

EIDA Availability Report

Created at 08-02-2026 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 08-11-2025 and 08-02-2026 00:32 using station metadata valid since 08-02-2025.

Counters:

- unrestricted stations offering channels HHZ,BHZ,EHZ,SHZ: 3332
- evaluated stations: 3230
- number of requests: 125328

Waveform availability plot

Color coded plot of evaluated EIDA stations. Shows results of 125328 random requests between 08-11-2025 and 08-02-2026. 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 (260208)

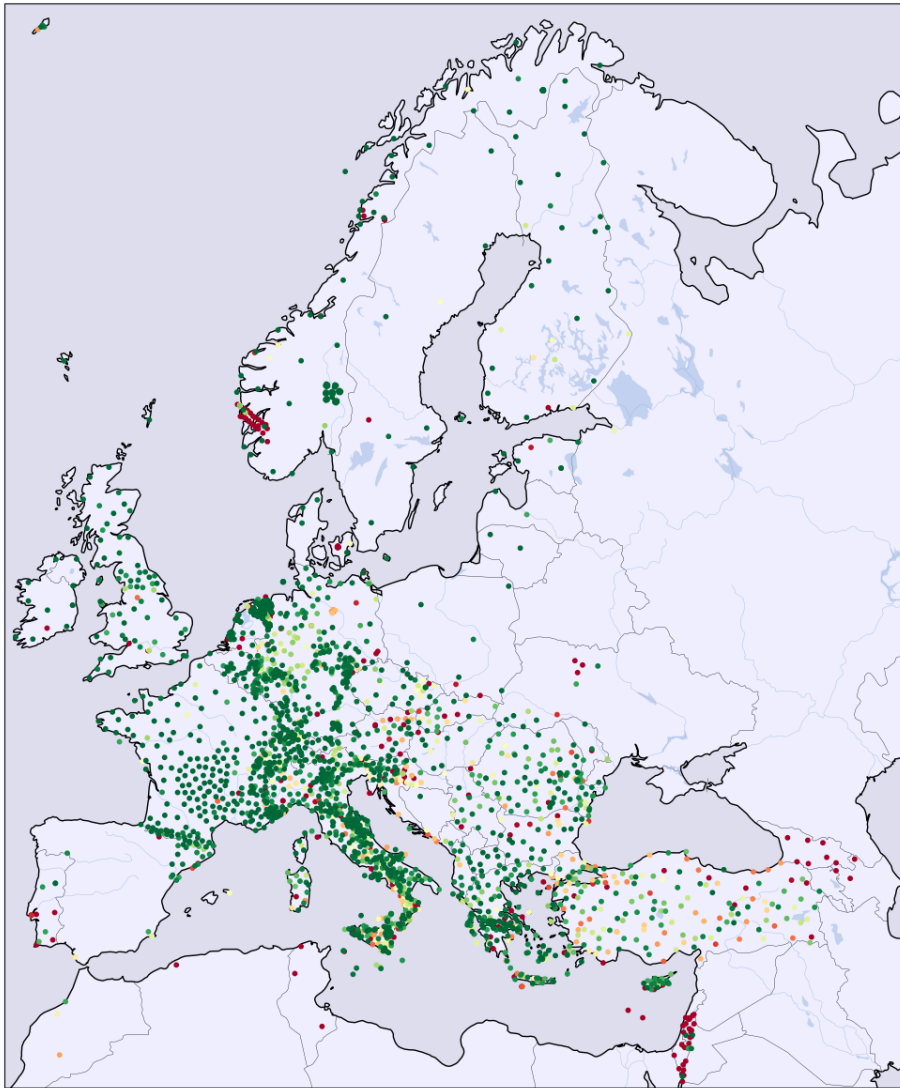


Figure 1: Availability of stations: green 100%, yellow 50%, red 0%

Request status statistics of networks:

net	OK	OK in %	NODATA	FRAGMENT	INCOMPL	METAFAIL	NOSERV	RESTFAIL
1D	71	86	10	0	0	0	1	0
1I	78	62	46	0	0	0	0	0
2D	195	78	37	0	0	0	16	0
2E	5	71	2	0	0	0	0	0
2I	223	84	40	0	0	0	0	0
3D	74	30	163	0	0	0	6	0
4P	410	56	287	5	13	0	0	6
5A	13	54	1	10	0	0	0	0
5B	34	94	2	0	0	0	0	0
5R	101	59	68	0	0	0	0	0
7B	580	53	499	2	5	0	0	0
7C	0	0	146	0	0	0	1	0
7F	126	96	3	0	0	0	1	0
8D	45	97	0	1	0	0	0	0
8N	40	53	34	1	0	0	0	0
9L	30	63	17	0	0	0	0	0
9S	52	58	36	1	0	0	0	0
AB	0	0	147	0	0	0	0	0
AC	416	92	30	0	1	0	4	0
BE	1243	95	55	0	1	0	0	0
BN	239	65	117	10	0	0	0	0
BQ	421	94	16	0	2	0	8	0
BS	712	64	378	10	5	0	0	0
BW	1883	79	496	0	0	0	0	0
C4	85	73	31	0	0	0	0	0
CA	837	85	122	16	2	0	0	0
CH	3474	91	225	89	1	0	0	0
CL	567	89	67	0	1	0	0	0
CP	0	0	94	0	0	0	1	0
CQ	414	55	315	11	2	0	0	0
CR	526	37	865	0	5	0	0	0
CZ	671	83	106	1	0	0	25	0
DK	585	40	787	0	6	0	50	0
DY	49	31	107	0	0	0	0	0
DZ	0	0	44	0	0	0	0	0
EB	35	97	1	0	0	0	0	0
EE	181	76	46	0	0	0	9	0
EI	388	88	35	0	0	0	14	0
ES	156	81	27	9	0	0	0	0
FN	381	95	3	0	0	0	14	0
FO	132	94	7	0	0	0	0	0
FR	7515	96	270	8	6	0	2	0
GB	2312	94	100	21	4	0	2	0
GE	2512	69	969	2	4	0	115	0

Request status statistics of networks (continued):

net	OK	OK in %	NODATA	FRAGMENT	INCOMPL	METAFAIL	NOSERV	RESTFAIL
GO	0	0	227	0	0	0	0	0
GQ	179	80	33	5	0	0	6	0
GR	3469	87	487	0	2	0	3	0
GU	1066	79	265	13	0	0	1	0
GX	108	81	11	3	1	0	9	0
HA	1236	93	91	0	1	0	0	0
HC	387	67	177	3	0	0	10	0
HE	675	77	166	0	0	0	25	0
HF	0	0	47	0	0	0	0	0
HL	1983	73	670	54	1	0	0	0
HP	810	92	42	24	1	0	0	0
HS	468	80	111	1	0	0	5	0
HT	1838	80	420	16	6	0	3	3
HU	543	83	81	0	1	0	27	0
IP	0	0	89	0	0	0	0	0
IS	0	0	1555	0	0	0	55	0
IV	14701	80	3369	196	21	0	3	40
IX	444	69	184	12	2	0	0	0
IY	502	64	261	10	1	0	7	0
JS	0	0	192	0	0	0	5	0
K3	19	90	2	0	0	0	0	0
KO	4355	62	769	1646	53	0	167	0
KQ	212	72	37	44	0	0	0	0
LC	0	0	47	0	0	0	0	0
LE	1430	93	101	0	0	0	2	0
LU	422	90	27	0	0	0	15	0
LX	69	62	41	0	1	0	0	0
M1	256	65	119	0	0	0	16	0
MD	116	88	15	0	0	0	0	0
ME	30	68	14	0	0	0	0	0
MK	348	99	2	0	0	0	0	0
ML	56	70	23	0	0	0	0	0
MN	718	65	363	20	0	0	1	0
MT	354	83	69	2	0	0	0	0
NH	349	68	156	1	0	0	5	0
NI	149	65	74	3	1	0	0	0
NL	9707	87	1228	117	26	0	2	0
NO	3388	87	201	8	7	0	281	0
NR	40	14	232	0	0	0	0	0
NS	1649	43	1880	0	0	0	298	0
OE	889	78	227	0	20	0	0	0
OT	563	80	93	6	1	0	0	39
OX	467	68	205	3	2	0	2	0
PL	336	95	3	0	0	0	14	0

Request status statistics of networks (continued):

net	OK	OK in %	NODATA	FRAGMENT	INCOMPL	METAFAIL	NOSERV	RESTFAIL
PM	34	13	208	0	0	0	11	0
QE	206	50	175	0	0	0	23	0
QM	267	75	87	0	0	0	0	0
RD	514	98	5	0	1	0	0	0
RF	46	97	1	0	0	0	0	0
RN	192	44	208	8	14	0	7	0
RO	4018	81	924	5	10	0	0	0
SI	127	52	117	0	0	0	0	0
SJ	452	73	133	7	4	0	16	0
SK	224	47	235	1	0	0	16	0
SL	1076	81	220	4	17	0	0	0
SS	33	89	4	0	0	0	0	0
ST	340	99	1	0	0	0	0	0
SX	600	71	239	1	0	0	5	0
TH	1403	89	145	2	0	0	20	0
TQ	202	48	196	8	0	0	11	0
TT	0	0	119	0	0	0	4	0
TU	96	21	352	0	1	0	0	0
TV	15	41	21	0	0	0	0	0
UD	77	31	161	3	0	0	0	0
UP	406	94	22	0	3	0	0	0
UR	295	72	106	5	0	0	0	0
UT	202	93	15	0	0	0	0	0
VI	278	82	52	4	2	0	0	0
VM	45	100	0	0	0	0	0	0
WE	0	0	34	0	0	0	0	0
WM	92	43	113	0	0	0	8	0
XE	229	60	149	0	0	0	0	0
XP	1517	99	4	0	0	0	0	0
Y8	194	82	40	0	0	0	0	0
YV	104	53	90	0	0	0	0	0
ZO	309	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.

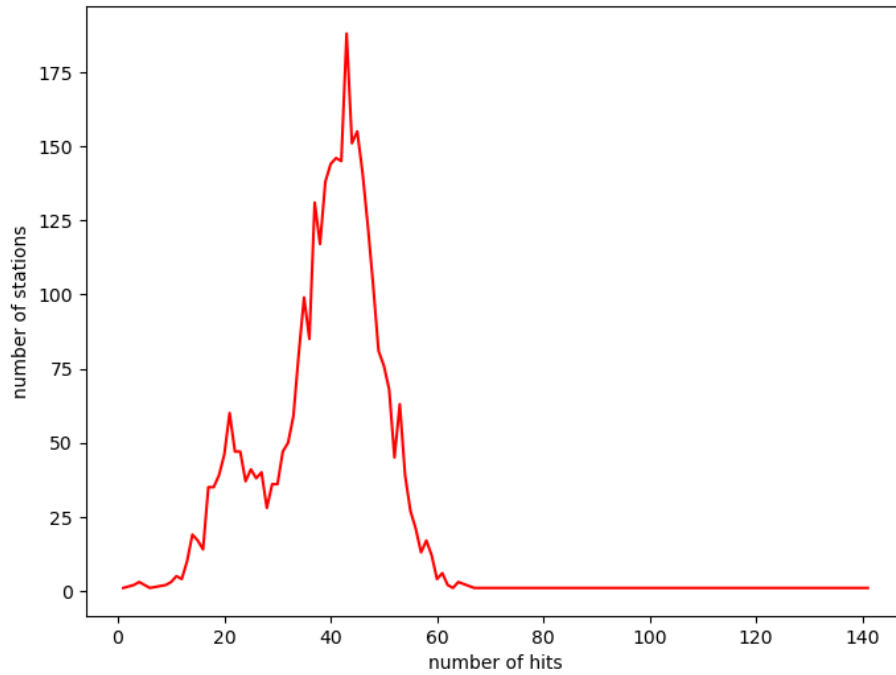


Figure 2: Request hit statistics showing the distribution of the 125328 requests on the 3230 evaluated stations

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 11-01-2026 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%)	1980 (100.0%)
BGR	3 (0.1%)	16 (0.8%)	60 (3.0%)
BGS	10 (0.5%)	11 (0.5%)	4 (0.2%)
ETH	1 (0.0%)	2 (0.1%)	4 (0.2%)
GFZ	9 (0.4%)	231 (11.5%)	91 (4.6%)
ICGC	20 (1.0%)	15 (0.7%)	25 (1.3%)
INGV	15 (0.7%)	11 (0.5%)	9 (0.5%)
KOERI	76 (3.8%)	128 (6.4%)	47 (2.4%)
LMU	0 (0.0%)	1 (0.0%)	5 (0.3%)
NIEP	2 (0.1%)	2 (0.1%)	9 (0.5%)
NOA	12 (0.6%)	14 (0.7%)	18 (0.9%)
ODC	0 (0.0%)	1 (0.0%)	11 (0.6%)
RESIF	6 (0.3%)	2 (0.1%)	18 (0.9%)
UIB/NORSAR	7 (0.3%)	56 (2.8%)	18 (0.9%)

failures of routing client: 0

failures of federator: 35

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 08-02-2026 00:32 MEST usingpandoc 2.18.

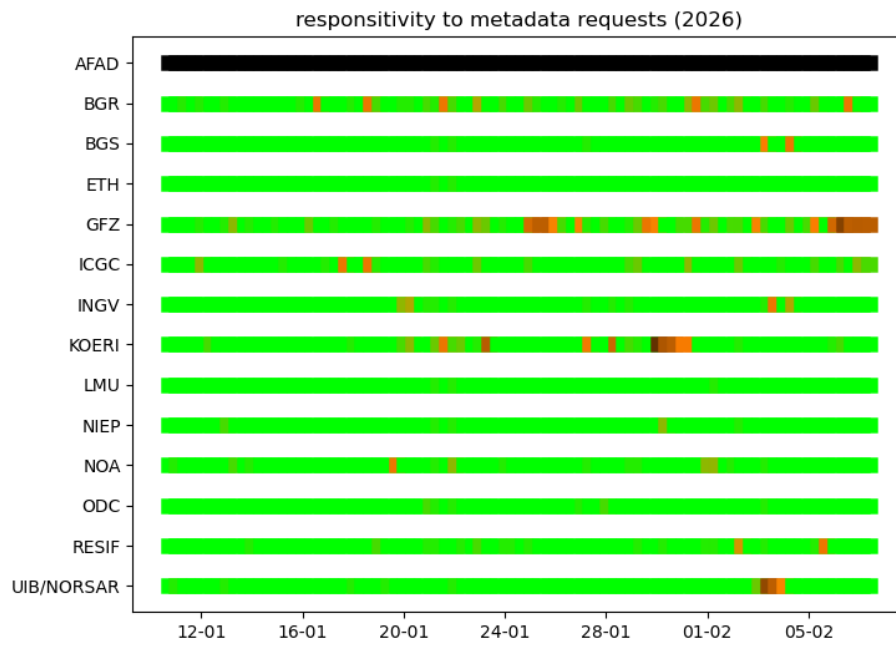


Figure 3: Responsiveness of all servers plotted with a granularity of 8h; green = 0% errors, orange = 10%, brown = 50%, black = 100%