

# EIDA Availability Report

**Created at 02-01-2026 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 02-10-2025 and 02-01-2026 00:32 using station metadata valid since 02-01-2025.

### Counters:

- unrestricted stations offering channels HHZ,BHZ,EHZ,SHZ: 3348
- evaluated stations: 3215
- number of requests: 125312

## Waveform availability plot

Color coded plot of evaluated EIDA stations. Shows results of 125312 random requests between 02-10-2025 and 02-01-2026. 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 (260102)

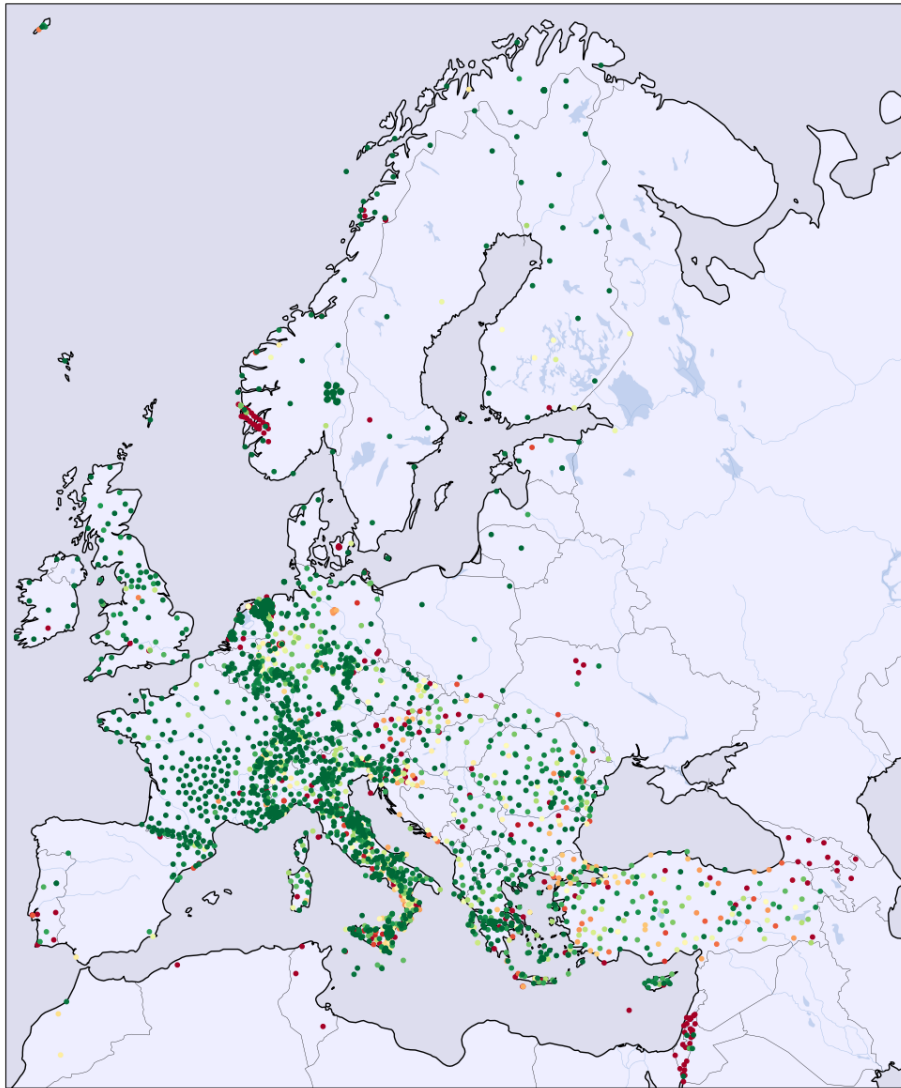


Figure 1: Availability of stations: green 100%, yellow 50%, red 0%

**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	65	61	40	0	0	0	0	0
2D	198	83	40	0	0	0	0	0
2I	229	86	35	0	0	0	0	0
3D	79	35	143	0	0	0	0	0
4P	439	60	265	4	21	0	0	0
5A	1	33	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	576	53	504	2	2	0	1	0
7C	0	0	128	0	0	0	1	0
7F	117	95	4	0	0	0	1	0
8D	41	97	0	1	0	0	0	0
8N	71	55	56	1	0	0	0	0
9L	32	62	19	0	0	0	0	0
9S	55	57	41	0	0	0	0	0
AB	0	0	133	0	0	0	0	0
AC	437	92	32	0	0	0	4	0
BE	1267	94	66	0	2	0	0	0
BN	213	63	112	7	0	0	2	0
BQ	402	87	40	0	1	0	15	0
BS	717	64	374	12	4	0	0	0
BW	1856	78	511	0	0	0	0	0
C4	81	66	40	0	0	0	0	0
CA	842	86	112	18	1	0	0	0
CH	3422	91	234	92	2	0	0	0
CL	580	91	57	0	0	0	0	0
CP	0	0	98	0	0	0	0	0
CQ	435	56	329	7	2	0	0	0
CR	506	39	772	0	6	0	0	0
CZ	661	83	130	1	3	0	0	0
DK	558	41	792	0	7	0	1	0
DY	51	32	106	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	83	38	1	0	0	0	0
EI	389	91	36	0	0	0	0	0
ES	162	78	42	3	0	0	0	0
FN	400	99	4	0	0	0	0	0
FO	122	84	22	0	0	0	0	0
FR	7625	96	263	8	4	0	3	0
GB	2135	93	103	21	3	0	16	0
GE	2505	72	943	3	8	0	2	0
GO	0	0	254	0	0	0	0	0

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

net	OK	OK in %	NODATA	FRAGMENT	INCOMPL	METAFAIL	NOSERV	RESTFAIL
GQ	170	85	25	3	0	0	2	0
GR	3357	86	470	1	4	0	43	0
GU	1069	80	233	17	0	0	1	0
GX	83	84	13	2	0	0	0	0
HA	1200	91	107	0	1	0	0	0
HC	360	60	220	3	1	0	9	0
HE	686	79	180	0	0	0	0	0
HF	0	0	48	0	0	0	0	0
HL	1926	74	617	46	2	0	0	0
HP	808	93	38	18	1	0	0	0
HS	522	88	68	2	0	0	0	0
HT	1794	79	441	12	5	0	0	2
HU	556	85	92	0	1	0	0	0
IP	0	0	88	0	0	0	0	0
IS	0	0	1597	0	0	0	1	0
IV	14494	79	3506	204	28	0	3	44
IX	399	65	197	11	3	0	0	0
IY	443	59	286	6	1	0	6	0
JS	0	0	211	0	0	0	0	0
K3	21	80	5	0	0	0	0	0
KO	4385	62	764	1699	55	0	91	0
KQ	226	66	55	54	0	0	5	0
LC	0	0	42	0	0	0	0	0
LE	1403	89	106	0	0	0	56	0
LU	449	94	24	0	0	0	0	0
LX	79	64	42	0	2	0	0	0
M1	283	67	133	0	0	0	1	0
MD	117	88	15	0	0	0	0	0
ME	26	56	20	0	0	0	0	0
MK	365	99	1	0	0	0	0	0
ML	66	82	14	0	0	0	0	0
MN	751	66	361	14	1	0	1	0
MT	354	83	70	0	0	0	0	0
NH	261	52	217	2	0	0	13	0
NI	154	70	61	2	0	0	0	0
NL	9674	87	1242	119	20	0	2	0
NO	3415	88	193	8	7	0	252	0
NR	28	10	243	0	0	0	0	0
NS	1623	42	1954	1	0	0	266	0
OE	864	78	214	0	23	0	0	0
OT	551	80	89	7	2	0	0	34
OX	500	70	207	3	1	0	2	0
PL	344	99	3	0	0	0	0	0
PM	36	15	202	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	259	72	96	0	0	0	0	0
RD	501	99	3	0	2	0	0	0
RF	39	100	0	0	0	0	0	0
RN	213	47	209	4	16	0	7	0
RO	4081	81	897	6	10	0	3	0
SI	137	54	114	0	0	0	0	0
SJ	441	75	141	2	3	0	0	0
SK	246	50	242	0	0	0	1	0
SL	1076	83	191	5	18	0	0	0
SS	31	83	6	0	0	0	0	0
ST	351	99	1	0	0	0	0	0
SX	638	72	234	1	1	0	9	0
TH	1377	89	129	3	2	0	20	0
TQ	201	51	180	9	1	0	0	0
TT	0	0	137	0	0	0	0	0
TU	106	22	368	0	1	0	0	0
TV	24	54	20	0	0	0	0	0
UD	85	31	186	3	0	0	0	0
UP	428	94	22	0	2	0	0	0
UR	256	70	97	4	0	0	5	0
UT	200	94	12	0	0	0	0	0
VI	227	78	58	3	1	0	0	0
VM	50	100	0	0	0	0	0	0
WE	0	0	37	0	0	0	0	0
WM	105	47	116	0	0	0	0	0
XE	221	58	153	0	0	0	1	0
XP	1473	99	5	0	0	0	0	0
Y8	160	80	38	0	0	0	0	0
YD	10	1	95	0	0	0	682	0
YV	102	56	77	0	0	0	0	0
ZO	314	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.

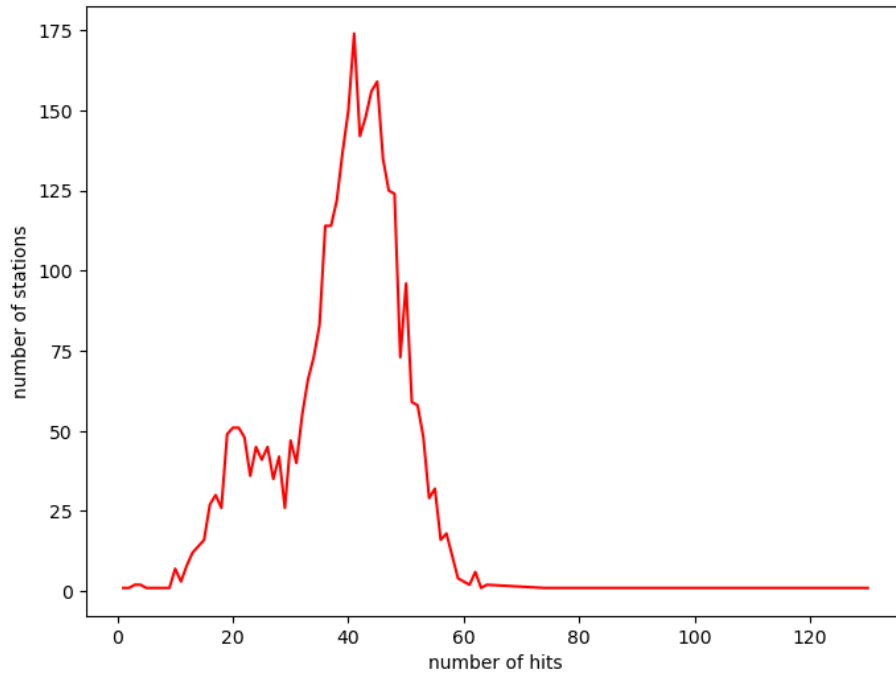


Figure 2: Request hit statistics showing the distribution of the 125312 requests on the 3215 evaluated stations

## 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 05-12-2025 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%)	1962 (100.0%)
BGR	11 ( 0.5%)	17 ( 0.8%)	35 ( 1.8%)
BGS	2 ( 0.1%)	2 ( 0.1%)	6 ( 0.3%)
ETH	0 ( 0.0%)	1 ( 0.0%)	3 ( 0.2%)
GFZ	0 ( 0.0%)	0 ( 0.0%)	287 (14.6%)
ICGC	3 ( 0.1%)	1 ( 0.0%)	17 ( 0.9%)
INGV	2 ( 0.1%)	0 ( 0.0%)	20 ( 1.0%)
KOERI	18 ( 0.9%)	82 ( 4.1%)	11 ( 0.6%)
LMU	3 ( 0.1%)	2 ( 0.1%)	7 ( 0.4%)
NIEP	9 ( 0.4%)	9 ( 0.4%)	18 ( 0.9%)
NOA	17 ( 0.8%)	15 ( 0.7%)	16 ( 0.8%)
ODC	0 ( 0.0%)	0 ( 0.0%)	78 ( 4.0%)
RESIF	3 ( 0.1%)	2 ( 0.1%)	15 ( 0.8%)
UIB/NORSAR	90 ( 4.5%)	309 (15.3%)	51 ( 2.6%)

failures of routing client: 0

failures of federator: 53

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 02-01-2026 00:32 MEST using pandoc 2.18.

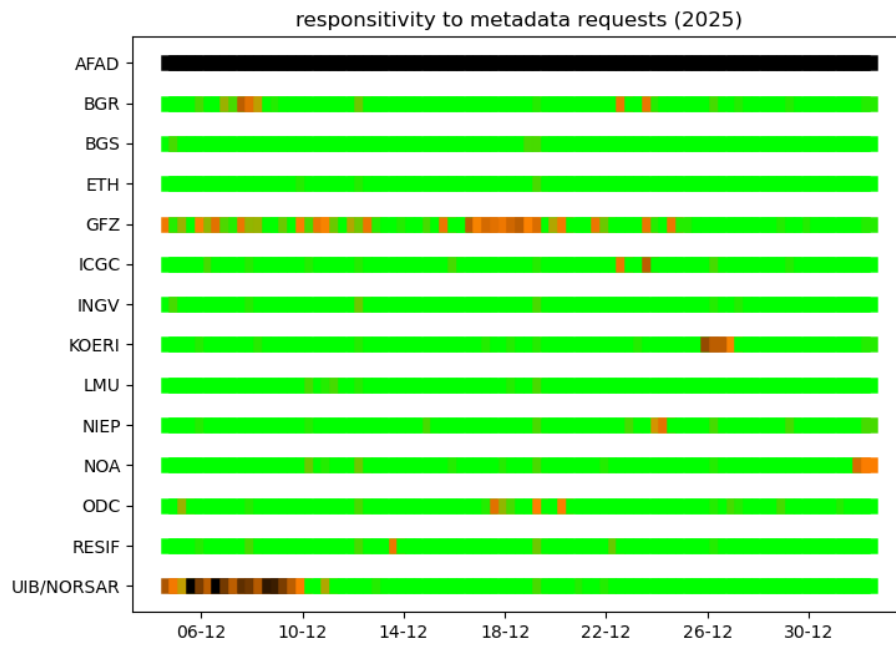


Figure 3: Responsiveness of all servers plotted with a granularity of 8h; green = 0% errors, orange = 10%, brown = 50%, black = 100%