

EIDA Availability Report

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

Counters:

- unrestricted stations offering channels HHZ,BHZ,EHZ,SHZ: 3332
- evaluated stations: 3229
- number of requests: 125142

Waveform availability plot

Color coded plot of evaluated EIDA stations. Shows results of 125142 random requests between 02-11-2025 and 02-02-2026. 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 (260202)

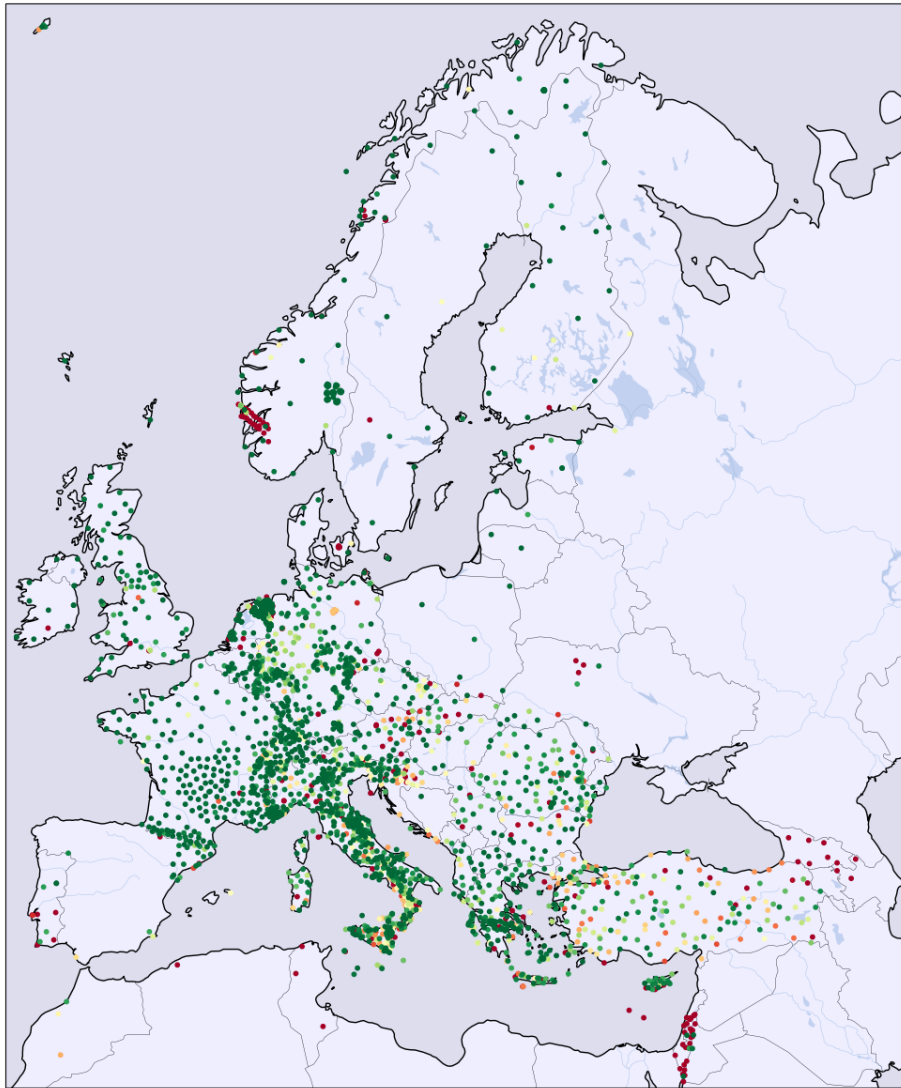


Figure 1: Availability of stations: green 100%, yellow 50%, red 0%

Request status statistics of networks:

net	OK	OK in %	NODATA	FRAGMENT	INCOMPL	METAFAIL	NOSERV	RESTFAIL
1D	73	85	11	0	0	0	1	0
1I	77	61	48	0	0	0	0	0
2D	200	82	37	0	0	0	6	0
2E	4	66	2	0	0	0	0	0
2I	226	84	43	0	0	0	0	0
3D	75	32	152	0	0	0	2	0
4P	410	56	289	4	14	0	0	3
5A	11	52	1	9	0	0	0	0
5B	32	96	1	0	0	0	0	0
5R	105	60	68	0	0	0	0	0
7B	584	53	500	2	5	0	0	0
7C	0	0	146	0	0	0	1	0
7F	124	96	3	0	0	0	1	0
8D	40	97	0	1	0	0	0	0
8N	44	53	37	1	0	0	0	0
9L	30	61	19	0	0	0	0	0
9S	52	58	36	1	0	0	0	0
AB	0	0	145	0	0	0	0	0
AC	418	91	32	0	1	0	4	0
BE	1216	94	63	0	2	0	0	0
BN	233	65	112	9	0	0	0	0
BQ	417	93	16	0	2	0	11	0
BS	707	64	372	11	5	0	0	0
BW	1876	79	498	0	0	0	0	0
C4	81	71	33	0	0	0	0	0
CA	841	87	101	18	2	0	0	0
CH	3472	91	228	90	1	0	0	0
CL	556	89	64	0	1	0	0	0
CP	0	0	94	0	0	0	0	0
CQ	421	55	326	10	2	0	0	0
CR	527	37	856	0	6	0	0	0
CZ	674	84	111	1	2	0	9	0
DK	587	41	808	0	6	0	16	0
DY	49	29	116	0	0	0	0	0
DZ	0	0	46	0	0	0	0	0
EB	38	100	0	0	0	0	0	0
EE	182	79	45	0	0	0	3	0
EI	385	90	34	0	0	0	7	0
ES	161	81	27	9	0	0	0	0
FN	376	97	3	0	0	0	7	0
FO	124	93	9	0	0	0	0	0
FR	7540	96	271	8	6	0	2	0
GB	2327	94	104	22	3	0	0	0
GE	2572	71	981	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	174	80	32	5	0	0	6	0
GR	3446	87	480	0	2	0	25	0
GU	1051	79	252	13	0	0	1	0
GX	109	85	12	3	1	0	2	0
HA	1213	92	97	0	1	0	0	0
HC	380	66	178	3	0	0	10	0
HE	689	79	169	0	0	0	10	0
HF	0	0	51	0	0	0	0	0
HL	1970	73	657	54	1	0	0	0
HP	805	92	41	21	1	0	0	0
HS	469	80	108	1	0	0	5	0
HT	1848	80	424	14	7	0	3	3
HU	563	86	81	0	1	0	8	0
IP	0	0	88	0	0	0	0	0
IS	0	0	1618	0	0	0	17	0
IV	14639	79	3394	205	21	0	5	41
IX	440	69	180	13	2	0	0	0
IY	481	63	253	10	1	0	7	0
JS	0	0	201	0	0	0	1	0
K3	15	78	4	0	0	0	0	0
KO	4376	62	789	1654	54	0	168	0
KQ	215	71	37	47	0	0	1	0
LC	0	0	49	0	0	0	0	0
LE	1425	92	100	0	0	0	13	0
LU	437	93	24	0	0	0	5	0
LX	73	65	38	0	1	0	0	0
M1	258	65	129	0	0	0	6	0
MD	118	88	16	0	0	0	0	0
ME	30	65	16	0	0	0	0	0
MK	354	99	1	0	0	0	0	0
ML	55	72	21	0	0	0	0	0
MN	725	65	356	21	0	0	1	0
MT	356	82	72	2	0	0	0	0
NH	345	67	161	1	0	0	5	0
NI	153	67	71	3	1	0	0	0
NL	9662	87	1244	117	26	0	2	0
NO	3383	87	200	9	7	0	252	0
NR	37	14	221	0	0	0	0	0
NS	1644	43	1912	1	0	0	265	0
OE	882	78	217	0	19	0	0	0
OT	556	81	86	5	1	0	0	38
OX	476	68	212	3	2	0	2	0
PL	349	97	2	0	0	0	6	0

Request status statistics of networks (continued):

net	OK	OK in %	NODATA	FRAGMENT	INCOMPL	METAFAIL	NOSERV	RESTFAIL
PM	30	12	212	0	0	0	2	0
QE	223	53	170	0	0	0	22	0
QM	262	74	91	0	0	0	0	0
RD	517	98	5	0	1	0	0	0
RF	44	97	1	0	0	0	0	0
RN	196	44	209	7	16	0	8	0
RO	4067	81	904	7	11	0	1	0
SI	126	51	118	0	0	0	0	0
SJ	467	75	136	7	4	0	7	0
SK	235	49	233	1	0	0	7	0
SL	1085	81	220	5	15	0	0	0
SS	31	88	4	0	0	0	0	0
ST	353	99	1	0	0	0	0	0
SX	597	70	236	1	0	0	7	0
TH	1394	89	141	3	1	0	20	0
TQ	215	51	193	8	1	0	4	0
TT	0	0	126	0	0	0	1	0
TU	101	21	364	0	1	0	0	0
TV	14	38	22	0	0	0	0	0
UD	78	32	161	2	0	0	0	0
UP	412	93	24	0	4	0	0	0
UR	285	72	102	5	0	0	0	0
UT	203	93	15	0	0	0	0	0
VI	262	80	57	4	2	0	0	0
VM	47	100	0	0	0	0	0	0
WE	0	0	35	0	0	0	0	0
WM	94	44	116	0	0	0	3	0
XE	221	58	155	0	0	0	0	0
XP	1503	99	5	0	0	0	0	0
Y8	184	80	44	0	0	0	0	0
YV	101	55	80	0	0	0	0	0
ZO	303	91	29	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.

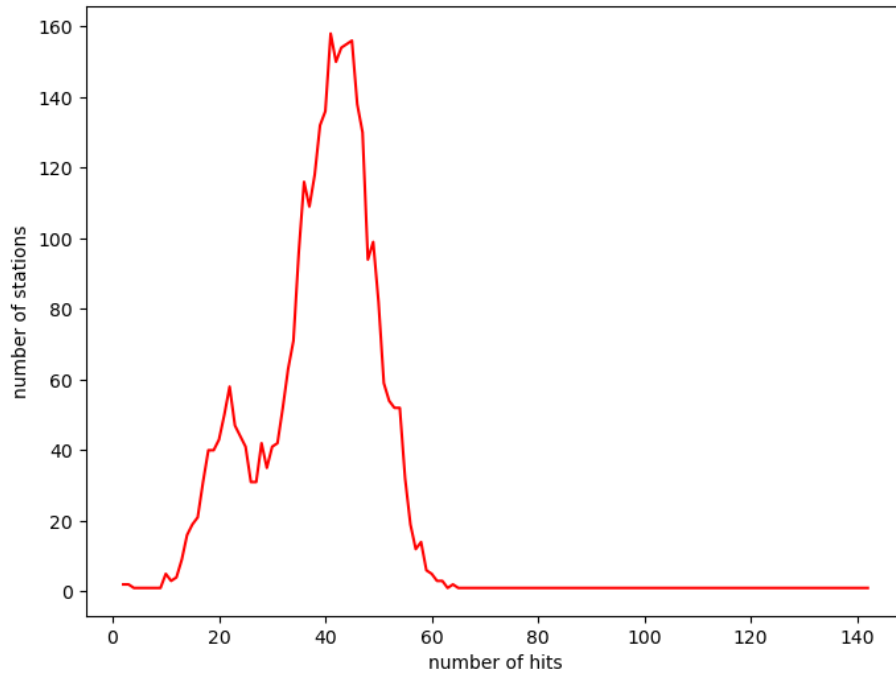


Figure 2: Request hit statistics showing the distribution of the 125142 requests on the 3229 evaluated stations

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 05-01-2026 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%)	2006 (100.0%)
BGR	4 (0.2%)	16 (0.8%)	58 (2.9%)
BGS	0 (0.0%)	1 (0.0%)	5 (0.2%)
ETH	1 (0.0%)	2 (0.1%)	4 (0.2%)
GFZ	1 (0.0%)	84 (4.2%)	81 (4.0%)
ICGC	11 (0.5%)	7 (0.3%)	28 (1.4%)
INGV	10 (0.5%)	6 (0.3%)	9 (0.4%)
KOERI	81 (4.0%)	130 (6.5%)	44 (2.2%)
LMU	0 (0.0%)	1 (0.0%)	5 (0.2%)
NIEP	2 (0.1%)	4 (0.2%)	9 (0.4%)
NOA	12 (0.6%)	14 (0.7%)	16 (0.8%)
ODC	0 (0.0%)	1 (0.0%)	14 (0.7%)
RESIF	6 (0.3%)	2 (0.1%)	14 (0.7%)
UIB/NORSAR	2 (0.1%)	0 (0.0%)	10 (0.5%)

failures of routing client: 0

failures of federator: 9

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

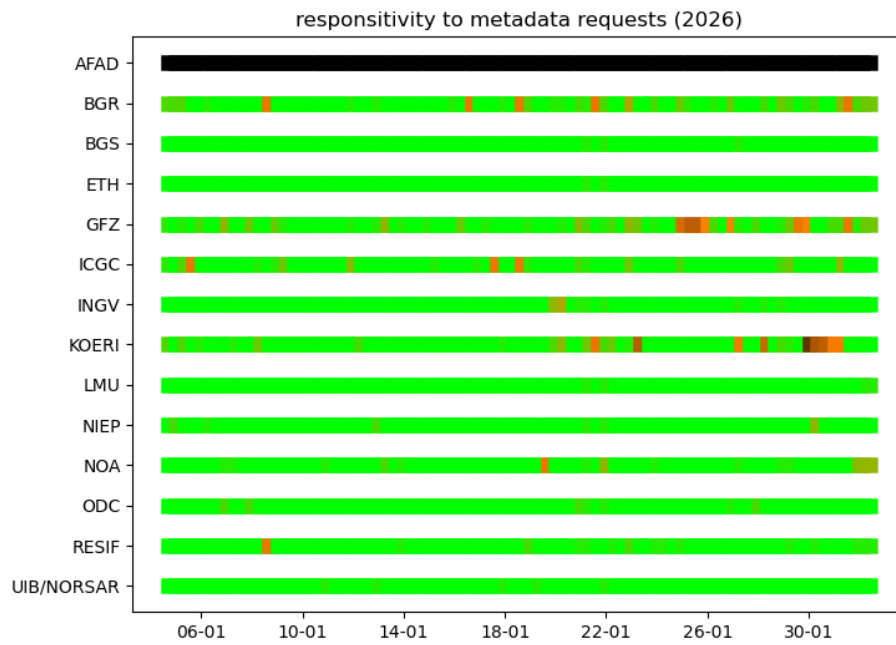


Figure 3: Responsiveness of all servers plotted with a granularity of 8h; green = 0% errors, orange = 10%, brown = 50%, black = 100%