

# EIDA Availability Report

**Created at 11-01-2026 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 11-10-2025 and 11-01-2026 00:32 using station metadata valid since 11-01-2025.

### Counters:

- unrestricted stations offering channels HHZ,BHZ,EHZ,SHZ: 3330
- evaluated stations: 3224
- number of requests: 124863

## Waveform availability plot

Color coded plot of evaluated EIDA stations. Shows results of 124863 random requests between 11-10-2025 and 11-01-2026. 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 (260111)

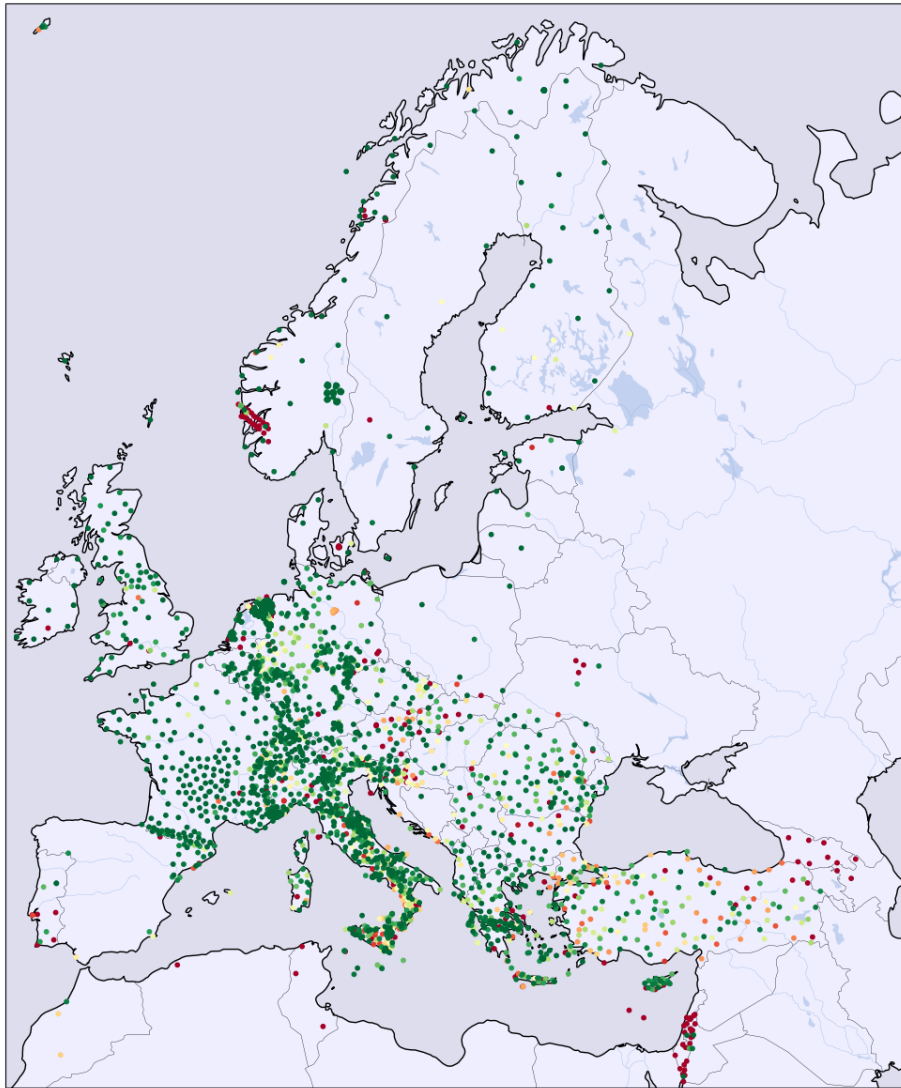


Figure 1: Availability of stations: green 100%, yellow 50%, red 0%

**Request status statistics of networks:**

net	OK	OK in %	NODATA	FRAGMENT	INCOMPL	METAFAIL	NOSERV	RESTFAIL
1D	72	83	14	0	0	0	0	0
1I	68	62	40	0	0	0	0	0
2D	194	81	45	0	0	0	0	0
2E	1	100	0	0	0	0	0	0
2I	222	86	34	0	0	0	0	0
3D	80	34	148	0	0	0	1	0
4P	428	59	272	3	22	0	0	0
5A	6	66	0	3	0	0	0	0
5B	34	100	0	0	0	0	0	0
5R	105	60	68	0	0	0	0	0
7B	570	52	509	2	2	0	0	0
7C	0	0	136	0	0	0	1	0
7F	123	96	4	0	0	0	1	0
8D	42	97	0	1	0	0	0	0
8N	63	56	47	1	0	0	0	0
9L	33	67	16	0	0	0	0	0
9S	44	50	43	0	0	0	0	0
AB	0	0	134	0	0	0	0	0
AC	430	92	32	0	0	0	4	0
BE	1257	95	64	0	2	0	0	0
BN	225	65	113	7	0	0	0	0
BQ	398	88	35	0	1	0	15	0
BS	732	65	368	13	4	0	0	0
BW	1878	78	518	0	0	0	0	0
C4	86	68	40	0	0	0	0	0
CA	844	86	109	18	2	0	0	0
CH	3434	91	231	97	1	0	0	0
CL	585	89	66	0	1	0	0	0
CP	0	0	99	0	0	0	0	0
CQ	437	55	340	11	2	0	0	0
CR	524	38	822	0	6	0	0	0
CZ	675	83	130	1	2	0	0	0
DK	591	42	805	0	8	0	1	0
DY	47	31	102	0	0	0	0	0
DZ	0	0	49	0	0	0	0	0
EB	42	100	0	0	0	0	0	0
EE	195	84	36	1	0	0	0	0
EI	403	91	36	0	0	0	0	0
ES	164	80	37	4	0	0	0	0
FN	383	99	3	0	0	0	0	0
FO	118	88	16	0	0	0	0	0
FR	7623	96	268	8	4	0	3	0
GB	2193	94	107	20	3	0	0	0
GE	2558	72	959	3	7	0	2	0

**Request status statistics of networks (continued):**

net	OK	OK in %	NODATA	FRAGMENT	INCOMPL	METAFAIL	NOSERV	RESTFAIL
GO	0	0	249	0	0	0	0	0
GQ	164	82	25	3	0	0	8	0
GR	3396	86	480	1	4	0	43	0
GU	1063	80	239	18	0	0	1	0
GX	87	84	13	2	1	0	0	0
HA	1197	92	99	0	1	0	0	0
HC	365	62	205	3	1	0	9	0
HE	680	78	184	0	0	0	0	0
HF	0	0	46	0	0	0	0	0
HL	1931	74	629	47	0	0	0	0
HP	821	93	39	19	0	0	0	0
HS	514	86	77	1	0	0	5	0
HT	1777	79	438	12	7	0	0	2
HU	549	85	92	0	1	0	0	0
IP	0	0	91	0	0	0	0	0
IS	0	0	1603	0	0	0	1	0
IV	14520	79	3529	203	28	0	3	45
IX	416	66	194	11	3	0	0	0
IY	435	60	270	8	1	0	6	0
JS	0	0	209	0	0	0	0	0
K3	21	80	5	0	0	0	0	0
KO	4421	62	772	1701	60	0	91	0
KQ	218	68	49	51	0	0	2	0
LC	0	0	40	0	0	0	0	0
LE	1407	90	110	0	0	0	33	0
LU	465	97	11	0	0	0	0	0
LX	78	66	39	0	1	0	0	0
M1	279	66	137	0	0	0	1	0
MD	114	87	17	0	0	0	0	0
ME	28	58	20	0	0	0	0	0
MK	367	99	1	0	0	0	0	0
ML	62	79	16	0	0	0	0	0
MN	749	66	361	17	1	0	1	0
MT	356	84	66	1	0	0	0	0
NH	273	55	201	2	0	0	14	0
NI	153	70	62	1	0	0	0	0
NL	9676	87	1251	109	25	0	2	0
NO	3405	88	195	10	7	0	252	0
NR	31	11	234	0	0	0	0	0
NS	1636	42	1966	1	0	0	266	0
OE	871	78	213	0	24	0	0	0
OT	544	80	86	7	2	0	0	37
OX	500	69	213	3	2	0	2	0
PL	357	99	2	0	0	0	0	0

**Request status statistics of networks (continued):**

net	OK	OK in %	NODATA	FRAGMENT	INCOMPL	METAFAIL	NOSERV	RESTFAIL
PM	31	12	210	0	0	0	0	0
QE	236	59	140	1	0	0	22	0
QM	254	72	98	0	0	0	0	0
RD	517	99	3	0	1	0	0	0
RF	39	100	0	0	0	0	0	0
RN	197	46	197	4	16	0	8	0
RO	4047	81	898	6	10	0	3	0
SI	139	54	115	0	0	0	0	0
SJ	450	75	138	6	3	0	0	0
SK	244	50	234	0	0	0	1	0
SL	1058	82	205	6	17	0	0	0
SS	31	81	7	0	0	0	0	0
ST	350	99	1	0	0	0	0	0
SX	594	70	232	1	0	0	14	0
TH	1409	90	128	3	2	0	20	0
TQ	205	51	181	8	1	0	0	0
TT	0	0	133	0	0	0	0	0
TU	104	22	363	0	1	0	0	0
TV	24	53	21	0	0	0	0	0
UD	81	31	175	3	0	0	0	0
UP	421	94	24	0	2	0	0	0
UR	257	70	103	5	0	0	0	0
UT	202	93	14	0	0	0	0	0
VI	246	80	54	3	1	0	0	0
VM	49	100	0	0	0	0	0	0
WE	0	0	37	0	0	0	0	0
WM	98	45	116	0	0	0	0	0
XE	224	58	159	0	0	0	1	0
XP	1455	99	4	0	0	0	0	0
Y8	169	80	42	0	0	0	0	0
YV	100	55	80	0	0	0	0	0
ZO	304	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.

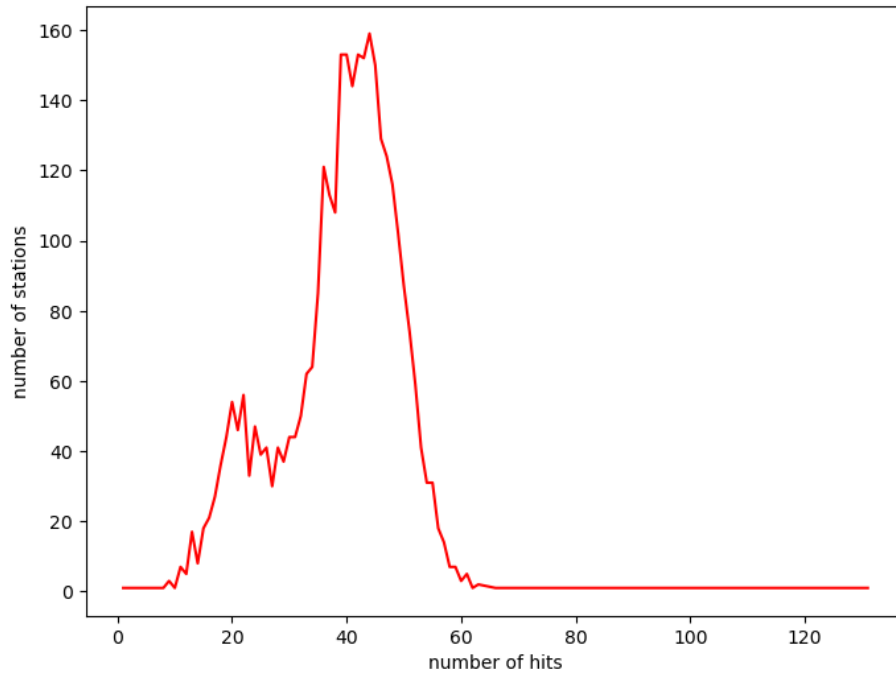


Figure 2: Request hit statistics showing the distribution of the 124863 requests on the 3224 evaluated stations

## 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 14-12-2025 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%)	1985 (100.0%)
BGR	3 ( 0.1%)	6 ( 0.3%)	38 ( 1.9%)
BGS	1 ( 0.0%)	1 ( 0.0%)	7 ( 0.4%)
ETH	0 ( 0.0%)	0 ( 0.0%)	2 ( 0.1%)
GFZ	0 ( 0.0%)	0 ( 0.0%)	208 (10.5%)
ICGC	6 ( 0.3%)	3 ( 0.1%)	26 ( 1.3%)
INGV	0 ( 0.0%)	0 ( 0.0%)	17 ( 0.9%)
KOERI	25 ( 1.2%)	87 ( 4.3%)	9 ( 0.5%)
LMU	1 ( 0.0%)	1 ( 0.0%)	5 ( 0.3%)
NIEP	9 ( 0.4%)	11 ( 0.5%)	18 ( 0.9%)
NOA	16 ( 0.8%)	13 ( 0.6%)	10 ( 0.5%)
ODC	0 ( 0.0%)	0 ( 0.0%)	67 ( 3.4%)
RESIF	3 ( 0.1%)	1 ( 0.0%)	18 ( 0.9%)
UIB/NORSAR	2 ( 0.1%)	2 ( 0.1%)	11 ( 0.6%)

failures of routing client: 0

failures of federator: 30

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](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](https://www.szgrf.bgr.de/eidaqc_report/EidaAvailability)

This report was automatically created at 11-01-2026 00:32 MEST usingpandoc 2.18.

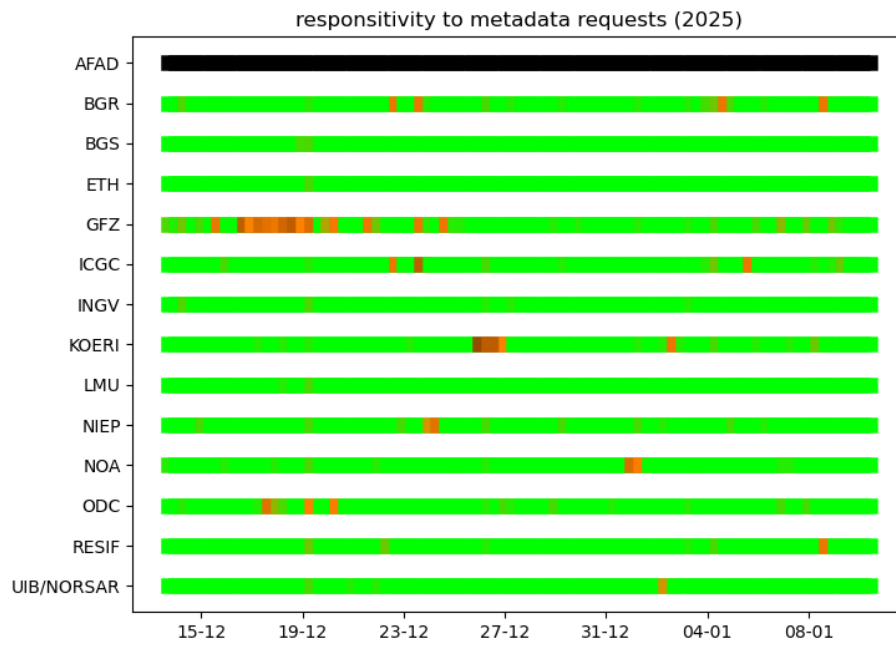


Figure 3: Responsiveness of all servers plotted with a granularity of 8h; green = 0% errors, orange = 10%, brown = 50%, black = 100%