

EIDA Availability Report

Created at 10-02-2026 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 10-11-2025 and 10-02-2026 00:32 using station metadata valid since 10-02-2025.

Counters:

- unrestricted stations offering channels HHZ,BHZ,EHZ,SHZ: 3332
- evaluated stations: 3230
- number of requests: 125353

Waveform availability plot

Color coded plot of evaluated EIDA stations. Shows results of 125353 random requests between 10-11-2025 and 10-02-2026. 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 (260210)

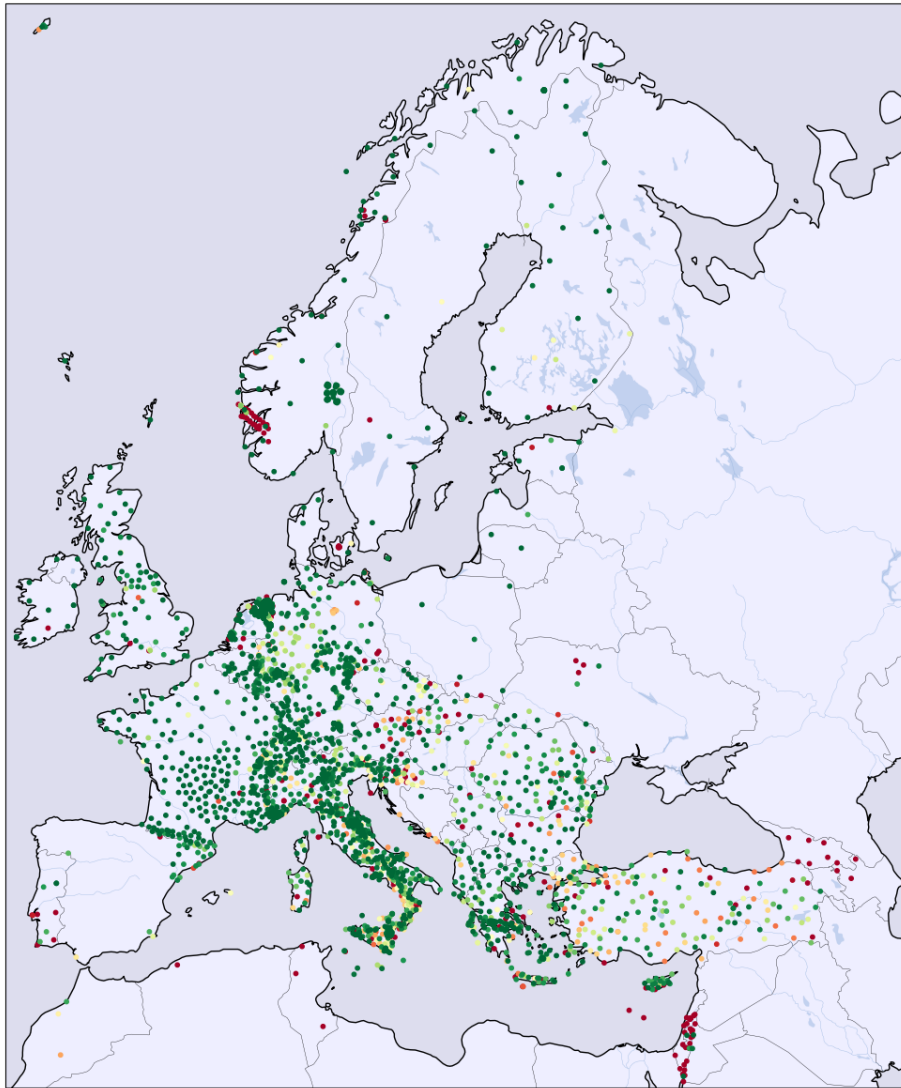


Figure 1: Availability of stations: green 100%, yellow 50%, red 0%

Request status statistics of networks:

net	OK	OK in %	NODATA	FRAGMENT	INCOMPL	METAFAIL	NOSERV	RESTFAIL
1D	70	84	10	0	0	0	3	0
1I	76	61	47	0	0	0	0	0
2D	187	76	36	0	0	0	23	0
2E	5	71	2	0	0	0	0	0
2I	221	84	40	0	0	0	0	0
3D	72	29	163	0	0	0	7	0
4P	405	56	288	5	13	0	0	6
5A	14	56	1	10	0	0	0	0
5B	36	94	2	0	0	0	0	0
5R	96	59	66	0	0	0	0	0
7B	587	53	498	2	5	0	0	0
7C	0	0	146	0	0	0	1	0
7F	127	96	3	0	0	0	1	0
8D	45	97	0	1	0	0	0	0
8N	40	54	33	1	0	0	0	0
9L	29	63	17	0	0	0	0	0
9S	52	58	35	1	0	0	1	0
AB	0	0	148	0	0	0	0	0
AC	420	92	31	0	1	0	4	0
BE	1243	95	54	0	1	0	0	0
BN	239	65	116	10	0	0	0	0
BQ	429	94	16	0	2	0	8	0
BS	708	64	383	10	3	0	0	0
BW	1874	79	498	0	0	0	0	0
C4	89	74	30	0	0	0	0	0
CA	820	83	145	16	2	0	0	0
CH	3500	91	225	87	1	0	0	0
CL	569	89	67	0	1	0	0	0
CP	0	0	93	0	0	0	3	0
CQ	418	55	317	11	1	0	0	0
CR	529	38	856	0	5	0	0	0
CZ	652	81	106	1	0	0	45	0
DK	575	39	782	0	5	0	83	0
DY	48	30	109	0	0	0	0	0
DZ	0	0	47	0	0	0	0	0
EB	34	89	4	0	0	0	0	0
EE	180	76	44	0	0	0	12	0
EI	382	87	35	0	0	0	20	0
ES	151	78	31	9	0	0	1	0
FN	367	92	3	0	0	0	25	0
FO	131	94	7	0	0	0	0	0
FR	7511	96	271	8	5	0	2	0
GB	2312	94	103	21	4	0	2	0
GE	2458	68	947	2	4	0	188	0

Request status statistics of networks (continued):

net	OK	OK in %	NODATA	FRAGMENTINCOMPL	METAFAILNOSERV	RESTFAIL
GO	0	0	222	0	0	0
GQ	175	78	36	5	0	0
GR	3478	87	486	0	1	0
GU	1071	79	266	12	0	0
GX	104	81	10	3	1	0
HA	1250	93	92	0	1	0
HC	395	68	169	3	0	0
HE	667	77	161	0	0	0
HF	0	0	46	0	0	0
HL	1970	73	661	52	1	0
HP	817	92	43	23	1	0
HS	466	79	113	1	0	0
HT	1825	80	425	16	6	0
HU	536	82	80	0	1	0
IP	0	0	92	0	0	0
IS	0	0	1532	0	0	0
IV	14718	80	3332	195	22	0
IX	455	69	183	11	2	0
IY	503	64	254	11	1	0
JS	0	0	191	0	0	0
K3	19	90	2	0	0	0
KO	4372	62	768	1647	53	0
KQ	213	72	38	42	0	0
LC	0	0	48	0	0	0
LE	1436	93	100	0	0	0
LU	413	89	27	0	0	0
LX	66	61	42	0	0	0
M1	250	64	120	0	0	0
MD	113	88	14	0	0	0
ME	29	67	14	0	0	0
MK	354	99	2	0	0	0
ML	53	68	24	0	0	0
MN	719	65	361	21	0	0
MT	352	83	68	2	1	0
NH	347	68	152	1	0	0
NI	149	65	76	3	1	0
NL	9680	87	1226	115	26	0
NO	3393	87	202	8	6	0
NR	41	14	235	0	0	0
NS	1671	43	1885	0	0	0
OE	898	78	226	0	22	0
OT	566	80	95	6	1	0
OX	465	68	205	3	2	0
PL	333	92	3	0	0	0

Request status statistics of networks (continued):

net	OK	OK in %	NODATA	FRAGMENT	INCOMPL	METAFAIL	NOSERV	RESTFAIL
PM	32	12	206	0	0	0	18	0
QE	202	50	173	0	0	0	23	0
QM	267	75	88	0	0	0	0	0
RD	516	98	5	0	1	0	0	0
RF	47	97	1	0	0	0	0	0
RN	191	45	204	8	14	0	7	0
RO	3995	81	920	5	9	0	0	0
SI	129	53	114	0	0	0	0	0
SJ	450	72	128	7	4	0	28	0
SK	218	45	232	1	0	0	25	0
SL	1078	82	215	4	17	0	0	0
SS	33	89	4	0	0	0	0	0
ST	335	99	2	0	0	0	0	0
SX	603	70	241	1	0	0	5	0
TH	1399	89	148	2	0	0	20	0
TQ	199	47	193	8	0	0	18	0
TT	0	0	114	0	0	0	6	0
TU	96	21	349	0	1	0	0	0
TV	14	38	22	0	0	0	0	0
UD	76	31	160	3	0	0	1	0
UP	403	93	23	0	3	0	0	0
UR	294	72	106	4	0	0	0	0
UT	205	92	16	0	0	0	0	0
VI	276	82	53	4	2	0	0	0
VM	45	100	0	0	0	0	0	0
WE	0	0	33	0	0	0	0	0
WM	91	42	112	0	0	0	10	0
XE	228	60	149	0	0	0	0	0
XP	1518	99	5	0	0	0	1	0
Y8	196	83	40	0	0	0	0	0
YV	102	53	90	0	0	0	0	0
ZO	307	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.

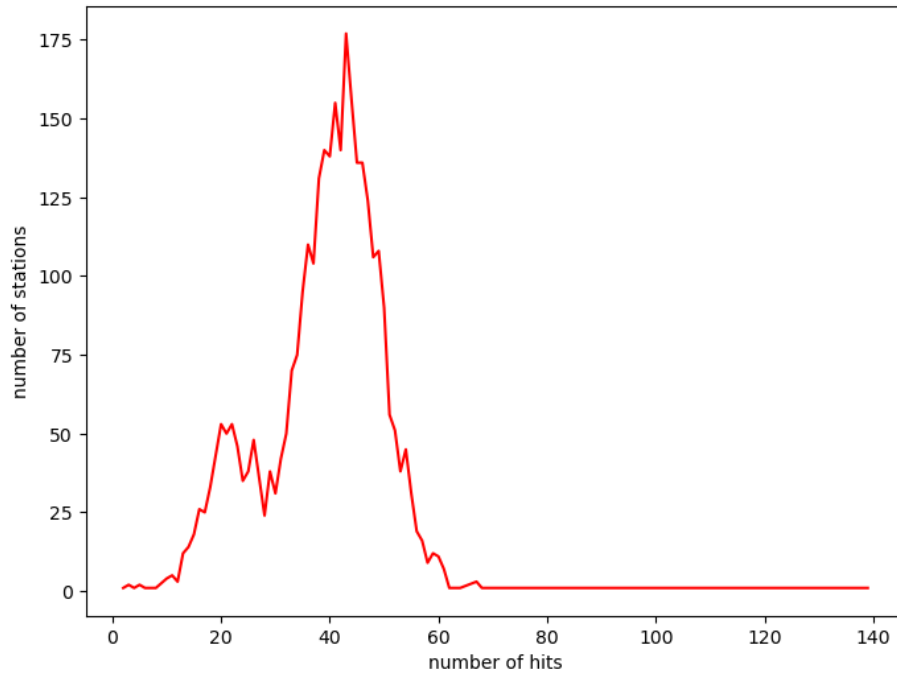


Figure 2: Request hit statistics showing the distribution of the 125353 requests on the 3230 evaluated stations

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 13-01-2026 00:32:02.

totals: direct requests 2016, routed requests 2016, federator requests 2016

Number of failed requests and failure rates of servers:

server	direct	routed	federator
AFAD	2016 (100.0%)	2016 (100.0%)	1846 (100.0%)
BGR	3 (0.1%)	19 (0.9%)	58 (3.1%)
BGS	10 (0.5%)	11 (0.5%)	4 (0.2%)
ETH	2 (0.1%)	2 (0.1%)	4 (0.2%)
GFZ	11 (0.5%)	349 (17.3%)	90 (4.9%)
ICGC	31 (1.5%)	25 (1.2%)	23 (1.2%)
INGV	15 (0.7%)	11 (0.5%)	9 (0.5%)
KOERI	76 (3.8%)	130 (6.4%)	47 (2.5%)
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%)	17 (0.9%)
ODC	0 (0.0%)	1 (0.0%)	11 (0.6%)
RESIF	6 (0.3%)	2 (0.1%)	18 (1.0%)
UIB/NORSAR	7 (0.3%)	56 (2.8%)	17 (0.9%)

failures of routing client: 0

failures of federator: 170

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 10-02-2026 00:32 MEST using pandoc 2.18.

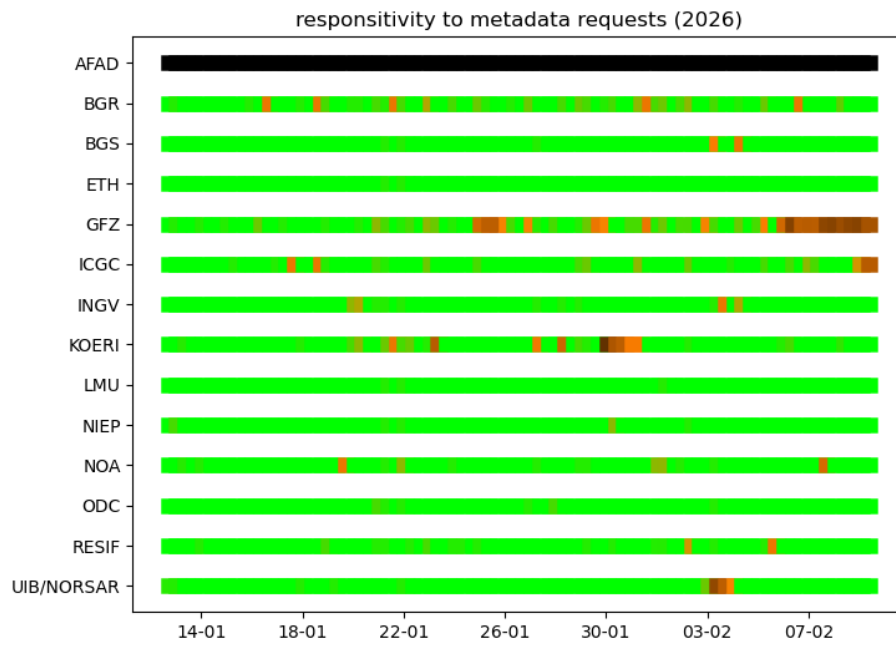


Figure 3: Responsiveness of all servers plotted with a granularity of 8h; green = 0% errors, orange = 10%, brown = 50%, black = 100%