

# EIDA Availability Report

**Created at 26-01-2026 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 26-10-2025 and 26-01-2026 00:32 using station metadata valid since 26-01-2025.

### Counters:

- unrestricted stations offering channels HHZ,BHZ,EHZ,SHZ: 3332
- evaluated stations: 3228
- number of requests: 125045

## Waveform availability plot

Color coded plot of evaluated EIDA stations. Shows results of 125045 random requests between 26-10-2025 and 26-01-2026. 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 (260126)

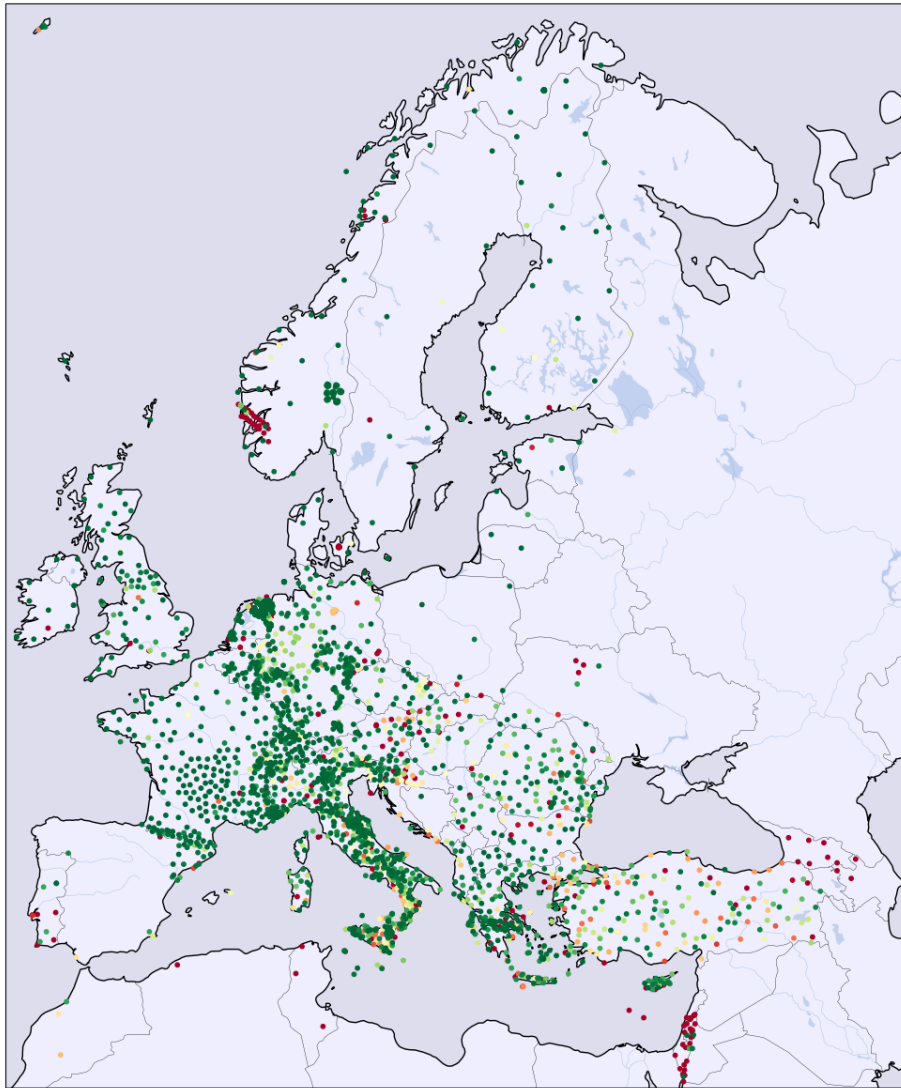


Figure 1: Availability of stations: green 100%, yellow 50%, red 0%

**Request status statistics of networks:**

net	OK	OK in %	NODATA	FRAGMENT	INCOMPL	METAFAIL	NOSERV	RESTFAIL
1D	75	86	11	0	0	0	1	0
1I	73	62	44	0	0	0	0	0
2D	192	81	37	0	0	0	6	0
2E	4	100	0	0	0	0	0	0
2I	215	83	41	0	0	0	0	0
3D	73	31	154	0	0	0	2	0
4P	414	57	291	4	17	0	0	0
5A	7	46	0	8	0	0	0	0
5B	32	96	1	0	0	0	0	0
5R	105	60	68	0	0	0	0	0
7B	578	53	505	2	4	0	0	0
7C	0	0	139	0	0	0	1	0
7F	122	96	4	0	0	0	1	0
8D	40	97	0	1	0	0	0	0
8N	47	52	42	1	0	0	0	0
9L	32	64	18	0	0	0	0	0
9S	51	56	40	0	0	0	0	0
AB	0	0	136	0	0	0	0	0
AC	421	91	34	0	1	0	4	0
BE	1236	95	62	0	2	0	0	0
BN	230	64	115	10	0	0	0	0
BQ	405	93	14	0	2	0	13	0
BS	723	64	381	10	4	0	0	0
BW	1893	78	508	0	0	0	0	0
C4	85	69	37	0	0	0	0	0
CA	847	86	109	17	2	0	0	0
CH	3427	91	220	92	1	0	0	0
CL	568	88	70	0	1	0	0	0
CP	0	0	97	0	0	0	0	0
CQ	422	55	330	10	2	0	0	0
CR	530	37	859	0	6	0	0	0
CZ	661	84	113	1	2	0	9	0
DK	585	41	805	0	6	0	14	0
DY	54	33	109	0	0	0	0	0
DZ	0	0	43	0	0	0	0	0
EB	43	100	0	0	0	0	0	0
EE	193	81	42	0	0	0	3	0
EI	384	90	33	0	0	0	6	0
ES	156	81	29	7	0	0	0	0
FN	374	97	3	0	0	0	7	0
FO	124	91	12	0	0	0	0	0
FR	7560	96	274	8	6	0	4	0
GB	2334	94	110	19	3	0	0	0
GE	2555	71	966	2	5	0	22	0

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

net	OK	OK in %	NODATA	FRAGMENT	INCOMPL	METAFAIL	NOSERV	RESTFAIL
GO	0	0	229	0	0	0	0	0
GQ	168	80	29	5	0	0	8	0
GR	3428	86	474	1	2	0	43	0
GU	1055	80	236	18	0	0	1	0
GX	100	84	12	3	1	0	2	0
HA	1195	92	96	0	1	0	0	0
HC	382	65	189	3	0	0	10	0
HE	678	78	173	0	0	0	10	0
HF	0	0	49	0	0	0	0	0
HL	1963	73	663	51	1	0	0	0
HP	801	93	40	19	1	0	0	0
HS	491	82	99	1	0	0	5	0
HT	1828	80	415	14	7	0	3	3
HU	561	86	78	0	1	0	8	0
IP	0	0	87	0	0	0	0	0
IS	0	0	1613	0	0	0	17	0
IV	14548	79	3453	198	20	0	6	45
IX	428	68	186	13	2	0	0	0
IY	465	62	258	9	1	0	7	0
JS	0	0	202	0	0	0	1	0
K3	16	76	5	0	0	0	0	0
KO	4402	62	795	1665	57	0	91	0
KQ	221	70	42	49	0	0	2	0
LC	0	0	44	0	0	0	0	0
LE	1438	91	98	0	0	0	33	0
LU	452	95	14	0	0	0	5	0
LX	72	64	39	0	1	0	0	0
M1	261	66	127	0	0	0	5	0
MD	113	87	16	0	0	0	0	0
ME	29	61	18	0	0	0	0	0
MK	369	99	1	0	0	0	0	0
ML	52	71	21	0	0	0	0	0
MN	734	66	356	17	0	0	1	0
MT	353	83	68	2	0	0	0	0
NH	324	63	170	0	0	0	13	0
NI	153	69	64	3	1	0	0	0
NL	9675	87	1227	115	25	0	2	0
NO	3367	87	204	9	6	0	252	0
NR	32	12	229	0	0	0	0	0
NS	1656	42	1948	1	0	0	265	0
OE	888	79	213	0	20	0	0	0
OT	537	79	89	5	2	0	0	41
OX	493	69	214	3	1	0	2	0
PL	344	98	2	0	0	0	5	0

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

net	OK	OK in %	NODATA	FRAGMENT	INCOMPL	METAFAIL	NOSERV	RESTFAIL
PM	34	13	211	0	0	0	1	0
QE	231	55	159	1	0	0	22	0
QM	258	72	96	0	0	0	0	0
RD	521	98	5	0	1	0	0	0
RF	45	100	0	0	0	0	0	0
RN	201	45	208	6	16	0	8	0
RO	4077	81	885	7	11	0	2	0
SI	130	51	121	0	0	0	0	0
SJ	452	74	139	6	4	0	6	0
SK	238	49	234	0	0	0	7	0
SL	1069	81	217	6	19	0	0	0
SS	31	86	5	0	0	0	0	0
ST	348	99	1	0	0	0	0	0
SX	585	70	234	1	0	0	14	0
TH	1413	90	132	3	1	0	20	0
TQ	209	49	199	7	1	0	4	0
TT	0	0	140	0	0	0	1	0
TU	102	22	359	0	1	0	0	0
TV	16	40	24	0	0	0	0	0
UD	80	32	168	2	0	0	0	0
UP	425	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	58	4	2	0	0	0
VM	48	100	0	0	0	0	0	0
WE	0	0	32	0	0	0	0	0
WM	95	45	111	0	0	0	3	0
XE	219	57	160	0	0	0	1	0
XP	1480	99	3	0	0	0	0	0
Y8	180	80	44	0	0	0	0	0
YV	98	55	79	0	0	0	0	0
ZO	297	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.

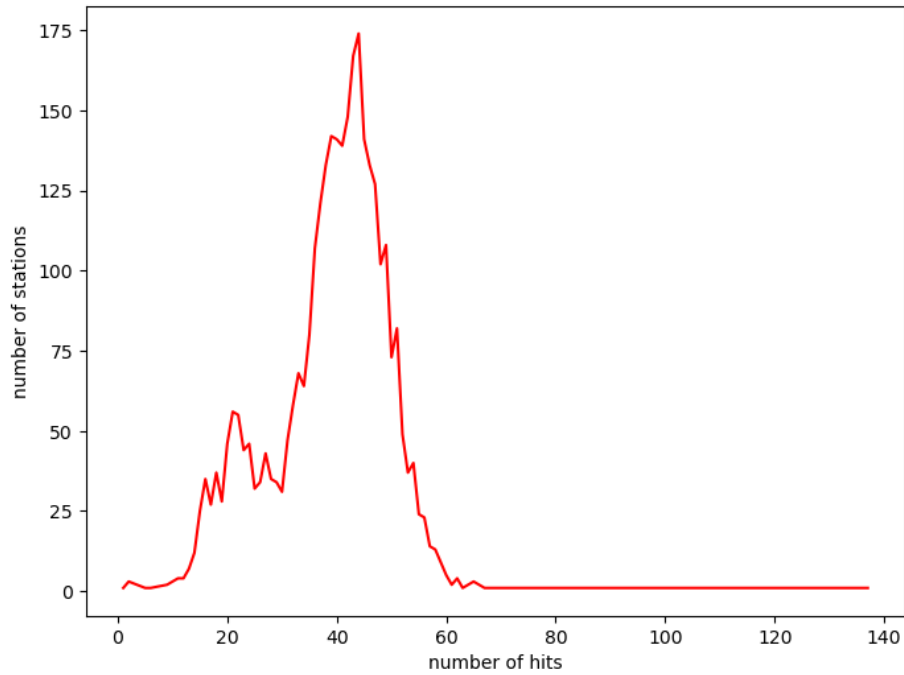


Figure 2: Request hit statistics showing the distribution of the 125045 requests on the 3228 evaluated stations

## 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 29-12-2025 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%)	2010 (100.0%)
BGR	4 ( 0.2%)	9 ( 0.4%)	48 ( 2.4%)
BGS	0 ( 0.0%)	1 ( 0.0%)	4 ( 0.2%)
ETH	1 ( 0.0%)	2 ( 0.1%)	3 ( 0.1%)
GFZ	0 ( 0.0%)	65 ( 3.2%)	63 ( 3.1%)
ICGC	9 ( 0.4%)	6 ( 0.3%)	26 ( 1.3%)
INGV	10 ( 0.5%)	6 ( 0.3%)	7 ( 0.3%)
KOERI	43 ( 2.1%)	45 ( 2.2%)	14 ( 0.7%)
LMU	0 ( 0.0%)	2 ( 0.1%)	3 ( 0.1%)
NIEP	4 ( 0.2%)	7 ( 0.3%)	4 ( 0.2%)
NOA	20 ( 1.0%)	22 ( 1.1%)	13 ( 0.6%)
ODC	0 ( 0.0%)	1 ( 0.0%)	15 ( 0.7%)
RESIF	5 ( 0.2%)	2 ( 0.1%)	14 ( 0.7%)
UIB/NORSAR	4 ( 0.2%)	2 ( 0.1%)	10 ( 0.5%)

failures of routing client: 0

failures of federator: 5

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 26-01-2026 00:32 MEST using pandoc 2.18.

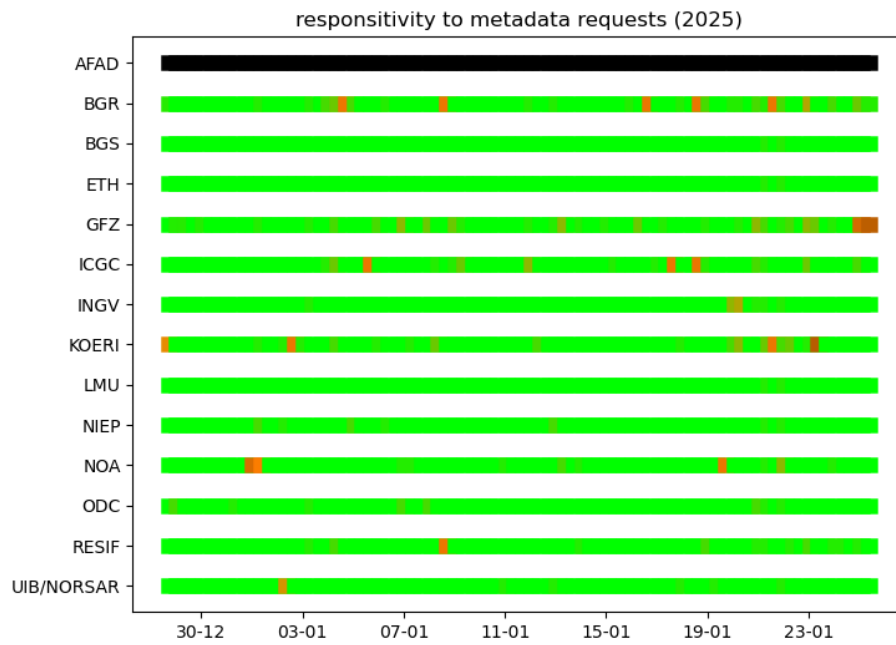


Figure 3: Responsiveness of all servers plotted with a granularity of 8h; green = 0% errors, orange = 10%, brown = 50%, black = 100%