

EIDA Availability Report

Created at 06-02-2026 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 06-11-2025 and 06-02-2026 00:32 using station metadata valid since 06-02-2025.

Counters:

- unrestricted stations offering channels HHZ,BHZ,EHZ,SHZ: 3332
- evaluated stations: 3230
- number of requests: 125233

Waveform availability plot

Color coded plot of evaluated EIDA stations. Shows results of 125233 random requests between 06-11-2025 and 06-02-2026. 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 (260206)

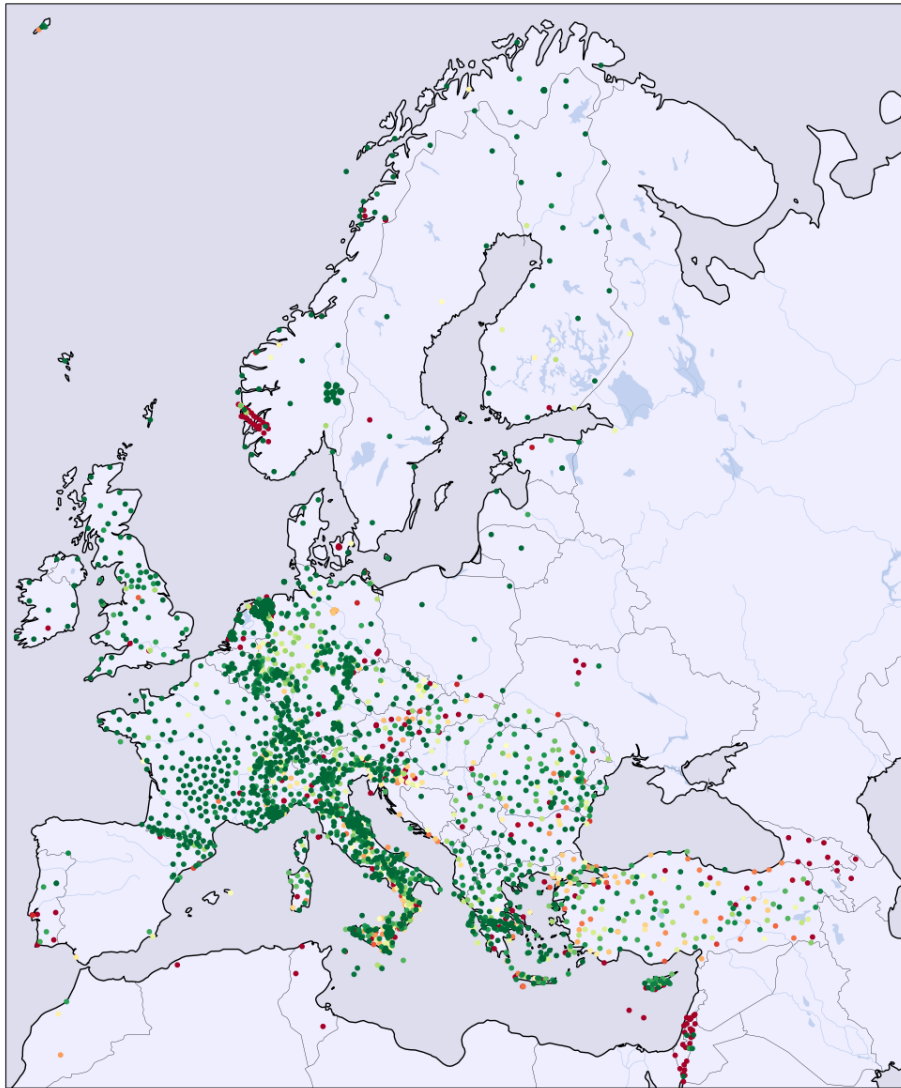


Figure 1: Availability of stations: green 100%, yellow 50%, red 0%

Request status statistics of networks:

net	OK	OK in %	NODATA	FRAGMENT	INCOMPL	METAFAIL	NOSERV	RESTFAIL
1D	74	86	11	0	0	0	1	0
1I	78	63	45	0	0	0	0	0
2D	201	82	38	0	0	0	6	0
2E	4	66	2	0	0	0	0	0
2I	224	84	40	0	0	0	0	0
3D	75	31	160	0	0	0	4	0
4P	407	56	289	4	12	0	0	5
5A	13	54	1	10	0	0	0	0
5B	33	94	2	0	0	0	0	0
5R	105	60	68	0	0	0	0	0
7B	587	53	498	2	5	0	0	0
7C	0	0	144	0	0	0	1	0
7F	126	97	2	0	0	0	1	0
8D	41	97	0	1	0	0	0	0
8N	41	52	36	1	0	0	0	0
9L	31	64	17	0	0	0	0	0
9S	51	57	36	1	0	0	0	0
AB	0	0	142	0	0	0	0	0
AC	417	92	30	0	1	0	4	0
BE	1237	95	59	0	2	0	0	0
BN	232	65	115	9	0	0	0	0
BQ	425	94	16	0	2	0	8	0
BS	709	64	378	11	5	0	0	0
BW	1871	79	493	0	0	0	0	0
C4	83	72	31	0	0	0	0	0
CA	850	87	106	18	2	0	0	0
CH	3472	91	230	90	1	0	0	0
CL	565	89	66	0	1	0	0	0
CP	0	0	94	0	0	0	0	0
CQ	417	55	319	10	2	0	0	0
CR	523	37	861	0	5	0	0	0
CZ	682	85	107	1	1	0	9	0
DK	602	42	799	0	6	0	16	0
DY	50	31	109	0	0	0	0	0
DZ	0	0	43	0	0	0	0	0
EB	36	100	0	0	0	0	0	0
EE	184	78	48	0	0	0	3	0
EI	392	90	36	0	0	0	7	0
ES	159	81	27	9	0	0	0	0
FN	385	97	3	0	0	0	7	0
FO	128	94	8	0	0	0	0	0
FR	7529	96	275	8	6	0	2	0
GB	2311	94	101	21	4	0	2	0
GE	2571	71	988	2	5	0	25	0

Request status statistics of networks (continued):

net	OK	OK in %	NODATA	FRAGMENT	INCOMPL	METAFAIL	NOSERV	RESTFAIL
GO	0	0	224	0	0	0	0	0
GQ	177	80	32	5	0	0	6	0
GR	3474	87	480	0	2	0	3	0
GU	1059	79	259	13	0	0	1	0
GX	114	87	11	3	1	0	2	0
HA	1220	92	98	0	1	0	0	0
HC	382	66	178	3	0	0	10	0
HE	685	79	169	0	0	0	10	0
HF	0	0	48	0	0	0	0	0
HL	1992	73	673	54	1	0	0	0
HP	811	92	42	23	1	0	0	0
HS	464	80	109	1	0	0	5	0
HT	1858	80	422	16	7	0	3	3
HU	554	85	82	0	1	0	8	0
IP	0	0	86	0	0	0	0	0
IS	0	0	1598	0	0	0	17	0
IV	14659	80	3376	199	22	0	3	41
IX	440	69	179	13	2	0	0	0
IY	500	64	258	10	1	0	7	0
JS	0	0	199	0	0	0	1	0
K3	19	82	4	0	0	0	0	0
KO	4357	62	777	1658	53	0	167	0
KQ	213	72	37	45	0	0	0	0
LC	0	0	47	0	0	0	0	0
LE	1437	93	102	0	0	0	2	0
LU	429	93	27	0	0	0	5	0
LX	71	62	41	0	1	0	0	0
M1	258	66	124	0	0	0	6	0
MD	118	88	16	0	0	0	0	0
ME	31	68	14	0	0	0	0	0
MK	359	99	2	0	0	0	0	0
ML	54	71	22	0	0	0	0	0
MN	723	65	368	19	0	0	1	0
MT	350	82	70	2	0	0	0	0
NH	349	68	156	1	0	0	5	0
NI	148	65	74	3	1	0	0	0
NL	9673	87	1231	118	26	0	2	0
NO	3361	87	202	8	7	0	281	0
NR	37	14	227	0	0	0	0	0
NS	1643	42	1886	0	0	0	298	0
OE	885	78	223	0	20	0	0	0
OT	559	80	87	6	1	0	0	39
OX	468	67	214	3	2	0	2	0
PL	339	97	3	0	0	0	6	0

Request status statistics of networks (continued):

net	OK	OK in %	NODATA	FRAGMENT	INCOMPL	METAFAIL	NOSERV	RESTFAIL
PM	35	14	213	0	0	0	2	0
QE	211	52	171	0	0	0	23	0
QM	269	75	87	0	0	0	0	0
RD	516	98	5	0	1	0	0	0
RF	44	97	1	0	0	0	0	0
RN	194	44	212	7	15	0	8	0
RO	4040	81	912	5	10	0	0	0
SI	127	52	116	0	0	0	0	0
SJ	466	75	137	7	4	0	7	0
SK	229	48	238	1	0	0	7	0
SL	1080	81	220	5	17	0	0	0
SS	29	87	4	0	0	0	0	0
ST	345	99	1	0	0	0	0	0
SX	601	70	240	1	0	0	5	0
TH	1408	89	145	3	0	0	20	0
TQ	208	49	199	8	0	0	4	0
TT	0	0	123	0	0	0	1	0
TU	95	21	356	0	1	0	0	0
TV	14	38	22	0	0	0	0	0
UD	77	32	160	3	0	0	0	0
UP	408	93	24	0	4	0	0	0
UR	290	72	104	5	0	0	0	0
UT	201	93	15	0	0	0	0	0
VI	271	82	52	4	2	0	0	0
VM	47	100	0	0	0	0	0	0
WE	0	0	33	0	0	0	0	0
WM	93	43	117	0	0	0	3	0
XE	227	60	151	0	0	0	0	0
XP	1520	99	4	0	0	0	0	0
Y8	190	81	42	0	0	0	0	0
YV	102	54	86	0	0	0	0	0
ZO	306	91	30	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.

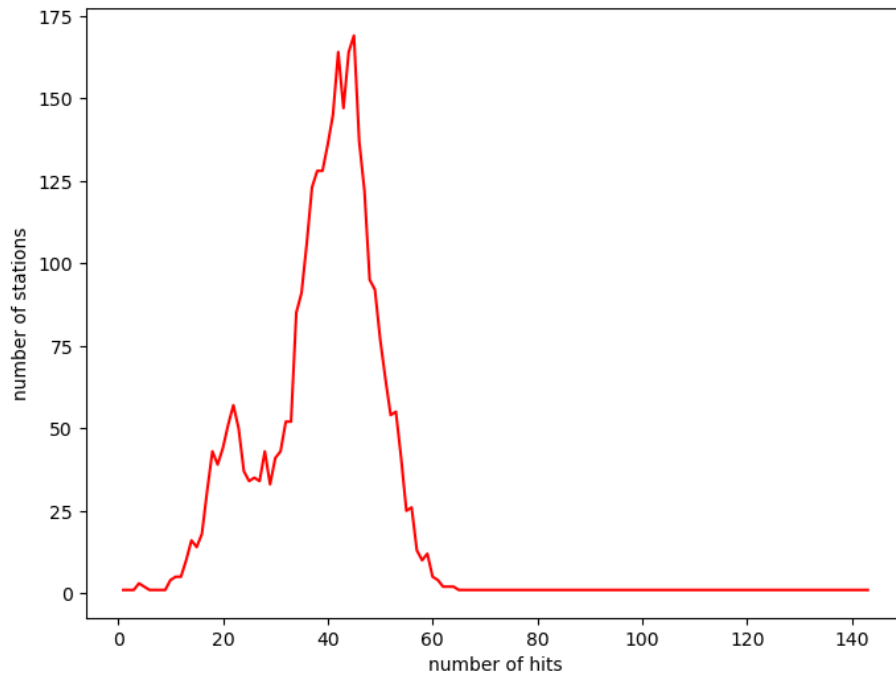


Figure 2: Request hit statistics showing the distribution of the 125233 requests on the 3230 evaluated stations

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 09-01-2026 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%)	2005 (100.0%)
BGR	3 (0.1%)	16 (0.8%)	58 (2.9%)
BGS	10 (0.5%)	11 (0.5%)	4 (0.2%)
ETH	1 (0.0%)	2 (0.1%)	4 (0.2%)
GFZ	7 (0.3%)	94 (4.7%)	81 (4.0%)
ICGC	8 (0.4%)	9 (0.4%)	26 (1.3%)
INGV	13 (0.6%)	9 (0.4%)	9 (0.4%)
KOERI	76 (3.8%)	128 (6.4%)	43 (2.1%)
LMU	0 (0.0%)	1 (0.0%)	5 (0.2%)
NIEP	2 (0.1%)	2 (0.1%)	9 (0.4%)
NOA	11 (0.5%)	14 (0.7%)	17 (0.8%)
ODC	0 (0.0%)	1 (0.0%)	11 (0.5%)
RESIF	6 (0.3%)	2 (0.1%)	17 (0.8%)
UIB/NORSAR	7 (0.3%)	56 (2.8%)	18 (0.9%)

failures of routing client: 0

failures of federator: 10

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 06-02-2026 00:32 MEST usingpandoc 2.18.

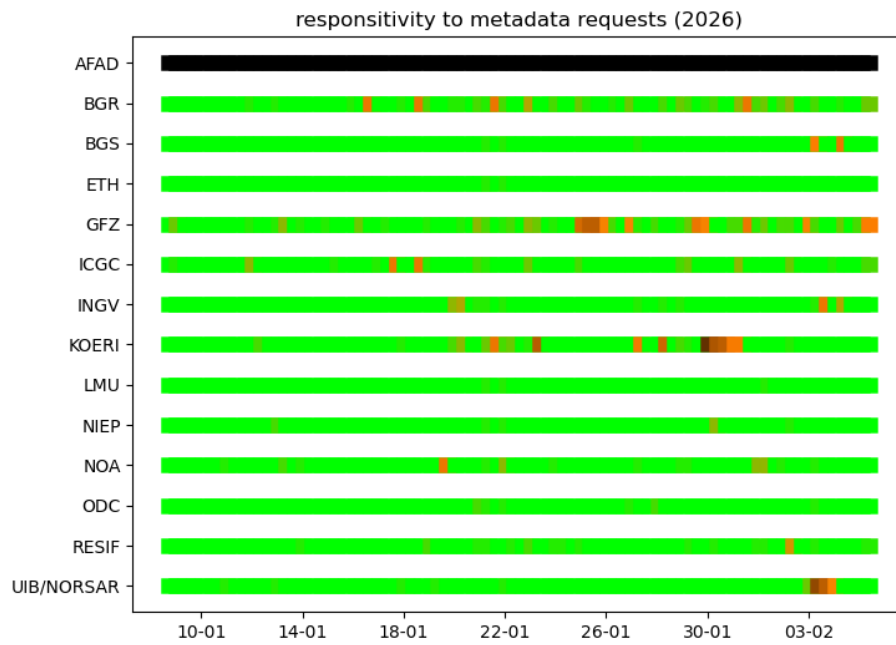


Figure 3: Responsiveness of all servers plotted with a granularity of 8h; green = 0% errors, orange = 10%, brown = 50%, black = 100%