

EIDA Availability Report

Created at 07-02-2026 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 07-11-2025 and 07-02-2026 00:32 using station metadata valid since 07-02-2025.

Counters:

- unrestricted stations offering channels HHZ,BHZ,EHZ,SHZ: 3332
- evaluated stations: 3230
- number of requests: 125313

Waveform availability plot

Color coded plot of evaluated EIDA stations. Shows results of 125313 random requests between 07-11-2025 and 07-02-2026. 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 (260207)

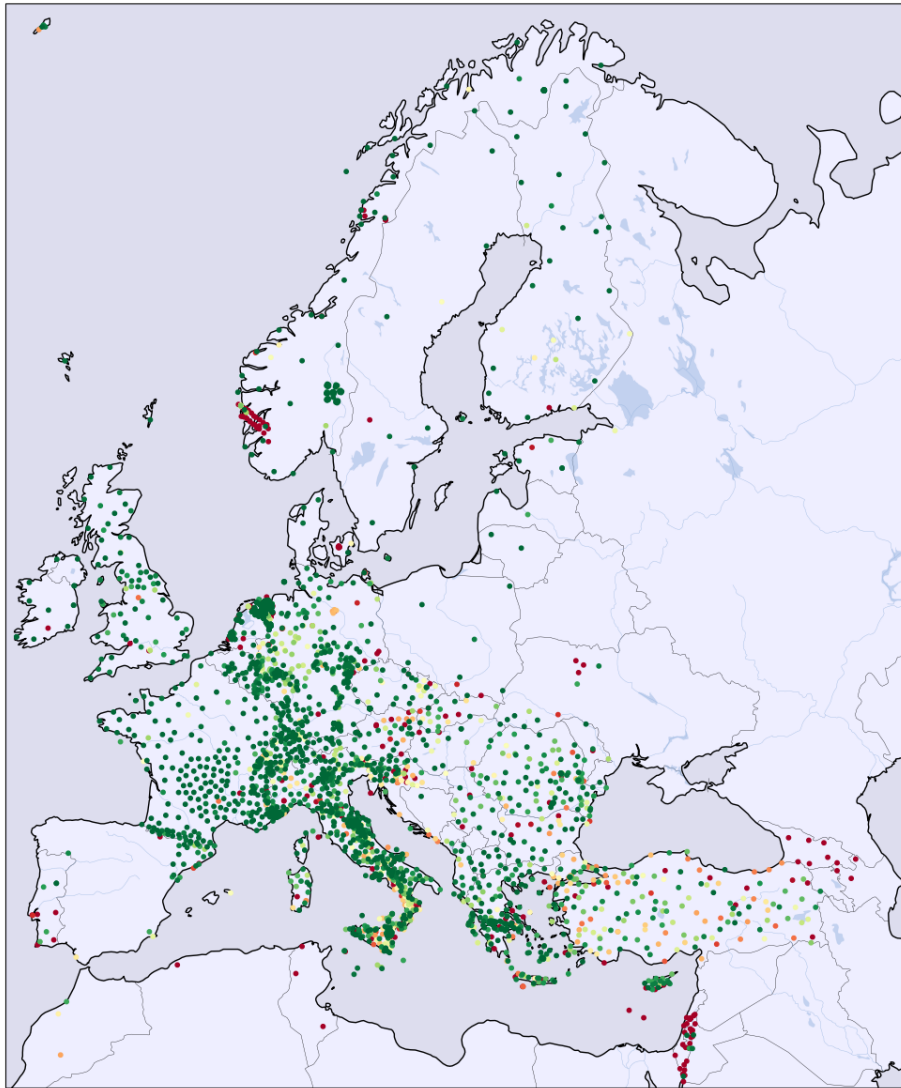


Figure 1: Availability of stations: green 100%, yellow 50%, red 0%

Request status statistics of networks:

net	OK	OK in %	NODATA	FRAGMENT	INCOMPL	METAFAIL	NOSERV	RESTFAIL
1D	71	85	11	0	0	0	1	0
1I	78	62	46	0	0	0	0	0
2D	198	80	38	0	0	0	11	0
2E	5	71	2	0	0	0	0	0
2I	222	84	40	0	0	0	0	0
3D	75	31	160	0	0	0	6	0
4P	410	56	287	4	13	0	0	6
5A	13	54	1	10	0	0	0	0
5B	33	94	2	0	0	0	0	0
5R	101	59	68	0	0	0	0	0
7B	589	53	501	2	5	0	0	0
7C	0	0	144	0	0	0	1	0
7F	128	96	3	0	0	0	1	0
8D	42	97	0	1	0	0	0	0
8N	41	53	35	1	0	0	0	0
9L	30	63	17	0	0	0	0	0
9S	51	57	36	1	0	0	0	0
AB	0	0	145	0	0	0	0	0
AC	414	92	29	0	1	0	4	0
BE	1241	95	58	0	2	0	0	0
BN	231	64	116	10	0	0	0	0
BQ	423	94	16	0	2	0	8	0
BS	715	64	377	11	5	0	0	0
BW	1877	79	496	0	0	0	0	0
C4	85	73	31	0	0	0	0	0
CA	845	86	111	17	2	0	0	0
CH	3476	91	225	89	1	0	0	0
CL	564	89	67	0	1	0	0	0
CP	0	0	94	0	0	0	1	0
CQ	414	55	318	10	2	0	0	0
CR	526	37	858	0	5	0	0	0
CZ	678	84	107	1	0	0	19	0
DK	589	41	797	0	6	0	39	0
DY	50	31	109	0	0	0	0	0
DZ	0	0	43	0	0	0	0	0
EB	36	97	1	0	0	0	0	0
EE	184	77	48	0	0	0	4	0
EI	389	89	35	0	0	0	11	0
ES	158	81	26	9	0	0	0	0
FN	384	96	3	0	0	0	10	0
FO	131	94	8	0	0	0	0	0
FR	7534	96	273	8	6	0	2	0
GB	2307	94	101	21	4	0	2	0
GE	2546	70	980	2	4	0	68	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	177	80	32	5	0	0	6	0
GR	3479	87	481	0	2	0	3	0
GU	1064	79	262	13	0	0	1	0
GX	112	84	11	3	1	0	5	0
HA	1226	92	93	0	1	0	0	0
HC	385	66	180	3	0	0	10	0
HE	680	78	169	0	0	0	19	0
HF	0	0	47	0	0	0	0	0
HL	1993	73	674	54	1	0	0	0
HP	807	92	41	24	1	0	0	0
HS	468	79	112	1	0	0	5	0
HT	1845	80	420	16	7	0	3	3
HU	548	84	82	0	1	0	14	0
IP	0	0	88	0	0	0	0	0
IS	0	0	1574	0	0	0	36	0
IV	14693	80	3368	197	21	0	3	41
IX	440	69	182	12	2	0	0	0
IY	497	64	258	10	1	0	7	0
JS	0	0	195	0	0	0	3	0
K3	20	86	3	0	0	0	0	0
KO	4363	62	766	1650	52	0	167	0
KQ	212	72	37	44	0	0	0	0
LC	0	0	47	0	0	0	0	0
LE	1439	93	101	0	0	0	2	0
LU	427	92	27	0	0	0	8	0
LX	70	62	41	0	1	0	0	0
M1	257	66	123	0	0	0	9	0
MD	118	88	16	0	0	0	0	0
ME	30	66	15	0	0	0	0	0
MK	354	99	2	0	0	0	0	0
ML	57	72	22	0	0	0	0	0
MN	715	64	366	19	0	0	1	0
MT	346	82	69	2	0	0	0	0
NH	349	68	156	1	0	0	5	0
NI	149	65	73	3	1	0	0	0
NL	9697	87	1226	118	26	0	2	0
NO	3380	87	202	8	7	0	281	0
NR	40	14	227	0	0	0	0	0
NS	1646	42	1892	0	0	0	298	0
OE	889	78	223	0	20	0	0	0
OT	560	80	91	6	1	0	0	39
OX	468	68	210	3	2	0	2	0
PL	339	96	3	0	0	0	9	0

Request status statistics of networks (continued):

net	OK	OK in %	NODATA	FRAGMENT	INCOMPL	METAFAIL	NOSERV	RESTFAIL
PM	35	14	211	0	0	0	4	0
QE	210	51	172	0	0	0	23	0
QM	268	75	89	0	0	0	0	0
RD	516	98	5	0	1	0	0	0
RF	45	97	1	0	0	0	0	0
RN	193	44	209	7	15	0	7	0
RO	4029	81	916	5	10	0	0	0
SI	125	51	117	0	0	0	0	0
SJ	458	74	137	7	4	0	8	0
SK	225	47	237	1	0	0	10	0
SL	1077	81	220	4	17	0	0	0
SS	32	88	4	0	0	0	0	0
ST	343	99	1	0	0	0	0	0
SX	598	70	239	1	0	0	5	0
TH	1400	89	145	3	0	0	20	0
TQ	206	49	197	8	0	0	8	0
TT	0	0	121	0	0	0	4	0
TU	97	21	353	0	1	0	0	0
TV	15	40	22	0	0	0	0	0
UD	77	32	159	3	0	0	0	0
UP	410	94	22	0	3	0	0	0
UR	290	72	103	5	0	0	0	0
UT	202	93	15	0	0	0	0	0
VI	274	82	53	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	5	0
XE	229	60	151	0	0	0	0	0
XP	1527	99	4	0	0	0	0	0
Y8	191	82	41	0	0	0	0	0
YV	102	53	87	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.

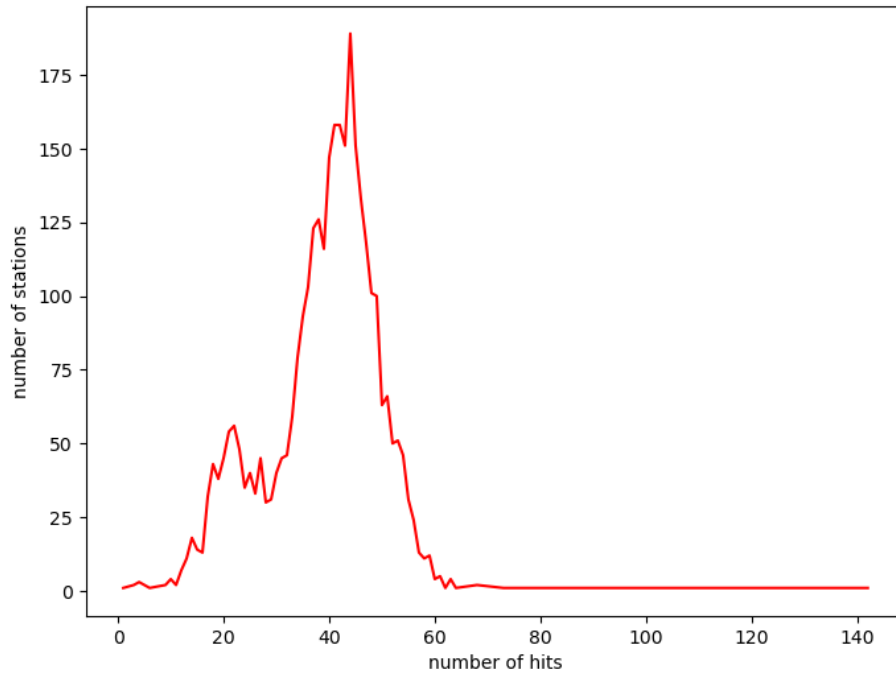


Figure 2: Request hit statistics showing the distribution of the 125313 requests on the 3230 evaluated stations

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 10-01-2026 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%)	2005 (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	8 (0.4%)	159 (7.9%)	91 (4.5%)
ICGC	12 (0.6%)	10 (0.5%)	25 (1.2%)
INGV	15 (0.7%)	11 (0.5%)	9 (0.4%)
KOERI	76 (3.8%)	128 (6.4%)	47 (2.3%)
LMU	0 (0.0%)	1 (0.0%)	5 (0.2%)
NIEP	2 (0.1%)	2 (0.1%)	9 (0.4%)
NOA	11 (0.5%)	14 (0.7%)	18 (0.9%)
ODC	0 (0.0%)	1 (0.0%)	11 (0.5%)
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: 10

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 07-02-2026 00:32 MEST using pandoc 2.18.

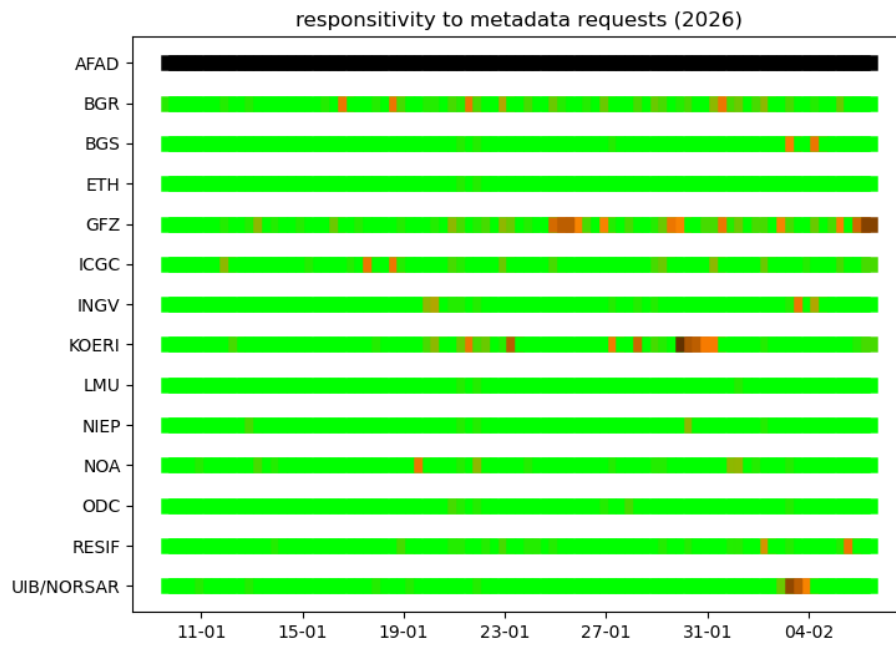


Figure 3: Responsiveness of all servers plotted with a granularity of 8h; green = 0% errors, orange = 10%, brown = 50%, black = 100%