

EIDA Availability Report

Created at 28-01-2026 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 28-10-2025 and 28-01-2026 00:32 using station metadata valid since 28-01-2025.

Counters:

- unrestricted stations offering channels HHZ,BHZ,EHZ,SHZ: 3332
- evaluated stations: 3229
- number of requests: 125101

Waveform availability plot

Color coded plot of evaluated EIDA stations. Shows results of 125101 random requests between 28-10-2025 and 28-01-2026. 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 (260128)

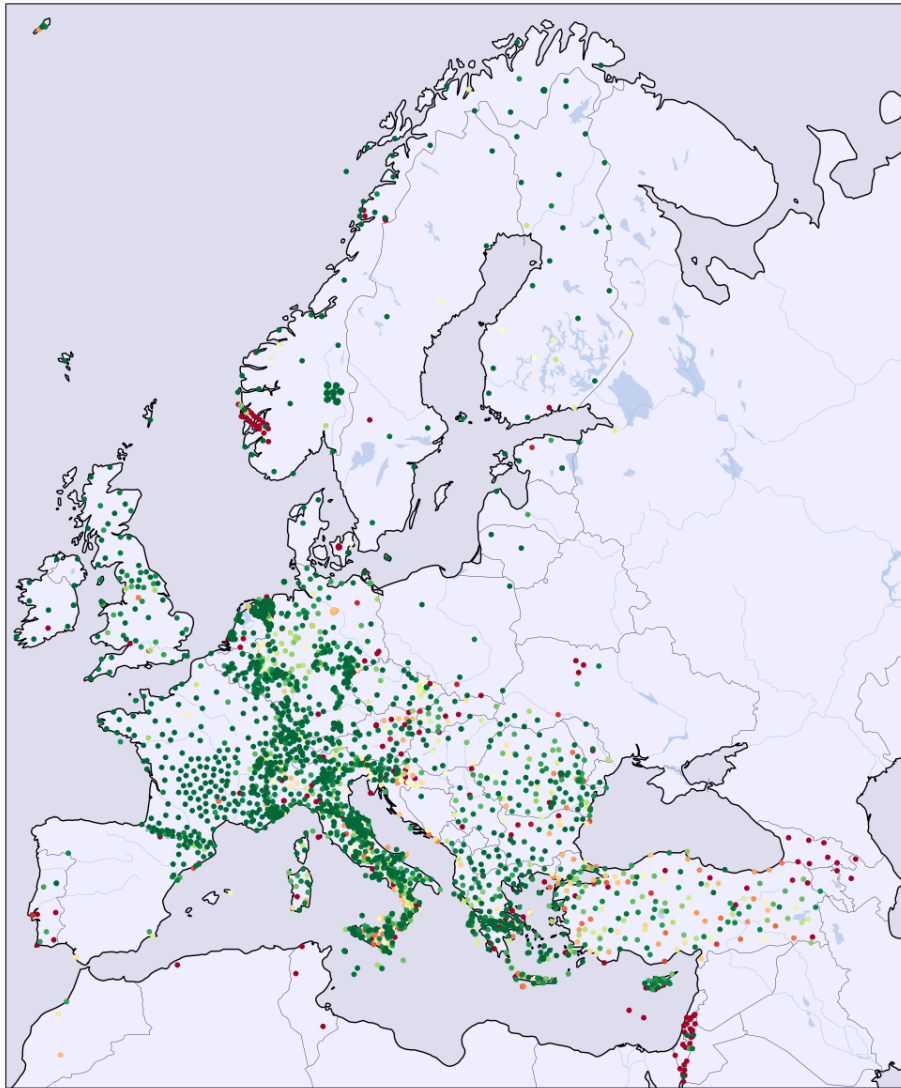


Figure 1: Availability of stations: green 100%, yellow 50%, red 0%

Request status statistics of networks:

net	OK	OK in %	NODATA	FRAGMENT	INCOMPL	METAFAIL	NOSERV	RESTFAIL
1D	74	87	10	0	0	0	1	0
1I	79	64	44	0	0	0	0	0
2D	196	82	37	0	0	0	6	0
2E	4	100	0	0	0	0	0	0
2I	219	84	41	0	0	0	0	0
3D	75	32	155	0	0	0	2	0
4P	412	56	290	4	17	0	0	0
5A	8	50	0	8	0	0	0	0
5B	31	96	1	0	0	0	0	0
5R	105	60	68	0	0	0	0	0
7B	585	53	503	2	4	0	0	0
7C	0	0	141	0	0	0	1	0
7F	122	96	4	0	0	0	1	0
8D	39	97	0	1	0	0	0	0
8N	47	54	38	1	0	0	0	0
9L	32	62	19	0	0	0	0	0
9S	53	57	39	0	0	0	0	0
AB	0	0	136	0	0	0	0	0
AC	419	91	32	0	1	0	4	0
BE	1230	94	64	0	2	0	0	0
BN	232	65	111	9	0	0	0	0
BQ	409	93	14	0	2	0	13	0
BS	717	64	373	10	4	0	0	0
BW	1890	79	495	0	0	0	0	0
C4	85	70	36	0	0	0	0	0
CA	839	86	109	17	2	0	0	0
CH	3447	91	222	92	1	0	0	0
CL	574	89	67	0	1	0	0	0
CP	0	0	95	0	0	0	0	0
CQ	417	54	330	10	2	0	0	0
CR	535	38	861	0	6	0	0	0
CZ	672	84	113	1	2	0	9	0
DK	589	41	810	0	6	0	16	0
DY	53	32	110	0	0	0	0	0
DZ	0	0	44	0	0	0	0	0
EB	42	100	0	0	0	0	0	0
EE	192	80	44	0	0	0	3	0
EI	383	90	31	0	0	0	7	0
ES	156	80	29	8	0	0	0	0
FN	376	97	3	0	0	0	7	0
FO	125	91	11	0	0	0	0	0
FR	7550	96	273	8	6	0	3	0
GB	2334	94	109	20	3	0	0	0
GE	2559	71	977	2	5	0	25	0

Request status statistics of networks (continued):

net	OK	OK in %	NODATA	FRAGMENTINCOMPL	METAFAILNOSERV	RESTFAIL
GO	0	0	229	0	0	0
GQ	168	78	32	5	0	0
GR	3423	86	473	1	2	0
GU	1046	80	239	18	0	0
GX	105	85	12	3	1	0
HA	1204	92	98	0	1	0
HC	383	65	185	3	0	0
HE	676	78	174	0	0	0
HF	0	0	49	0	0	0
HL	1963	73	664	51	1	0
HP	808	92	40	20	1	0
HS	489	82	100	1	0	0
HT	1842	80	418	14	7	0
HU	563	86	79	0	1	0
IP	0	0	88	0	0	0
IS	0	0	1629	0	0	0
IV	14591	79	3441	199	21	0
IX	421	68	180	13	2	0
IY	468	63	253	10	1	0
JS	0	0	201	0	0	0
K3	15	78	4	0	0	0
KO	4405	62	798	1673	57	0
KQ	219	69	43	49	0	0
LC	0	0	45	0	0	0
LE	1439	91	99	0	0	0
LU	452	95	18	0	0	0
LX	72	64	39	0	1	0
M1	262	66	128	0	0	0
MD	113	87	16	0	0	0
ME	30	63	17	0	0	0
MK	364	99	1	0	0	0
ML	55	71	22	0	0	0
MN	721	66	348	18	0	0
MT	347	82	74	2	0	0
NH	325	64	166	0	0	0
NI	148	68	64	3	1	0
NL	9677	87	1240	115	23	0
NO	3369	87	202	9	6	0
NR	32	12	226	0	0	0
NS	1656	42	1942	1	0	0
OE	891	79	214	0	18	0
OT	536	79	92	5	2	0
OX	481	68	216	3	2	0
PL	340	97	2	0	0	0

Request status statistics of networks (continued):

net	OK	OK in %	NODATA	FRAGMENT	INCOMPL	METAFAIL	NOSERV	RESTFAIL
PM	31	12	207	0	0	0	2	0
QE	230	55	159	0	0	0	22	0
QM	263	73	96	0	0	0	0	0
RD	523	98	5	0	1	0	0	0
RF	44	100	0	0	0	0	0	0
RN	200	45	207	6	16	0	8	0
RO	4062	81	896	6	10	0	1	0
SI	132	52	119	0	0	0	0	0
SJ	458	74	137	6	4	0	7	0
SK	238	49	232	0	0	0	7	0
SL	1070	81	215	5	17	0	0	0
SS	31	86	5	0	0	0	0	0
ST	353	99	1	0	0	0	0	0
SX	582	69	235	1	0	0	14	0
TH	1409	89	133	3	1	0	20	0
TQ	209	49	198	8	1	0	4	0
TT	0	0	134	0	0	0	1	0
TU	101	21	358	0	1	0	0	0
TV	16	42	22	0	0	0	0	0
UD	79	32	163	2	0	0	0	0
UP	416	93	24	0	4	0	0	0
UR	288	73	101	5	0	0	0	0
UT	206	93	15	0	0	0	0	0
VI	259	80	56	4	2	0	0	0
VM	48	100	0	0	0	0	0	0
WE	0	0	33	0	0	0	0	0
WM	95	44	114	0	0	0	3	0
XE	222	58	157	0	0	0	0	0
XP	1491	99	3	0	0	0	0	0
Y8	179	80	43	0	0	0	0	0
YV	100	54	82	0	0	0	0	0
ZO	298	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.

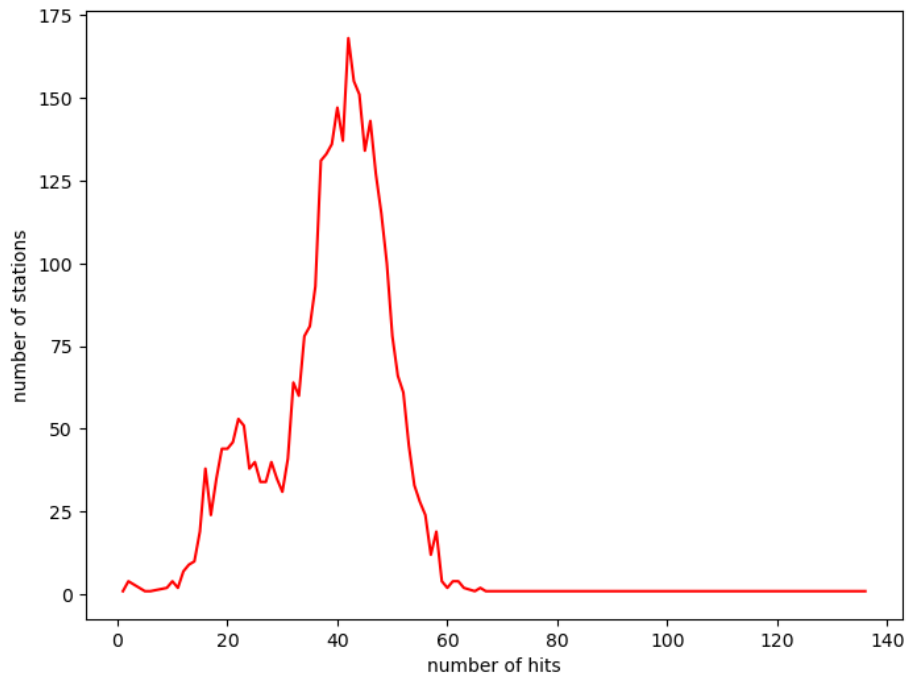


Figure 2: Request hit statistics showing the distribution of the 125101 requests on the 3229 evaluated stations

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 31-12-2025 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%)	2009 (100.0%)
BGR	4 (0.2%)	11 (0.5%)	50 (2.5%)
BGS	0 (0.0%)	1 (0.0%)	5 (0.2%)
ETH	1 (0.0%)	2 (0.1%)	4 (0.2%)
GFZ	0 (0.0%)	73 (3.6%)	73 (3.6%)
ICGC	10 (0.5%)	6 (0.3%)	25 (1.2%)
INGV	10 (0.5%)	6 (0.3%)	8 (0.4%)
KOERI	41 (2.0%)	47 (2.3%)	19 (0.9%)
LMU	0 (0.0%)	2 (0.1%)	3 (0.1%)
NIEP	3 (0.1%)	6 (0.3%)	5 (0.2%)
NOA	20 (1.0%)	22 (1.1%)	15 (0.7%)
ODC	0 (0.0%)	1 (0.0%)	14 (0.7%)
RESIF	5 (0.2%)	2 (0.1%)	14 (0.7%)
UIB/NORSAR	4 (0.2%)	2 (0.1%)	12 (0.6%)

failures of routing client: 0

failures of federator: 6

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 28-01-2026 00:32 MEST using pandoc 2.18.

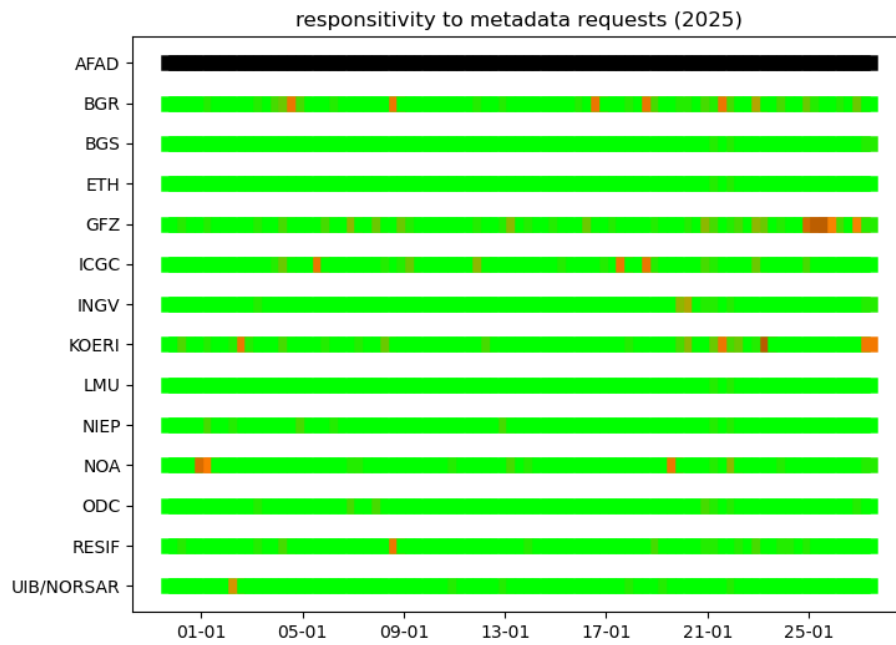


Figure 3: Responsiveness of all servers plotted with a granularity of 8h; green = 0% errors, orange = 10%, brown = 50%, black = 100%