

# EIDA Availability Report

**Created at 09-02-2026 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 09-11-2025 and 09-02-2026 00:32 using station metadata valid since 09-02-2025.

### Counters:

- unrestricted stations offering channels HHZ,BHZ,EHZ,SHZ: 3332
- evaluated stations: 3230
- number of requests: 125337

## Waveform availability plot

Color coded plot of evaluated EIDA stations. Shows results of 125337 random requests between 09-11-2025 and 09-02-2026. 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 (260209)

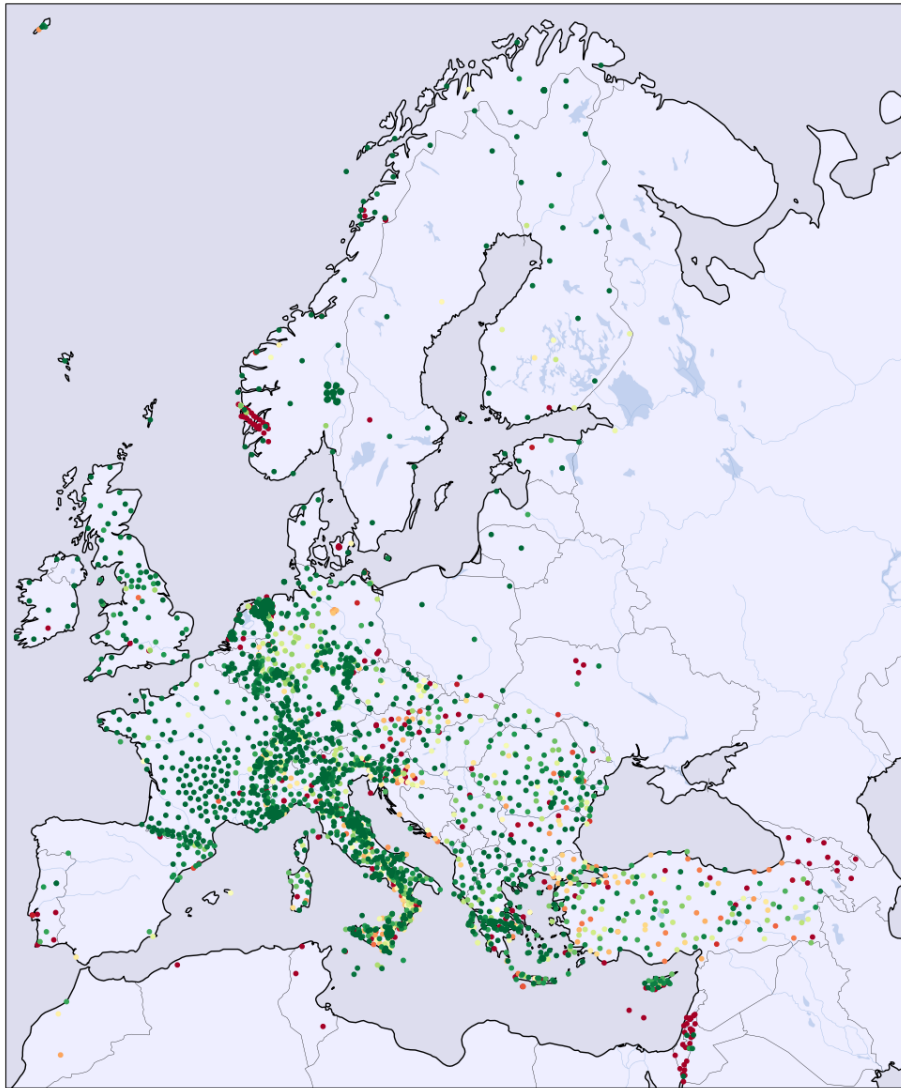


Figure 1: Availability of stations: green 100%, yellow 50%, red 0%

**Request status statistics of networks:**

net	OK	OK in %	NODATA	FRAGMENT	INCOMPL	METAFAIL	NOSERV	RESTFAIL
1D	70	85	10	0	0	0	2	0
1I	78	62	46	0	0	0	0	0
2D	191	76	36	0	0	0	22	0
2E	5	71	2	0	0	0	0	0
2I	221	85	39	0	0	0	0	0
3D	73	29	164	0	0	0	7	0
4P	407	56	286	5	13	0	0	6
5A	14	56	1	10	0	0	0	0
5B	34	94	2	0	0	0	0	0
5R	97	59	67	0	0	0	0	0
7B	581	53	496	2	5	0	0	0
7C	0	0	144	0	0	0	1	0
7F	127	96	3	0	0	0	1	0
8D	44	97	0	1	0	0	0	0
8N	40	53	34	1	0	0	0	0
9L	30	63	17	0	0	0	0	0
9S	52	58	36	1	0	0	0	0
AB	0	0	146	0	0	0	0	0
AC	421	92	31	0	1	0	4	0
BE	1239	95	54	0	1	0	0	0
BN	241	65	116	10	0	0	0	0
BQ	426	94	16	0	2	0	8	0
BS	710	64	381	10	4	0	0	0
BW	1878	79	493	0	0	0	0	0
C4	87	73	31	0	0	0	0	0
CA	825	84	136	16	2	0	0	0
CH	3488	91	224	89	1	0	0	0
CL	570	89	67	0	1	0	0	0
CP	0	0	93	0	0	0	3	0
CQ	414	55	317	11	2	0	0	0
CR	528	37	859	0	5	0	0	0
CZ	660	82	106	1	0	0	37	0
DK	578	40	785	0	6	0	73	0
DY	48	30	108	0	0	0	0	0
DZ	0	0	45	0	0	0	0	0
EB	35	92	3	0	0	0	0	0
EE	180	75	46	0	0	0	12	0
EI	384	88	35	0	0	0	17	0
ES	154	80	28	9	0	0	0	0
FN	375	93	3	0	0	0	22	0
FO	132	94	7	0	0	0	0	0
FR	7511	96	266	8	5	0	2	0
GB	2314	94	101	21	4	0	2	0
GE	2478	68	959	2	4	0	150	0

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

net	OK	OK in %	NODATA	FRAGMENT	INCOMPL	METAFAIL	NOSERV	RESTFAIL
GO	0	0	227	0	0	0	0	0
GQ	176	79	34	5	0	0	6	0
GR	3478	87	486	0	1	0	3	0
GU	1069	79	266	13	0	0	1	0
GX	106	81	11	3	1	0	9	0
HA	1248	93	91	0	1	0	0	0
HC	393	67	172	3	0	0	10	0
HE	665	77	163	0	0	0	31	0
HF	0	0	45	0	0	0	0	0
HL	1980	73	662	53	1	0	0	0
HP	816	92	42	24	1	0	0	0
HS	466	79	113	1	0	0	5	0
HT	1833	80	423	16	6	0	3	3
HU	537	82	80	0	1	0	30	0
IP	0	0	89	0	0	0	0	0
IS	0	0	1541	0	0	0	67	0
IV	14711	80	3348	197	22	0	3	42
IX	450	69	182	12	2	0	0	0
IY	501	64	259	11	1	0	7	0
JS	0	0	190	0	0	0	7	0
K3	19	90	2	0	0	0	0	0
KO	4369	62	768	1649	53	0	167	0
KQ	212	72	38	43	0	0	0	0
LC	0	0	48	0	0	0	0	0
LE	1429	93	101	0	0	0	2	0
LU	416	90	27	0	0	0	18	0
LX	68	61	41	0	1	0	0	0
M1	252	64	119	0	0	0	20	0
MD	114	88	15	0	0	0	0	0
ME	29	67	14	0	0	0	0	0
MK	347	99	2	0	0	0	0	0
ML	54	70	23	0	0	0	0	0
MN	721	65	363	21	0	0	1	0
MT	352	82	70	2	1	0	0	0
NH	349	68	154	1	0	0	5	0
NI	151	65	75	3	1	0	0	0
NL	9703	87	1228	114	26	0	2	0
NO	3392	87	200	8	7	0	281	0
NR	40	14	232	0	0	0	0	0
NS	1657	43	1878	0	0	0	298	0
OE	894	78	228	0	22	0	0	0
OT	566	80	95	6	1	0	0	38
OX	467	68	207	3	2	0	2	0
PL	335	93	3	0	0	0	20	0

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

net	OK	OK in %	NODATA	FRAGMENT	INCOMPL	METAFAIL	NOSERV	RESTFAIL
PM	33	12	206	0	0	0	16	0
QE	204	50	176	0	0	0	23	0
QM	267	75	86	0	0	0	0	0
RD	517	98	5	0	1	0	0	0
RF	46	97	1	0	0	0	0	0
RN	191	44	206	8	14	0	7	0
RO	4003	80	926	5	9	0	0	0
SI	127	52	116	0	0	0	0	0
SJ	450	73	130	7	4	0	23	0
SK	219	46	233	1	0	0	21	0
SL	1074	81	218	4	17	0	0	0
SS	33	89	4	0	0	0	0	0
ST	337	99	2	0	0	0	0	0
SX	603	71	240	1	0	0	5	0
TH	1395	89	147	2	0	0	20	0
TQ	201	47	194	8	0	0	17	0
TT	0	0	117	0	0	0	5	0
TU	96	21	353	0	1	0	0	0
TV	15	40	22	0	0	0	0	0
UD	79	32	160	3	0	0	0	0
UP	402	93	23	0	3	0	0	0
UR	292	72	105	4	0	0	0	0
UT	204	92	16	0	0	0	0	0
VI	277	82	52	4	2	0	0	0
VM	45	100	0	0	0	0	0	0
WE	0	0	33	0	0	0	0	0
WM	91	43	111	0	0	0	9	0
XE	228	60	152	0	0	0	0	0
XP	1517	99	4	0	0	0	0	0
Y8	196	82	41	0	0	0	0	0
YV	104	53	89	0	0	0	0	0
ZO	309	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.

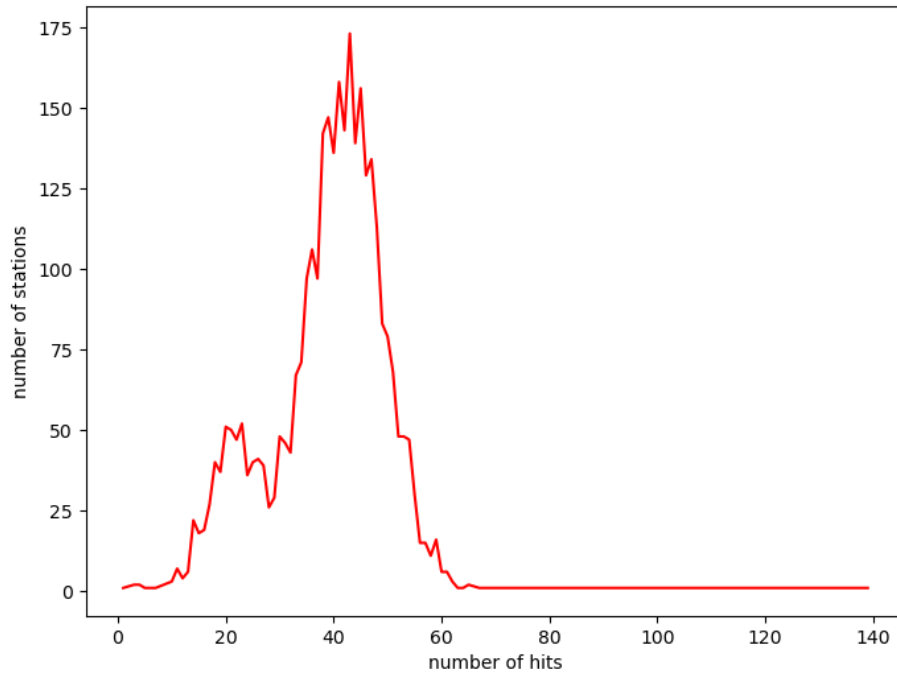


Figure 2: Request hit statistics showing the distribution of the 125337 requests on the 3230 evaluated stations

## 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 12-01-2026 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%)	1915 (100.0%)
BGR	3 ( 0.1%)	19 ( 0.9%)	59 ( 3.1%)
BGS	10 ( 0.5%)	11 ( 0.5%)	4 ( 0.2%)
ETH	1 ( 0.0%)	2 ( 0.1%)	4 ( 0.2%)
GFZ	10 ( 0.5%)	303 (15.0%)	91 ( 4.8%)
ICGC	21 ( 1.0%)	15 ( 0.7%)	25 ( 1.3%)
INGV	15 ( 0.7%)	11 ( 0.5%)	9 ( 0.5%)
KOERI	76 ( 3.8%)	130 ( 6.5%)	47 ( 2.5%)
LMU	0 ( 0.0%)	1 ( 0.0%)	5 ( 0.3%)
NIEP	2 ( 0.1%)	2 ( 0.1%)	9 ( 0.5%)
NOA	12 ( 0.6%)	14 ( 0.7%)	17 ( 0.9%)
ODC	0 ( 0.0%)	1 ( 0.0%)	11 ( 0.6%)
RESIF	6 ( 0.3%)	2 ( 0.1%)	18 ( 0.9%)
UIB/NORSAR	7 ( 0.3%)	56 ( 2.8%)	17 ( 0.9%)

failures of routing client: 0

failures of federator: 100

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 09-02-2026 00:32 MEST usingpandoc 2.18.

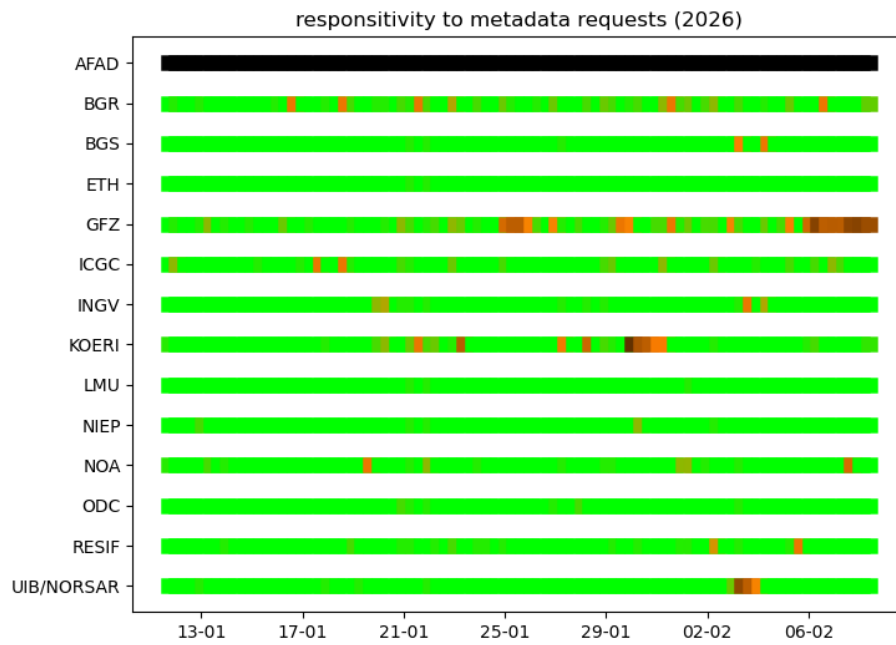


Figure 3: Responsiveness of all servers plotted with a granularity of 8h; green = 0% errors, orange = 10%, brown = 50%, black = 100%