

# EIDA Availability Report

**Created at 07-01-2026 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 07-10-2025 and 07-01-2026 00:32 using station metadata valid since 07-01-2025.

### Counters:

- unrestricted stations offering channels HHZ,BHZ,EHZ,SHZ: 3290
- evaluated stations: 3181
- number of requests: 123094

## Waveform availability plot

Color coded plot of evaluated EIDA stations. Shows results of 123094 random requests between 07-10-2025 and 07-01-2026. 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 (260107)

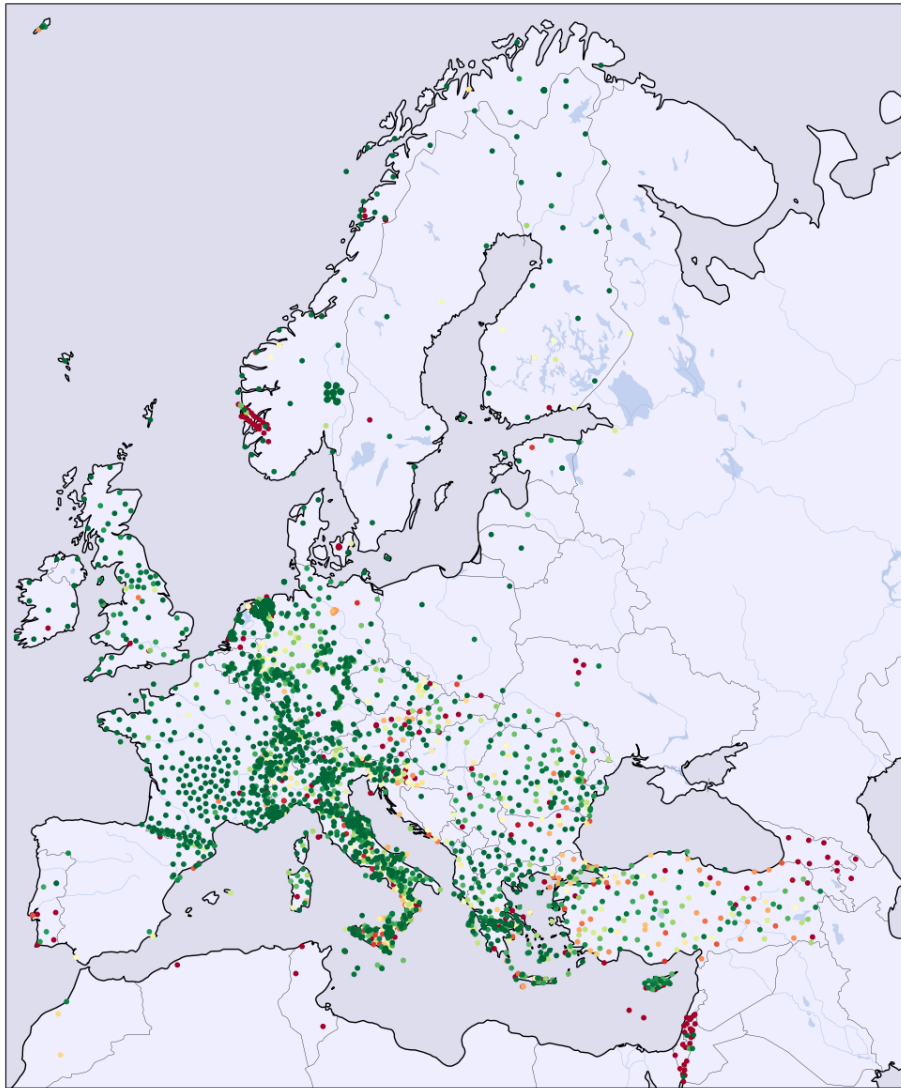


Figure 1: Availability of stations: green 100%, yellow 50%, red 0%

**Request status statistics of networks:**

net	OK	OK in %	NODATA	FRAGMENT	INCOMPL	METAFAIL	NOSERV	RESTFAIL
1D	75	83	15	0	0	0	0	0
1I	68	61	42	0	0	0	0	0
2D	195	82	42	0	0	0	0	0
2E	1	100	0	0	0	0	0	0
2I	223	86	35	0	0	0	0	0
3D	77	34	147	0	0	0	0	0
4P	433	59	267	3	22	0	0	0
5A	4	66	0	2	0	0	0	0
5B	35	100	0	0	0	0	0	0
5R	105	60	68	0	0	0	0	0
7B	584	52	515	2	2	0	1	0
7C	0	0	137	0	0	0	1	0
7F	117	95	4	0	0	0	1	0
8D	40	97	0	1	0	0	0	0
8N	68	57	50	1	0	0	0	0
9L	32	65	17	0	0	0	0	0
9S	48	52	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	1267	94	65	0	2	0	0	0
BN	217	64	112	7	0	0	2	0
BQ	401	88	38	0	1	0	15	0
BS	725	65	371	13	4	0	0	0
BW	1876	78	514	0	0	0	0	0
C4	83	66	42	0	0	0	0	0
CA	835	86	110	17	2	0	0	0
CH	3403	91	236	93	2	0	0	0
CL	573	89	64	0	0	0	0	0
CP	0	0	99	0	0	0	0	0
CQ	440	55	334	10	2	0	0	0
CR	517	39	799	0	6	0	0	0
CZ	651	83	128	1	2	0	0	0
DK	575	41	806	0	8	0	1	0
DY	47	30	105	0	0	0	0	0
DZ	0	0	48	0	0	0	0	0
EB	43	100	0	0	0	0	0	0
EE	198	84	35	1	0	0	0	0
EI	392	91	36	0	0	0	0	0
ES	161	80	37	3	0	0	0	0
FN	398	98	5	0	0	0	0	0
FO	122	87	18	0	0	0	0	0
FR	7617	96	266	8	4	0	3	0
GB	2183	93	108	20	3	0	13	0
GE	2533	72	953	3	8	0	2	0

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

net	OK	OK in %	NODATA	FRAGMENT	INCOMPL	METAFAIL	NOSERV	RESTFAIL
GO	0	0	253	0	0	0	0	0
GQ	166	82	24	3	0	0	8	0
GR	3373	86	479	1	4	0	43	0
GU	1070	80	239	19	0	0	1	0
GX	85	85	12	2	1	0	0	0
HA	1194	92	102	0	1	0	0	0
HC	362	61	212	3	1	0	9	0
HE	684	78	185	0	0	0	0	0
HF	0	0	48	0	0	0	0	0
HL	1952	74	626	49	0	0	0	0
HP	809	93	41	19	0	0	0	0
HS	521	87	70	2	0	0	5	0
HT	1775	79	443	12	6	0	0	2
HU	544	85	92	0	1	0	0	0
IP	0	0	86	0	0	0	0	0
IS	0	0	1610	0	0	0	1	0
IV	14480	79	3513	202	29	0	3	45
IX	397	65	192	11	3	0	0	0
IY	438	59	283	6	1	0	6	0
JS	0	0	208	0	0	0	0	0
K3	20	80	5	0	0	0	0	0
KO	4402	62	774	1699	58	0	91	0
LC	0	0	39	0	0	0	0	0
LE	1416	90	110	0	0	0	33	0
LU	460	96	16	0	0	0	0	0
LX	76	64	40	0	1	0	0	0
M1	283	66	140	0	0	0	1	0
MD	115	87	17	0	0	0	0	0
ME	27	56	21	0	0	0	0	0
MK	369	99	1	0	0	0	0	0
ML	67	80	16	0	0	0	0	0
MN	749	66	361	16	1	0	1	0
MT	347	83	68	1	0	0	0	0
NH	264	53	213	2	0	0	14	0
NI	150	69	63	2	0	0	0	0
NL	9727	87	1240	110	22	0	2	0
NO	3415	88	195	9	7	0	252	0
NR	28	10	238	0	0	0	0	0
NS	1633	42	1956	1	0	0	266	0
OE	868	78	213	0	22	0	0	0
OT	535	79	90	7	2	0	0	36
OX	494	69	210	3	2	0	2	0
PL	352	99	2	0	0	0	0	0
PM	35	14	205	0	0	0	0	0

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

net	OK	OK in %	NODATA	FRAGMENT	INCOMPL	METAFAIL	NOSERV	RESTFAIL
QE	229	57	143	1	0	0	22	0
QM	257	72	96	0	0	0	0	0
RD	513	99	3	0	1	0	0	0
RF	38	100	0	0	0	0	0	0
RO	4070	81	905	6	10	0	3	0
SI	132	53	114	0	0	0	0	0
SJ	451	75	140	5	3	0	0	0
SK	242	50	236	0	0	0	1	0
SL	1071	82	198	6	18	0	0	0
SS	29	85	5	0	0	0	0	0
ST	352	99	1	0	0	0	0	0
TH	1396	90	126	3	2	0	20	0
TQ	200	51	182	9	1	0	0	0
TT	0	0	131	0	0	0	0	0
TU	99	21	369	0	1	0	0	0
TV	25	54	21	0	0	0	0	0
UD	83	31	179	3	0	0	0	0
UP	422	94	23	0	2	0	0	0
UR	254	69	103	4	0	0	4	0
UT	202	93	13	0	0	0	0	0
VI	243	80	55	3	1	0	0	0
VM	49	100	0	0	0	0	0	0
WE	0	0	38	0	0	0	0	0
WM	99	48	107	0	0	0	0	0
XE	224	58	156	0	0	0	1	0
XP	1453	99	4	0	0	0	0	0
Y8	165	80	41	0	0	0	0	0
YV	102	56	78	0	0	0	0	0
ZO	310	91	27	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.

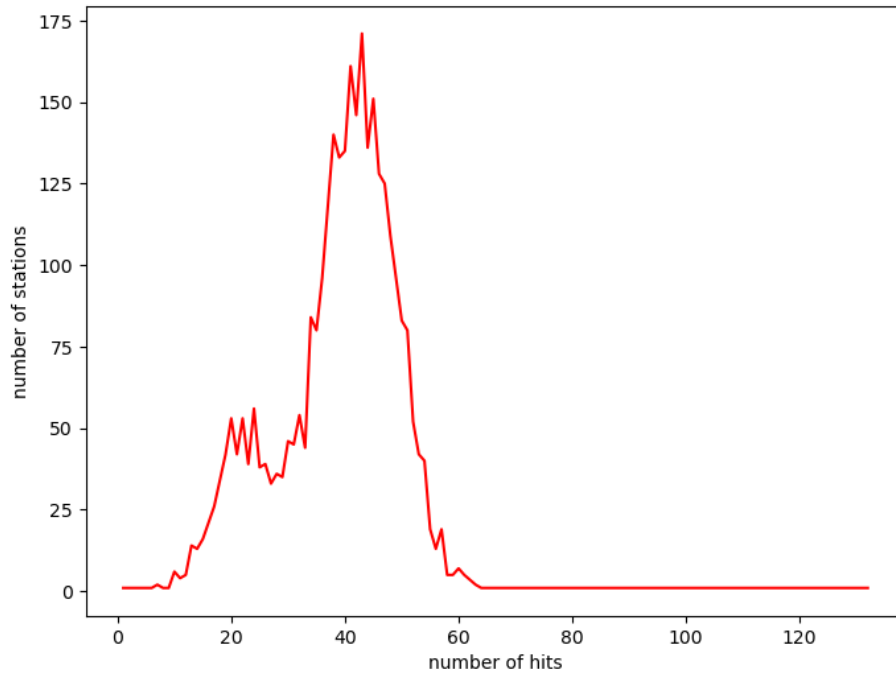


Figure 2: Request hit statistics showing the distribution of the 123094 requests on the 3181 evaluated stations

## 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 10-12-2025 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%)	1983 (100.0%)
BGR	3 ( 0.1%)	6 ( 0.3%)	34 ( 1.7%)
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%)	239 (12.1%)
ICGC	5 ( 0.2%)	1 ( 0.0%)	21 ( 1.1%)
INGV	1 ( 0.0%)	0 ( 0.0%)	18 ( 0.9%)
KOERI	23 ( 1.1%)	86 ( 4.3%)	9 ( 0.5%)
LMU	3 ( 0.1%)	3 ( 0.1%)	7 ( 0.4%)
NIEP	10 ( 0.5%)	11 ( 0.5%)	18 ( 0.9%)
NOA	17 ( 0.8%)	15 ( 0.7%)	15 ( 0.8%)
ODC	0 ( 0.0%)	0 ( 0.0%)	72 ( 3.6%)
RESIF	3 ( 0.1%)	2 ( 0.1%)	15 ( 0.8%)
UIB/NORSAR	6 ( 0.3%)	15 ( 0.7%)	13 ( 0.7%)

failures of routing client: 0

failures of federator: 32

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 07-01-2026 00:32 MEST usingpandoc 2.18.

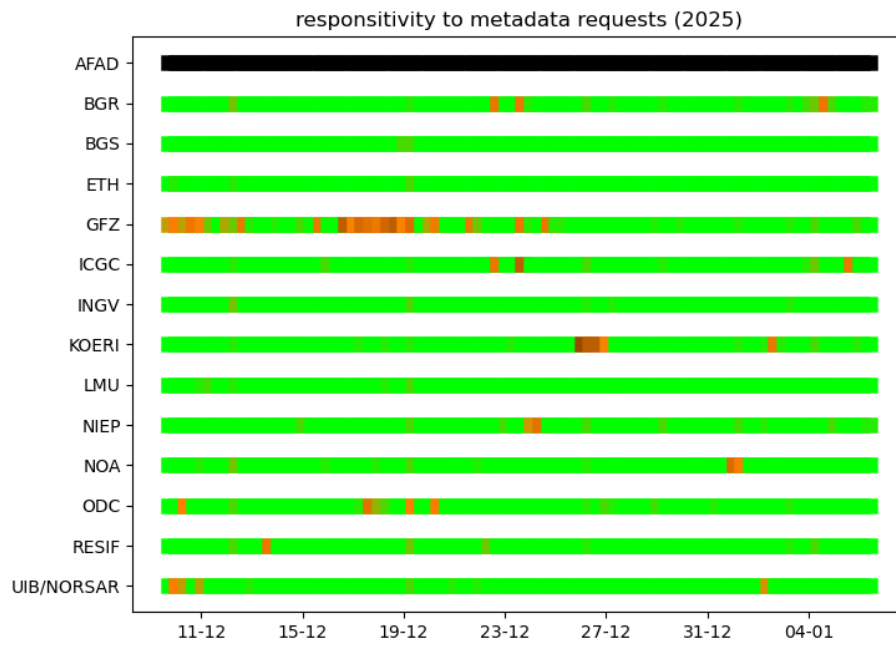


Figure 3: Responsiveness of all servers plotted with a granularity of 8h; green = 0% errors, orange = 10%, brown = 50%, black = 100%