

EIDA Availability Report

Created at 13-02-2026 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 13-11-2025 and 13-02-2026 00:32 using station metadata valid since 13-02-2025.

Counters:

- unrestricted stations offering channels HHZ,BHZ,EHZ,SHZ: 3332
- evaluated stations: 3231
- number of requests: 125357

Waveform availability plot

Color coded plot of evaluated EIDA stations. Shows results of 125357 random requests between 13-11-2025 and 13-02-2026. 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 (260213)

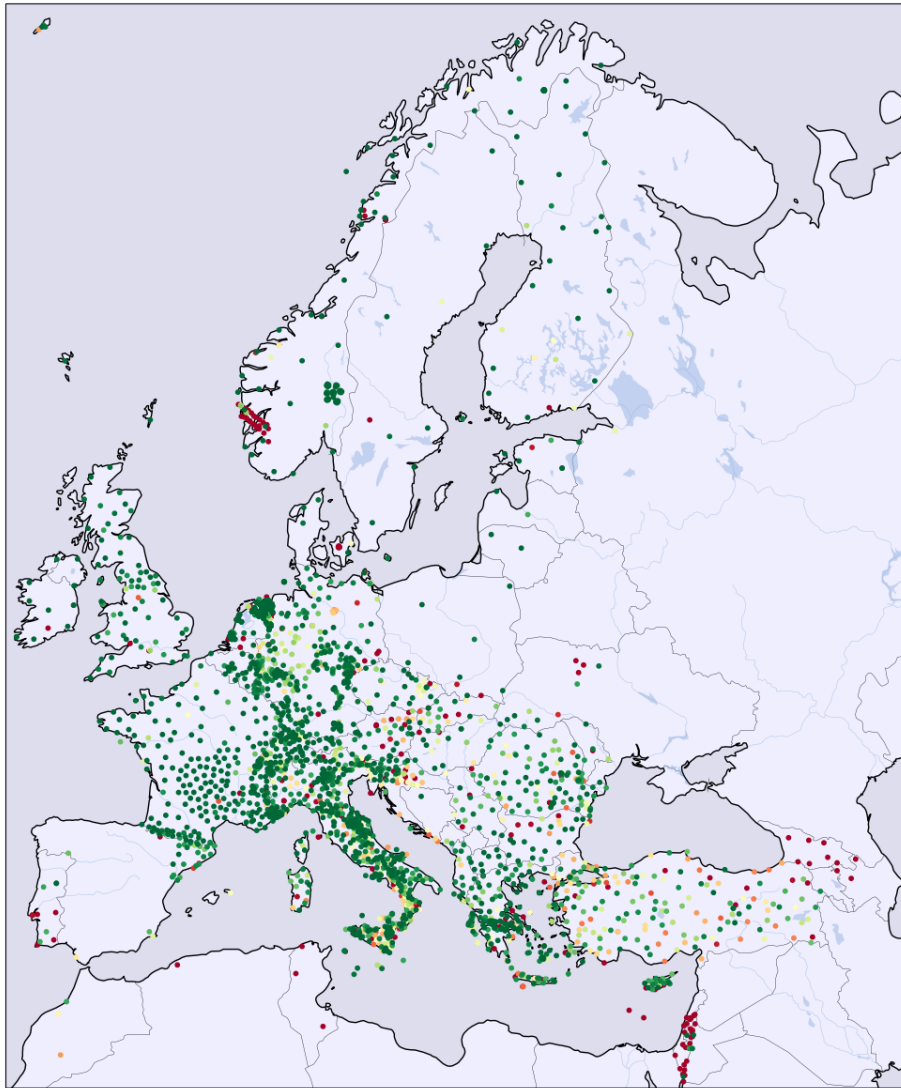


Figure 1: Availability of stations: green 100%, yellow 50%, red 0%

Request status statistics of networks:

net	OK	OK in %	NODATA	FRAGMENT	INCOMPL	METAFAIL	NOSERV	RESTFAIL
1D	69	84	10	0	0	0	3	0
1I	78	62	46	0	0	0	0	0
2D	182	75	35	0	0	0	23	0
2E	8	72	3	0	0	0	0	0
2I	216	82	45	0	0	0	0	0
3D	68	28	165	0	0	0	8	0
4P	404	56	281	5	13	0	0	7
5A	15	55	1	11	0	0	0	0
5B	37	94	2	0	0	0	0	0
5R	86	57	63	0	0	0	0	0
7B	575	53	499	2	5	0	0	0
7C	0	0	144	0	0	0	1	0
7F	128	96	3	0	0	0	1	0
8D	46	97	0	1	0	0	0	0
8N	36	51	33	1	0	0	0	0
9L	29	61	18	0	0	0	0	0
9S	52	58	35	1	0	0	1	0
AB	0	0	152	0	0	0	0	0
AC	428	92	32	0	1	0	4	0
BE	1245	95	57	0	1	0	0	0
BN	240	65	114	10	0	0	0	0
BQ	426	94	16	0	2	0	8	0
BS	713	63	385	13	4	0	0	0
BW	1870	79	497	0	0	0	0	0
C4	87	73	32	0	0	0	0	0
CA	812	82	144	15	2	0	10	0
CH	3504	91	221	86	1	0	0	0
CL	573	89	69	0	1	0	0	0
CP	0	0	95	0	0	0	3	0
CQ	417	55	319	12	1	0	0	0
CR	525	37	855	1	5	0	0	0
CZ	641	80	107	1	0	0	45	0
DK	584	39	790	0	5	0	83	0
DY	45	30	103	0	0	0	0	0
DZ	0	0	46	0	0	0	0	0
EB	34	89	4	0	0	0	0	0
EE	184	76	45	0	0	0	12	0
EI	386	87	35	0	0	0	20	0
ES	155	78	33	9	0	0	1	0
FN	367	92	3	0	0	0	25	0
FO	136	95	7	0	0	0	0	0
FR	7501	96	283	9	5	0	2	0
GB	2315	94	102	19	4	0	2	0
GE	2451	68	949	2	4	0	187	0

Request status statistics of networks (continued):

net	OK	OK in %	NODATA	FRAGMENT	INCOMPL	METAFAIL	NOSERV	RESTFAIL
GO	0	0	228	0	0	0	0	0
GQ	171	78	37	5	0	0	6	0
GR	3484	87	492	0	1	0	2	0
GU	1070	79	264	12	0	0	1	0
GX	109	81	10	3	1	0	10	0
HA	1245	92	94	0	1	0	0	0
HC	389	68	169	3	0	0	10	0
HE	662	76	163	0	0	0	35	0
HF	0	0	45	0	0	0	0	0
HL	1968	73	660	54	1	0	0	0
HP	807	92	42	24	1	0	0	0
HS	464	79	114	1	0	0	5	0
HT	1835	80	418	17	6	0	3	3
HU	541	82	81	0	1	0	35	0
IP	0	0	94	0	0	0	0	0
IS	0	0	1526	0	0	0	83	0
IV	14776	80	3341	193	23	0	5	41
IX	465	70	179	12	2	0	0	0
IY	503	64	251	12	2	0	7	0
JS	0	0	193	0	0	0	7	0
K3	20	86	3	0	0	0	0	0
KO	4368	62	777	1645	60	0	167	0
KQ	217	73	36	41	0	0	0	0
LC	0	0	47	0	0	0	0	0
LE	1413	93	104	0	0	0	2	0
LU	411	89	30	0	0	0	19	0
LX	67	62	41	0	0	0	0	0
M1	246	62	125	0	0	0	20	0
MD	111	88	15	0	0	0	0	0
ME	30	69	13	0	0	0	0	0
MK	352	99	2	0	0	0	0	0
ML	53	67	25	0	0	0	0	0
MN	721	65	361	20	0	0	0	0
MT	354	82	70	2	1	0	0	0
NH	355	69	151	1	0	0	5	0
NI	148	65	75	3	1	0	0	0
NL	9623	87	1223	117	27	0	3	0
NO	3397	87	204	9	6	0	281	0
NR	42	15	237	0	0	0	0	0
NS	1665	43	1872	0	0	0	298	0
OE	902	77	231	0	24	0	0	0
OT	567	80	95	6	1	0	0	37
OX	458	68	199	3	2	0	2	0
PL	330	92	3	0	0	0	23	0

Request status statistics of networks (continued):

net	OK	OK in %	NODATA	FRAGMENT	INCOMPL	METAFAIL	NOSERV	RESTFAIL
PM	33	12	206	0	0	0	18	0
QE	198	49	178	0	0	0	23	0
QM	272	75	87	0	0	0	0	0
RD	520	98	5	0	1	0	0	0
RF	49	98	1	0	0	0	0	0
RN	194	46	202	8	14	0	1	0
RO	3994	80	931	4	9	0	0	0
SI	131	53	114	0	0	0	0	0
SJ	442	72	129	7	4	0	28	0
SK	220	45	235	1	0	0	25	0
SL	1059	81	216	5	17	0	0	0
SS	32	86	5	0	0	0	0	0
ST	335	99	2	0	0	0	0	0
SX	602	70	242	1	0	0	5	0
TH	1405	89	151	2	0	0	20	0
TQ	202	47	199	9	0	0	18	0
TT	0	0	114	0	0	0	6	0
TU	101	22	350	0	1	0	0	0
TV	13	37	22	0	0	0	0	0
UD	77	32	156	3	0	0	1	0
UP	412	94	22	0	3	0	0	0
UR	293	72	105	4	0	0	0	0
UT	202	92	17	0	0	0	0	0
VI	284	83	51	4	2	0	0	0
VM	43	100	0	0	0	0	0	0
WE	0	0	32	0	0	0	0	0
WM	92	42	113	0	0	0	10	0
XE	228	60	147	0	0	0	0	0
XP	1491	99	5	0	0	0	1	0
Y8	199	83	40	0	0	0	0	0
YV	99	51	92	0	0	0	0	0
ZO	303	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.

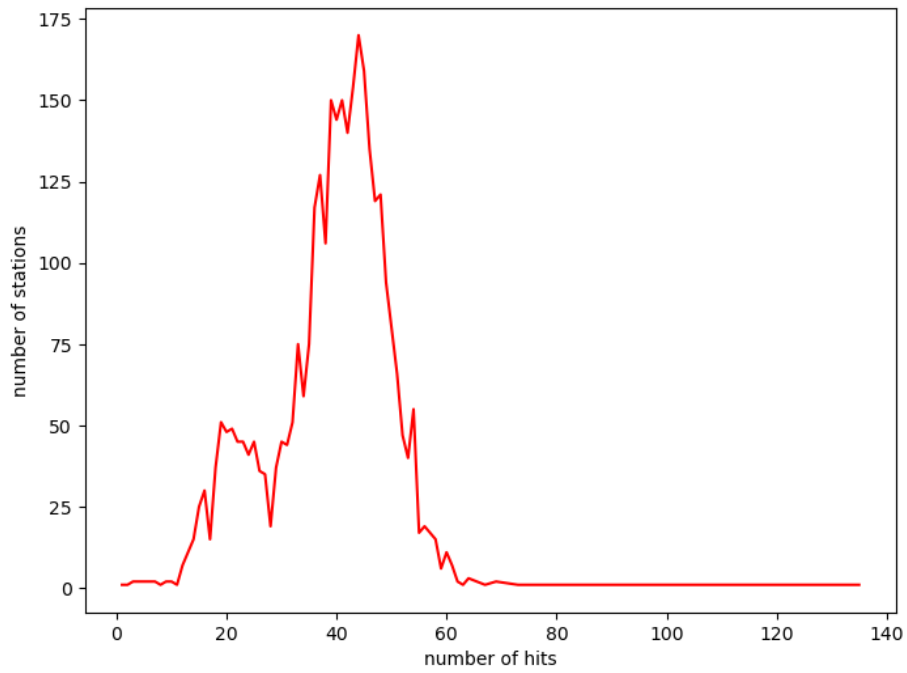


Figure 2: Request hit statistics showing the distribution of the 125357 requests on the 3231 evaluated stations

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 16-01-2026 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%)	1665 (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%)	86 (5.2%)
ICGC	34 (1.7%)	99 (4.9%)	23 (1.4%)
INGV	16 (0.8%)	12 (0.6%)	10 (0.6%)
KOERI	79 (3.9%)	137 (6.8%)	51 (3.1%)
LMU	0 (0.0%)	2 (0.1%)	5 (0.3%)
NIEP	1 (0.0%)	1 (0.0%)	9 (0.5%)
NOA	12 (0.6%)	13 (0.6%)	15 (0.9%)
ODC	0 (0.0%)	1 (0.0%)	12 (0.7%)
RESIF	5 (0.2%)	2 (0.1%)	18 (1.1%)
UIB/NORSAR	21 (1.0%)	71 (3.5%)	16 (1.0%)

failures of routing client: 0

failures of federator: 350

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 13-02-2026 00:32 MEST usingpandoc 2.18.

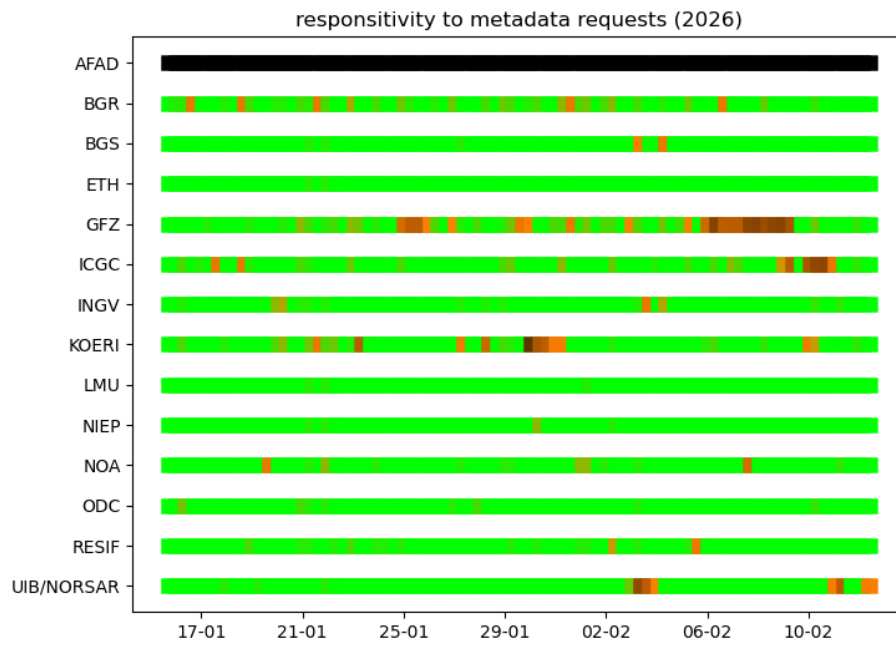


Figure 3: Responsiveness of all servers plotted with a granularity of 8h; green = 0% errors, orange = 10%, brown = 50%, black = 100%