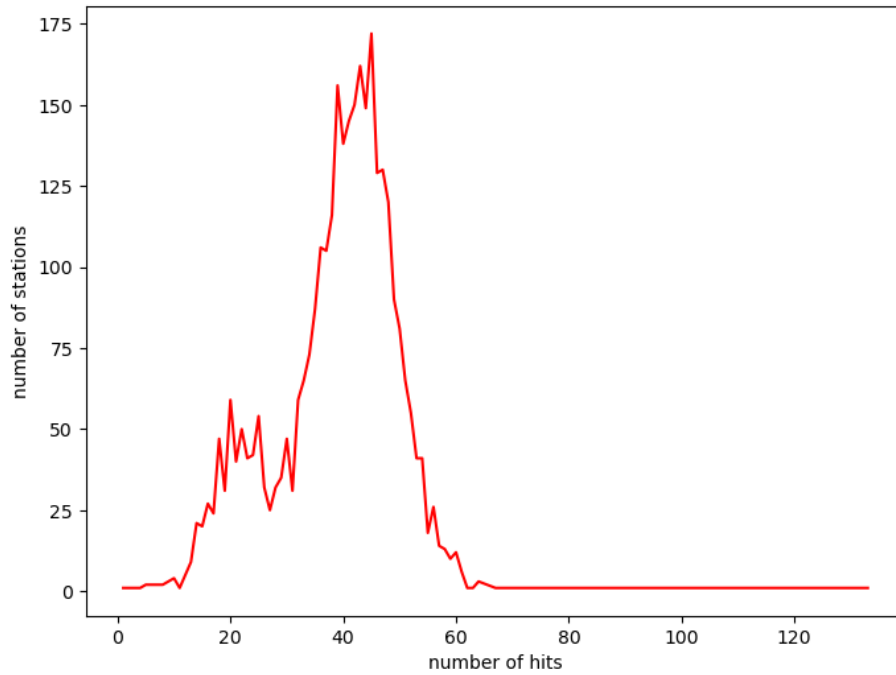


Figure 2: Request hit statistics showing the distribution of the 125366 requests on the 3231 evaluated stations

Failure rate of inventory requests

This section contains results of inventory test requests on network, station and channel level. A few times per hour all servers get direct metadata requests followed by a metadata request using the routing client of obspy. It is checked whether all servers respond to the direct requests and whether all servers contribute to the routed request. The following results refer to tests carried out since 17-01-2026 00:32:02.

totals: direct requests 2015, routed requests 2015, federator requests 2015

Number of failed requests and failure rates of servers:

server	direct	routed	federator
AFAD	2016 (100.0%)	2015 (100.0%)	1655 (100.0%)
BGR	3 (0.1%)	19 (0.9%)	58 (3.5%)
BGS	10 (0.5%)	11 (0.5%)	4 (0.2%)
ETH	3 (0.1%)	3 (0.1%)	4 (0.2%)
GFZ	11 (0.5%)	349 (17.3%)	92 (5.6%)
ICGC	35 (1.7%)	99 (4.9%)	23 (1.4%)
INGV	16 (0.8%)	12 (0.6%)	11 (0.7%)
KOERI	78 (3.9%)	136 (6.7%)	54 (3.3%)
LMU	0 (0.0%)	2 (0.1%)	5 (0.3%)
NIEP	1 (0.0%)	1 (0.0%)	9 (0.5%)
NOA	13 (0.6%)	14 (0.7%)	15 (0.9%)
ODC	0 (0.0%)	1 (0.0%)	10 (0.6%)
RESIF	5 (0.2%)	2 (0.1%)	20 (1.2%)
UIB/NORSAR	21 (1.0%)	71 (3.5%)	16 (1.0%)

failures of routing client: 0

failures of federator: 360

runs without errors: 0 (0.0%)

Remarks

A history of these daily reports (in pdf format) as well as request logs on station level are available at ftp://www.szgrf.bgr.de/pub/EidaAvailability/files/history_eida_availability_reports.tgz and [stationlogs_eida_availability.tgz](ftp://www.szgrf.bgr.de/pub/EidaAvailability/files/stationlogs_eida_availability.tgz), respectively. Reports created after 15-08-2022 are available at https://www.szgrf.bgr.de/eidaqc_report/EidaAvailability

This report was automatically created at 14-02-2026 00:32 MEST using pandoc 2.18.

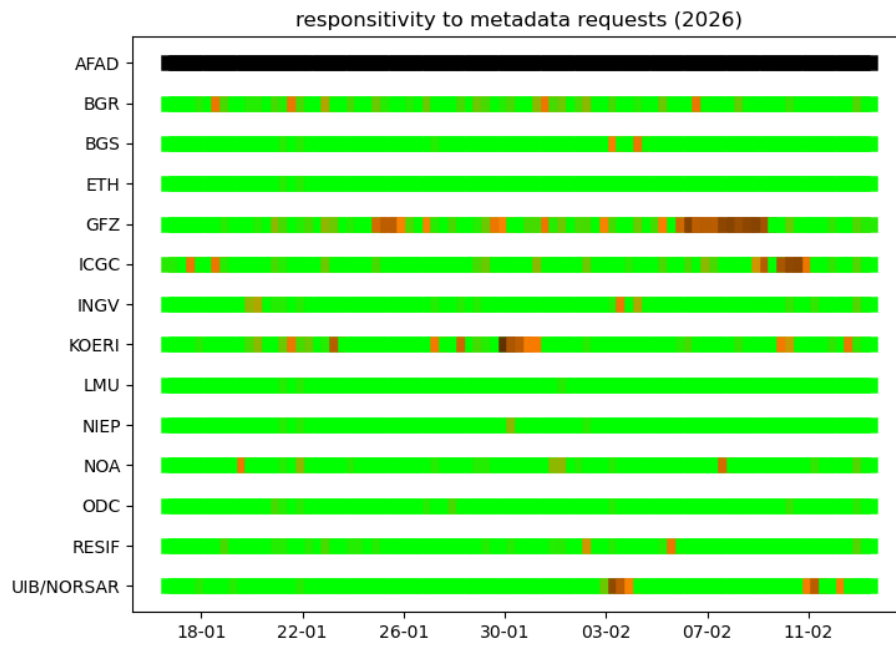


Figure 3: Responsiveness of all servers plotted with a granularity of 8h; green = 0% errors, orange = 10%, brown = 50%, black = 100%