

# EIDA Availability Report

**Created at 03-01-2026 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 03-10-2025 and 03-01-2026 00:32 using station metadata valid since 03-01-2025.

### Counters:

- unrestricted stations offering channels HHZ,BHZ,EHZ,SHZ: 3348
- evaluated stations: 3223
- number of requests: 125313

## Waveform availability plot

Color coded plot of evaluated EIDA stations. Shows results of 125313 random requests between 03-10-2025 and 03-01-2026. 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 (260103)

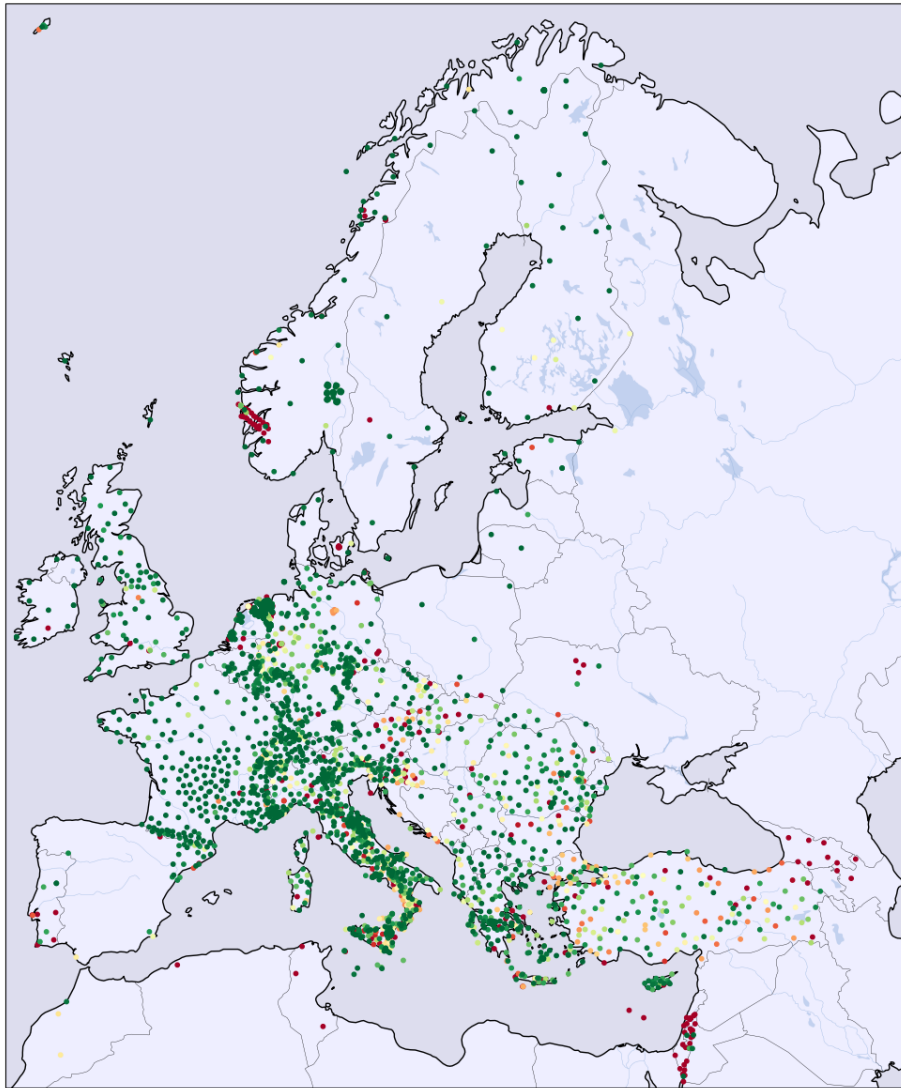


Figure 1: Availability of stations: green 100%, yellow 50%, red 0%

**Request status statistics of networks:**

net	OK	OK in %	NODATA	FRAGMENT	INCOMPL	METAFAIL	NOSERV	RESTFAIL
1D	75	82	16	0	0	0	0	0
1I	64	61	40	0	0	0	0	0
2D	198	82	43	0	0	0	0	0
2I	230	86	36	0	0	0	0	0
3D	80	35	143	0	0	0	0	0
4P	441	60	266	4	21	0	0	0
5A	1	33	0	2	0	0	0	0
5B	33	100	0	0	0	0	0	0
5R	105	60	68	0	0	0	0	0
7B	576	52	508	2	2	0	1	0
7C	0	0	132	0	0	0	1	0
7F	118	95	4	0	0	0	1	0
8D	40	97	0	1	0	0	0	0
8N	70	55	55	1	0	0	0	0
9L	32	62	19	0	0	0	0	0
9S	54	56	42	0	0	0	0	0
AB	0	0	133	0	0	0	0	0
AC	437	92	32	0	0	0	4	0
BE	1263	95	63	0	2	0	0	0
BN	217	64	112	7	0	0	2	0
BQ	402	87	40	0	1	0	15	0
BS	714	64	373	13	4	0	0	0
BW	1866	78	507	0	0	0	0	0
C4	80	65	42	0	0	0	0	0
CA	842	86	112	17	2	0	0	0
CH	3432	91	237	92	2	0	0	0
CL	579	90	60	0	0	0	0	0
CP	0	0	98	0	0	0	0	0
CQ	445	56	328	8	2	0	0	0
CR	509	39	778	0	6	0	0	0
CZ	647	83	128	1	2	0	0	0
DK	562	41	789	0	8	0	1	0
DY	50	31	107	0	0	0	0	0
DZ	0	0	47	0	0	0	0	0
EB	43	100	0	0	0	0	0	0
EE	200	84	36	1	0	0	0	0
EI	392	91	35	0	0	0	0	0
ES	161	78	40	3	0	0	0	0
FN	401	99	4	0	0	0	0	0
FO	121	84	22	0	0	0	0	0
FR	7601	96	263	7	4	0	3	0
GB	2152	93	107	21	3	0	16	0
GE	2509	72	949	3	8	0	2	0
GO	0	0	256	0	0	0	0	0

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

net	OK	OK in %	NODATA	FRAGMENT	INCOMPL	METAFAIL	NOSERV	RESTFAIL
GQ	172	85	25	3	0	0	2	0
GR	3350	86	470	1	4	0	43	0
GU	1076	81	230	17	0	0	1	0
GX	83	84	13	2	0	0	0	0
HA	1201	91	106	0	1	0	0	0
HC	357	60	219	3	1	0	9	0
HE	682	79	180	0	0	0	0	0
HF	0	0	48	0	0	0	0	0
HL	1927	74	623	46	2	0	0	0
HP	809	93	38	19	0	0	0	0
HS	526	87	70	2	0	0	0	0
HT	1795	79	436	12	5	0	0	2
HU	554	85	92	0	1	0	0	0
IP	0	0	86	0	0	0	0	0
IS	0	0	1608	0	0	0	1	0
IV	14462	79	3495	204	28	0	3	43
IX	401	65	198	11	3	0	0	0
IY	440	59	286	6	1	0	6	0
JS	0	0	210	0	0	0	0	0
K3	21	80	5	0	0	0	0	0
KO	4381	62	768	1695	55	0	91	0
KQ	230	66	56	54	0	0	5	0
LC	0	0	41	0	0	0	0	0
LE	1404	90	104	0	0	0	52	0
LU	451	95	23	0	0	0	0	0
LX	79	64	42	0	2	0	0	0
M1	286	67	137	0	0	0	1	0
MD	117	87	17	0	0	0	0	0
ME	27	57	20	0	0	0	0	0
MK	372	99	1	0	0	0	0	0
ML	66	82	14	0	0	0	0	0
MN	749	66	362	14	1	0	1	0
MT	351	83	70	1	0	0	0	0
NH	260	53	216	2	0	0	12	0
NI	153	70	63	2	0	0	0	0
NL	9688	87	1239	116	20	0	2	0
NO	3422	88	194	8	7	0	252	0
NR	29	10	241	0	0	0	0	0
NS	1620	42	1950	1	0	0	266	0
OE	865	78	216	0	23	0	0	0
OT	550	80	90	7	2	0	0	34
OX	500	70	206	3	1	0	2	0
PL	349	99	2	0	0	0	0	0
PM	36	14	206	0	0	0	0	0

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

net	OK	OK in %	NODATA	FRAGMENT	INCOMPL	METAFAIL	NOSERV	RESTFAIL
QE	229	58	139	1	0	0	22	0
QM	258	72	97	0	0	0	0	0
RD	501	99	3	0	2	0	0	0
RF	40	100	0	0	0	0	0	0
RN	211	46	211	4	16	0	7	0
RO	4085	81	898	6	10	0	3	0
SI	135	54	113	0	0	0	0	0
SJ	441	75	141	3	3	0	0	0
SK	248	50	241	0	0	0	1	0
SL	1074	83	192	5	18	0	0	0
SS	30	85	5	0	0	0	0	0
ST	344	99	1	0	0	0	0	0
SX	642	72	238	1	0	0	9	0
TH	1382	89	129	3	2	0	20	0
TQ	198	51	177	9	1	0	0	0
TT	0	0	135	0	0	0	0	0
TU	104	22	367	0	1	0	0	0
TV	24	53	21	0	0	0	0	0
UD	84	31	183	3	0	0	0	0
UP	426	94	23	0	2	0	0	0
UR	254	70	98	4	0	0	5	0
UT	201	94	12	0	0	0	0	0
VI	229	78	58	3	1	0	0	0
VM	50	100	0	0	0	0	0	0
WE	0	0	38	0	0	0	0	0
WM	104	47	116	0	0	0	0	0
XE	225	59	154	0	0	0	1	0
XP	1471	99	5	0	0	0	0	0
Y8	159	80	39	0	0	0	0	0
YD	10	1	93	0	0	0	665	0
YV	103	57	75	0	0	0	0	0
ZO	311	91	28	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.

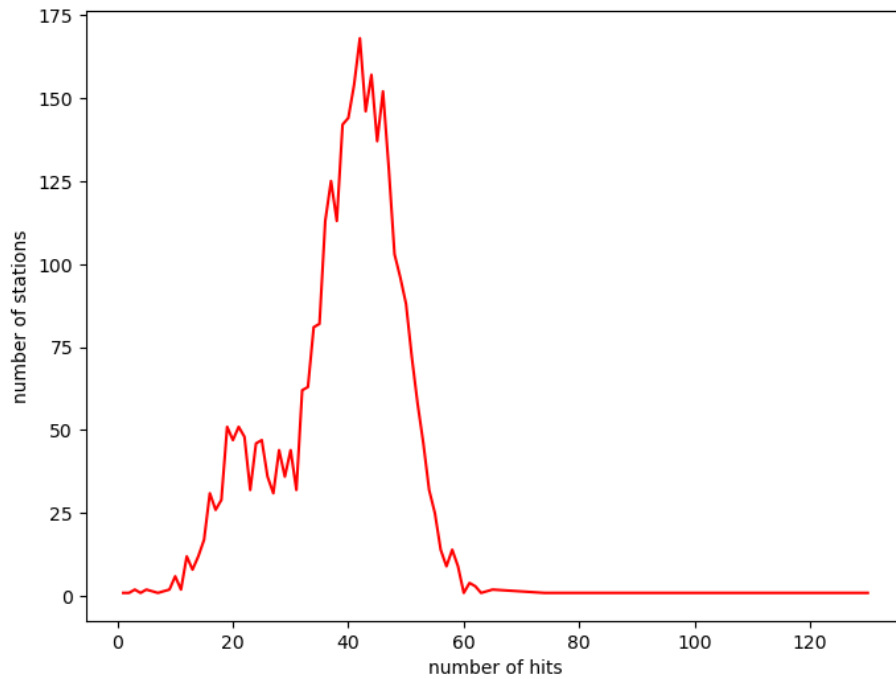


Figure 2: Request hit statistics showing the distribution of the 125313 requests on the 3223 evaluated stations

## 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 06-12-2025 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%)	1963 (100.0%)
BGR	11 ( 0.5%)	17 ( 0.8%)	35 ( 1.8%)
BGS	1 ( 0.0%)	1 ( 0.0%)	6 ( 0.3%)
ETH	0 ( 0.0%)	1 ( 0.0%)	3 ( 0.2%)
GFZ	0 ( 0.0%)	0 ( 0.0%)	282 (14.4%)
ICGC	3 ( 0.1%)	1 ( 0.0%)	17 ( 0.9%)
INGV	1 ( 0.0%)	0 ( 0.0%)	18 ( 0.9%)
KOERI	18 ( 0.9%)	83 ( 4.1%)	11 ( 0.6%)
LMU	3 ( 0.1%)	2 ( 0.1%)	7 ( 0.4%)
NIEP	9 ( 0.4%)	10 ( 0.5%)	18 ( 0.9%)
NOA	17 ( 0.8%)	15 ( 0.7%)	15 ( 0.8%)
ODC	0 ( 0.0%)	0 ( 0.0%)	74 ( 3.8%)
RESIF	3 ( 0.1%)	2 ( 0.1%)	15 ( 0.8%)
UIB/NORSAR	84 ( 4.2%)	301 (14.9%)	51 ( 2.6%)

failures of routing client: 0

failures of federator: 52

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 03-01-2026 00:32 MEST using pandoc 2.18.

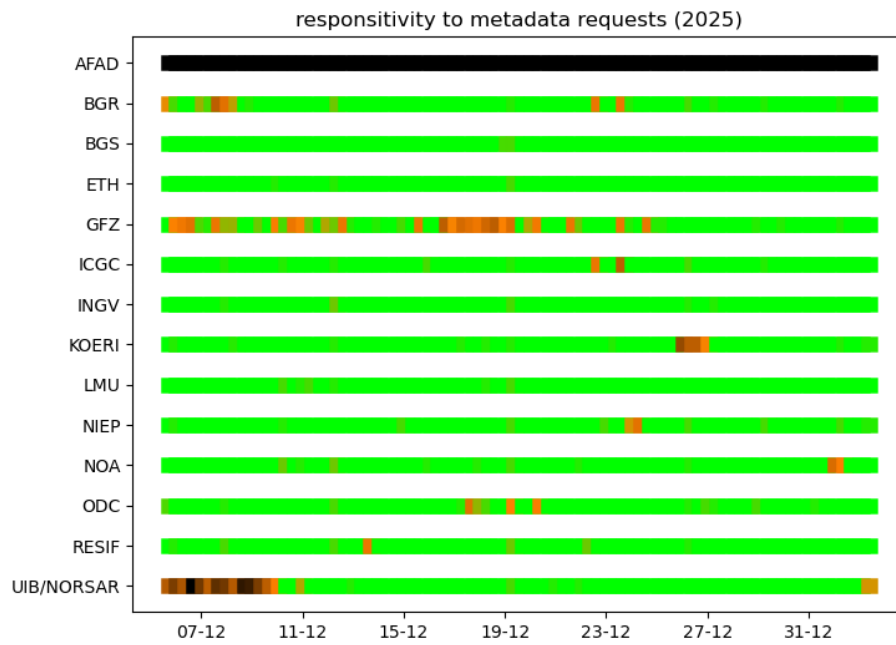


Figure 3: Responsiveness of all servers plotted with a granularity of 8h; green = 0% errors, orange = 10%, brown = 50%, black = 100%