

EIDA Availability Report

Created at 12-02-2026 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 12-11-2025 and 12-02-2026 00:32 using station metadata valid since 12-02-2025.

Counters:

- unrestricted stations offering channels HHZ,BHZ,EHZ,SHZ: 3332
- evaluated stations: 3231
- number of requests: 125336

Waveform availability plot

Color coded plot of evaluated EIDA stations. Shows results of 125336 random requests between 12-11-2025 and 12-02-2026. 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 (260212)

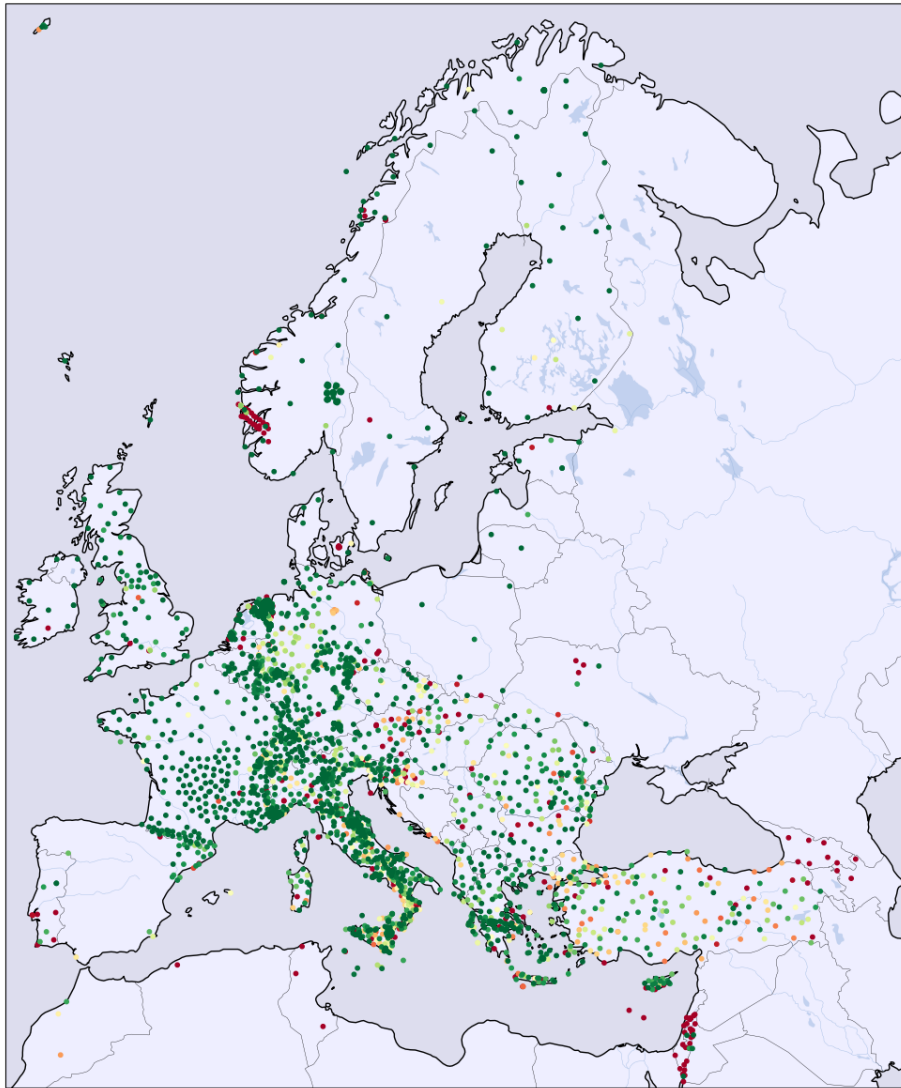


Figure 1: Availability of stations: green 100%, yellow 50%, red 0%

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	76	61	47	0	0	0	0	0
2D	184	76	34	0	0	0	23	0
2E	7	70	3	0	0	0	0	0
2I	216	83	43	0	0	0	0	0
3D	68	28	166	0	0	0	7	0
4P	404	56	283	5	13	0	0	7
5A	15	55	1	11	0	0	0	0
5B	36	94	2	0	0	0	0	0
5R	91	58	65	0	0	0	0	0
7B	582	53	502	2	5	0	0	0
7C	0	0	144	0	0	0	1	0
7F	125	96	3	0	0	0	1	0
8D	47	97	0	1	0	0	0	0
8N	39	53	33	1	0	0	0	0
9L	29	61	18	0	0	0	0	0
9S	53	58	35	1	0	0	1	0
AB	0	0	149	0	0	0	0	0
AC	419	92	31	0	1	0	4	0
BE	1244	95	56	0	1	0	0	0
BN	238	65	115	10	0	0	0	0
BQ	426	94	16	0	2	0	8	0
BS	707	63	385	13	4	0	0	0
BW	1874	79	496	0	0	0	0	0
C4	87	71	34	0	0	0	0	0
CA	810	82	143	15	2	0	10	0
CH	3498	91	221	88	1	0	0	0
CL	572	89	67	0	1	0	0	0
CP	0	0	96	0	0	0	3	0
CQ	419	55	319	11	1	0	0	0
CR	527	37	857	0	5	0	0	0
CZ	646	80	108	1	0	0	45	0
DK	582	40	780	0	5	0	83	0
DY	45	30	103	0	0	0	0	0
DZ	0	0	47	0	0	0	0	0
EB	32	88	4	0	0	0	0	0
EE	185	76	44	0	0	0	12	0
EI	391	87	35	0	0	0	20	0
ES	155	78	33	9	0	0	1	0
FN	368	92	3	0	0	0	25	0
FO	135	95	7	0	0	0	0	0
FR	7484	96	279	9	5	0	2	0
GB	2316	94	103	20	4	0	2	0
GE	2448	68	942	2	4	0	187	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	173	77	38	5	0	0	6	0
GR	3486	87	487	0	1	0	2	0
GU	1071	79	264	12	0	0	1	0
GX	106	81	10	3	1	0	10	0
HA	1245	92	93	0	1	0	0	0
HC	389	68	170	3	0	0	10	0
HE	666	76	164	0	0	0	35	0
HF	0	0	45	0	0	0	0	0
HL	1980	73	660	54	1	0	0	0
HP	800	92	42	23	1	0	0	0
HS	466	79	113	1	0	0	5	0
HT	1834	80	419	17	6	0	3	3
HU	541	82	81	0	1	0	35	0
IP	0	0	93	0	0	0	0	0
IS	0	0	1537	0	0	0	83	0
IV	14747	80	3342	195	23	0	5	41
IX	463	70	179	12	2	0	0	0
IY	504	64	255	12	2	0	7	0
JS	0	0	195	0	0	0	7	0
K3	19	86	3	0	0	0	0	0
KO	4355	62	774	1647	59	0	167	0
KQ	216	73	37	42	0	0	0	0
LC	0	0	48	0	0	0	0	0
LE	1415	93	102	0	0	0	2	0
LU	410	89	30	0	0	0	19	0
LX	67	62	41	0	0	0	0	0
M1	246	63	123	0	0	0	20	0
MD	111	88	15	0	0	0	0	0
ME	30	68	14	0	0	0	0	0
MK	353	99	2	0	0	0	0	0
ML	54	68	25	0	0	0	0	0
MN	720	65	359	21	0	0	0	0
MT	353	83	69	2	1	0	0	0
NH	353	68	156	1	0	0	5	0
NI	150	64	77	3	1	0	0	0
NL	9636	87	1228	116	26	0	3	0
NO	3391	87	199	9	6	0	281	0
NR	42	15	234	0	0	0	0	0
NS	1671	43	1876	0	0	0	298	0
OE	900	78	230	0	23	0	0	0
OT	573	80	95	6	1	0	0	37
OX	456	68	202	3	2	0	2	0
PL	333	92	3	0	0	0	23	0

Request status statistics of networks (continued):

net	OK	OK in %	NODATA	FRAGMENT	INCOMPL	METAFAIL	NOSERV	RESTFAIL
PM	32	12	207	0	0	0	18	0
QE	200	50	176	0	0	0	23	0
QM	267	75	88	0	0	0	0	0
RD	519	98	5	0	1	0	0	0
RF	48	97	1	0	0	0	0	0
RN	194	46	201	7	14	0	4	0
RO	3992	81	923	4	9	0	0	0
SI	133	53	114	0	0	0	0	0
SJ	446	72	128	7	4	0	28	0
SK	220	45	237	1	0	0	25	0
SL	1063	81	219	5	18	0	0	0
SS	32	88	4	0	0	0	0	0
ST	338	99	2	0	0	0	0	0
SX	607	71	240	1	0	0	5	0
TH	1405	89	150	2	0	0	20	0
TQ	202	47	198	8	0	0	18	0
TT	0	0	114	0	0	0	6	0
TU	100	22	352	0	1	0	0	0
TV	13	37	22	0	0	0	0	0
UD	77	32	155	3	0	0	1	0
UP	409	94	22	0	3	0	0	0
UR	294	73	104	4	0	0	0	0
UT	205	92	16	0	0	0	0	0
VI	278	82	51	4	2	0	0	0
VM	44	100	0	0	0	0	0	0
WE	0	0	32	0	0	0	0	0
WM	93	42	115	0	0	0	10	0
XE	227	60	150	0	0	0	0	0
XP	1508	99	5	0	0	0	1	0
Y8	196	83	40	0	0	0	0	0
YV	100	53	88	0	0	0	0	0
ZO	303	90	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.

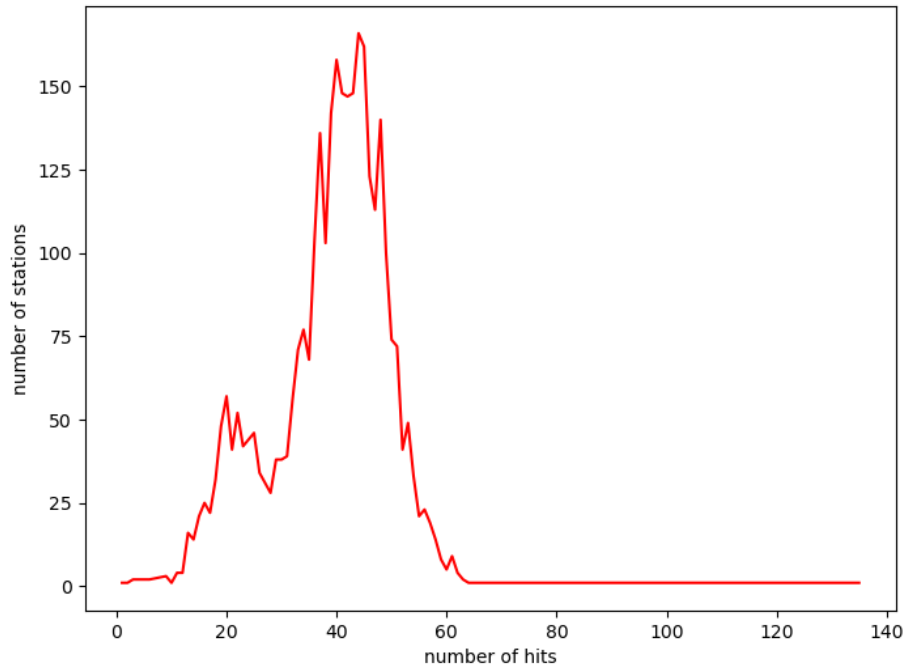


Figure 2: Request hit statistics showing the distribution of the 125336 requests on the 3231 evaluated stations

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 15-01-2026 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%)	1716 (100.0%)
BGR	3 (0.1%)	19 (0.9%)	58 (3.4%)
BGS	10 (0.5%)	11 (0.5%)	4 (0.2%)
ETH	4 (0.2%)	4 (0.2%)	4 (0.2%)
GFZ	11 (0.5%)	349 (17.3%)	86 (5.0%)
ICGC	35 (1.7%)	98 (4.9%)	23 (1.3%)
INGV	16 (0.8%)	12 (0.6%)	10 (0.6%)
KOERI	79 (3.9%)	135 (6.7%)	50 (2.9%)
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 (1.0%)
UIB/NORSAR	18 (0.9%)	68 (3.4%)	16 (0.9%)

failures of routing client: 0

failures of federator: 299

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 12-02-2026 00:32 MEST using pandoc 2.18.

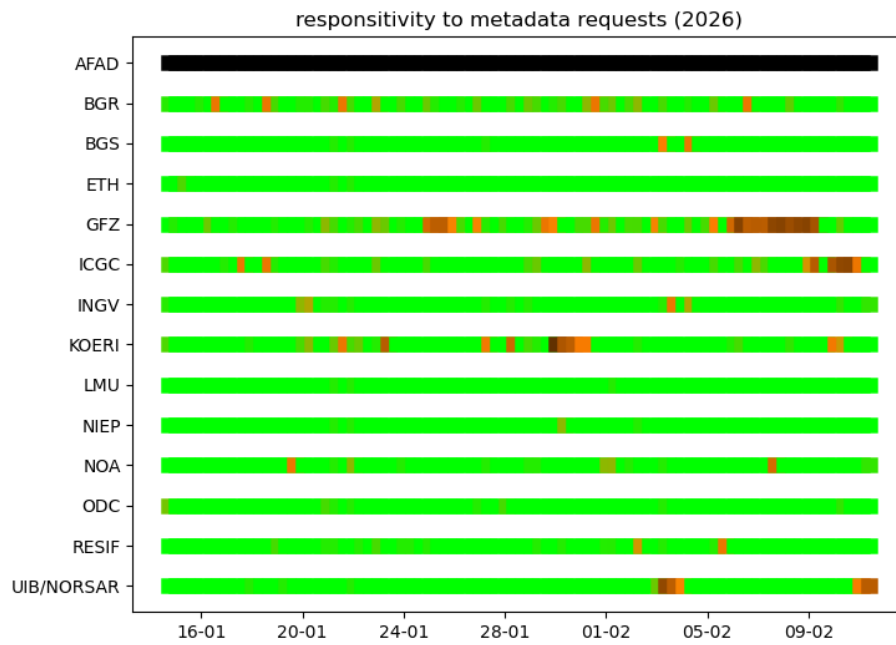


Figure 3: Responsiveness of all servers plotted with a granularity of 8h; green = 0% errors, orange = 10%, brown = 50%, black = 100%