

# EIDA Availability Report

**Created at 15-02-2026 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 15-11-2025 and 15-02-2026 00:32 using station metadata valid since 15-02-2025.

### Counters:

- unrestricted stations offering channels HHZ,BHZ,EHZ,SHZ: 3332
- evaluated stations: 3231
- number of requests: 125367

## Waveform availability plot

Color coded plot of evaluated EIDA stations. Shows results of 125367 random requests between 15-11-2025 and 15-02-2026. 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 (260215)

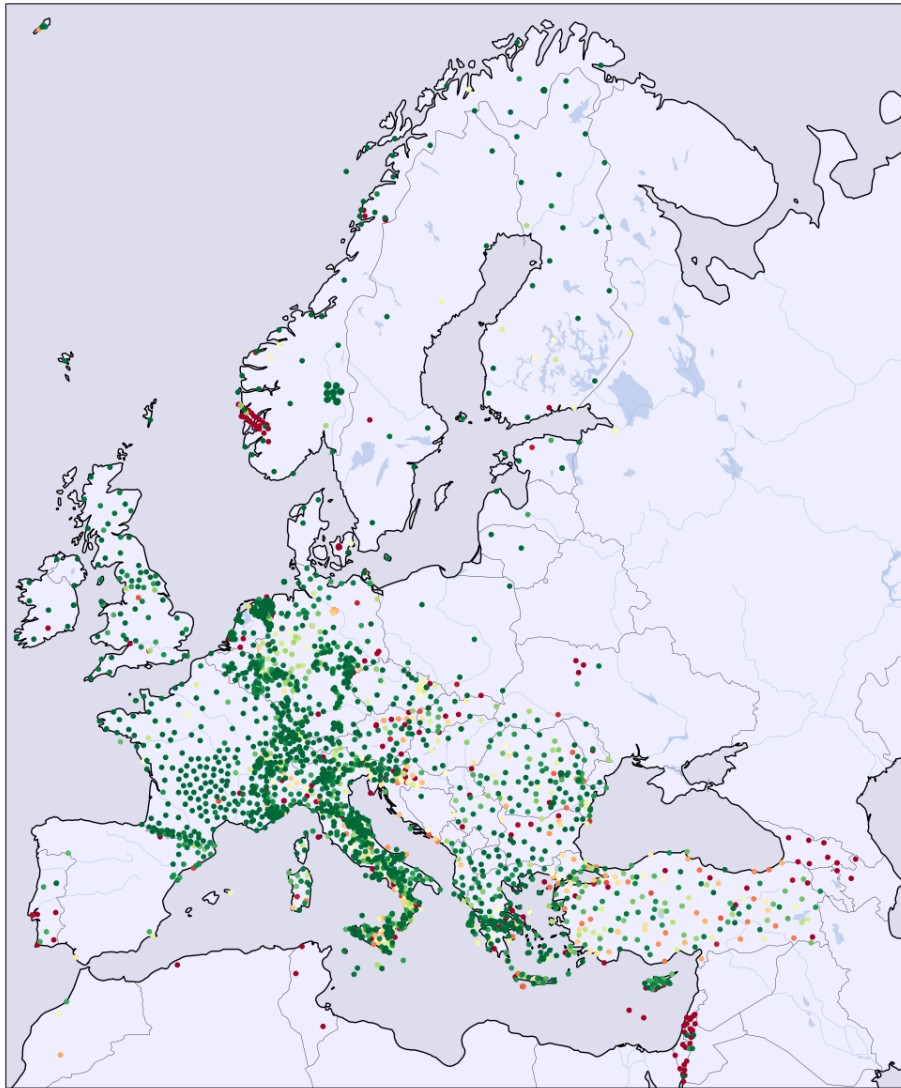


Figure 1: Availability of stations: green 100%, yellow 50%, red 0%

**Request status statistics of networks:**

net	OK	OK in %	NODATA	FRAGMENT	INCOMPL	METAFAIL	NOSERV	RESTFAIL
1D	70	85	9	0	0	0	3	0
1I	78	62	45	1	0	0	0	0
2D	185	75	36	0	0	0	23	0
2E	9	69	4	0	0	0	0	0
2I	216	82	47	0	0	0	0	0
3D	63	26	165	0	0	0	8	0
4P	399	56	281	4	12	0	0	7
5A	16	57	1	11	0	0	0	0
5B	38	95	2	0	0	0	0	0
5R	80	56	61	0	0	0	0	0
7B	580	53	501	2	5	0	0	0
7C	0	0	147	0	0	0	1	0
7F	130	97	3	0	0	0	1	0
8D	45	97	0	1	0	0	0	0
8N	36	53	30	1	0	0	0	0
9L	28	60	18	0	0	0	0	0
9S	52	57	36	1	0	0	1	0
AB	0	0	149	0	0	0	0	0
AC	418	92	31	0	1	0	4	0
BE	1243	95	60	0	1	0	0	0
BN	233	65	114	11	0	0	0	0
BQ	426	94	16	0	2	0	8	0
BS	721	64	382	13	4	0	0	0
BW	1867	79	496	0	0	0	0	0
C4	86	72	32	0	0	0	0	0
CA	814	82	145	16	2	0	10	0
CH	3498	92	218	86	0	0	0	0
CL	574	88	70	0	1	0	0	0
CP	0	0	92	0	0	0	3	0
CQ	410	55	318	12	1	0	0	0
CR	517	37	857	1	5	0	0	0
CZ	645	81	104	1	0	0	45	0
DK	580	39	790	0	5	0	83	0
DY	46	30	106	0	0	0	0	0
DZ	0	0	42	0	0	0	0	0
EB	36	90	4	0	0	0	0	0
EE	181	76	44	0	0	0	12	0
EI	389	87	35	0	0	0	20	0
ES	159	79	31	8	0	0	1	0
FN	374	93	3	0	0	0	25	0
FO	137	95	7	0	0	0	0	0
FR	7492	96	283	9	5	0	2	0
GB	2300	94	99	18	4	0	2	0
GE	2453	68	950	2	4	0	187	0

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

net	OK	OK in %	NODATA	FRAGMENT	INCOMPL	METAFAIL	NOSERV	RESTFAIL
GO	0	0	233	0	0	0	0	0
GQ	172	77	38	6	0	0	6	0
GR	3482	87	492	0	1	0	2	0
GU	1071	79	267	12	0	0	1	0
GX	110	82	10	3	1	0	10	0
HA	1254	92	94	0	1	0	0	0
HC	391	68	167	3	0	0	10	0
HE	667	76	166	0	0	0	35	0
HF	0	0	45	0	0	0	0	0
HL	1959	72	670	54	1	0	0	0
HP	799	92	41	24	1	0	0	0
HS	468	79	116	1	0	0	5	0
HT	1835	80	419	17	6	0	3	3
HU	541	82	80	0	1	0	35	0
IP	0	0	94	0	0	0	0	0
IS	0	0	1541	0	0	0	83	0
IV	14759	80	3340	191	24	0	5	41
IX	466	70	182	12	2	0	0	0
IY	514	65	250	12	2	0	7	0
JS	0	0	190	0	0	0	7	0
K3	22	88	3	0	0	0	0	0
KO	4378	62	777	1629	58	0	167	0
KQ	218	74	35	40	0	0	0	0
LC	0	0	46	0	0	0	0	0
LE	1403	92	107	0	0	0	2	0
LU	407	88	32	0	0	0	19	0
LX	67	61	42	0	0	0	0	0
M1	243	62	128	0	0	0	20	0
MD	113	88	15	0	0	0	0	0
ME	30	69	13	0	0	0	0	0
MK	351	99	2	0	0	0	0	0
ML	55	68	25	0	0	0	0	0
MN	722	65	357	20	0	0	0	0
MT	360	83	69	2	1	0	0	0
NH	357	69	151	1	0	0	5	0
NI	148	65	74	3	1	0	0	0
NL	9636	87	1222	114	25	0	3	0
NO	3413	87	205	9	6	0	281	0
NR	41	14	240	0	0	0	0	0
NS	1670	43	1887	0	0	0	298	0
OE	914	78	230	0	24	0	0	0
OT	571	80	95	6	1	0	0	37
OX	453	69	194	3	2	0	1	0
PL	333	92	2	0	1	0	23	0

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

net	OK	OK in %	NODATA	FRAGMENT	INCOMPL	METAFAIL	NOSERV	RESTFAIL
PM	32	12	208	0	0	0	18	0
QE	193	49	177	0	0	0	23	0
QM	275	75	89	0	0	0	0	0
RD	525	98	5	0	1	0	0	0
RF	49	98	1	0	0	0	0	0
RN	196	46	202	8	14	0	1	0
RO	3988	80	936	4	9	0	0	0
SI	129	53	110	0	0	0	0	0
SJ	435	71	131	7	4	0	28	0
SK	216	45	235	1	0	0	25	0
SL	1060	81	221	5	17	0	0	0
SS	32	86	5	0	0	0	0	0
ST	331	99	2	0	0	0	0	0
SX	594	70	243	1	0	0	5	0
TH	1413	89	149	2	0	0	20	0
TQ	200	47	195	8	0	0	18	0
TT	0	0	113	0	0	0	6	0
TU	105	22	355	0	1	0	0	0
TV	12	35	22	0	0	0	0	0
UD	76	32	154	3	0	0	1	0
UP	418	94	22	0	3	0	0	0
UR	292	72	107	4	0	0	0	0
UT	202	92	16	0	0	0	0	0
VI	290	84	48	4	2	0	0	0
VM	41	100	0	0	0	0	0	0
WE	0	0	31	0	0	0	0	0
WM	92	42	112	0	0	0	10	0
XE	230	61	145	0	0	0	0	0
XP	1497	99	5	0	0	0	1	0
Y8	195	82	40	0	0	0	0	0
YV	99	51	92	0	0	0	0	0
ZO	302	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.

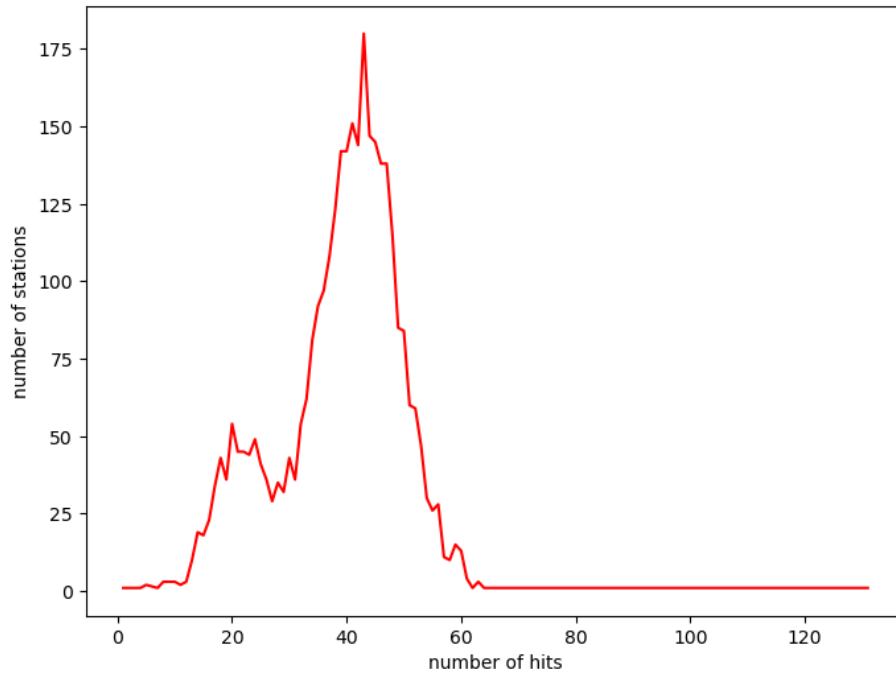


Figure 2: Request hit statistics showing the distribution of the 125367 requests on the 3231 evaluated stations

## 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 18-01-2026 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%)	1654 (100.0%)
BGR	3 ( 0.1%)	19 ( 0.9%)	59 ( 3.6%)
BGS	10 ( 0.5%)	11 ( 0.5%)	4 ( 0.2%)
ETH	3 ( 0.1%)	3 ( 0.1%)	4 ( 0.2%)
GFZ	11 ( 0.5%)	349 (17.3%)	102 ( 6.2%)
ICGC	35 ( 1.7%)	97 ( 4.8%)	23 ( 1.4%)
INGV	16 ( 0.8%)	12 ( 0.6%)	11 ( 0.7%)
KOERI	78 ( 3.9%)	136 ( 6.7%)	57 ( 3.4%)
LMU	0 ( 0.0%)	2 ( 0.1%)	6 ( 0.4%)
NIEP	1 ( 0.0%)	1 ( 0.0%)	9 ( 0.5%)
NOA	13 ( 0.6%)	14 ( 0.7%)	15 ( 0.9%)
ODC	0 ( 0.0%)	1 ( 0.0%)	10 ( 0.6%)
RESIF	5 ( 0.2%)	2 ( 0.1%)	20 ( 1.2%)
UIB/NORSAR	21 ( 1.0%)	71 ( 3.5%)	17 ( 1.0%)

failures of routing client: 0

failures of federator: 361

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)

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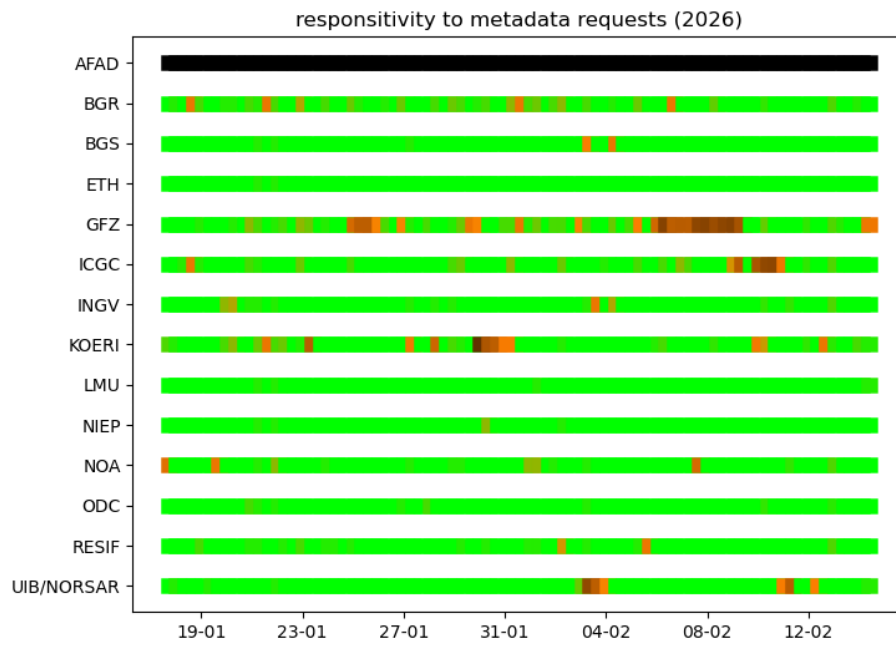


Figure 3: Responsiveness of all servers plotted with a granularity of 8h; green = 0% errors, orange = 10%, brown = 50%, black = 100%