

# EIDA Availability Report

**Created at 24-01-2026 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 24-10-2025 and 24-01-2026 00:32 using station metadata valid since 24-01-2025.

### Counters:

- unrestricted stations offering channels HHZ,BHZ,EHZ,SHZ: 3329
- evaluated stations: 3227
- number of requests: 125040

## Waveform availability plot

Color coded plot of evaluated EIDA stations. Shows results of 125040 random requests between 24-10-2025 and 24-01-2026. 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 (260124)

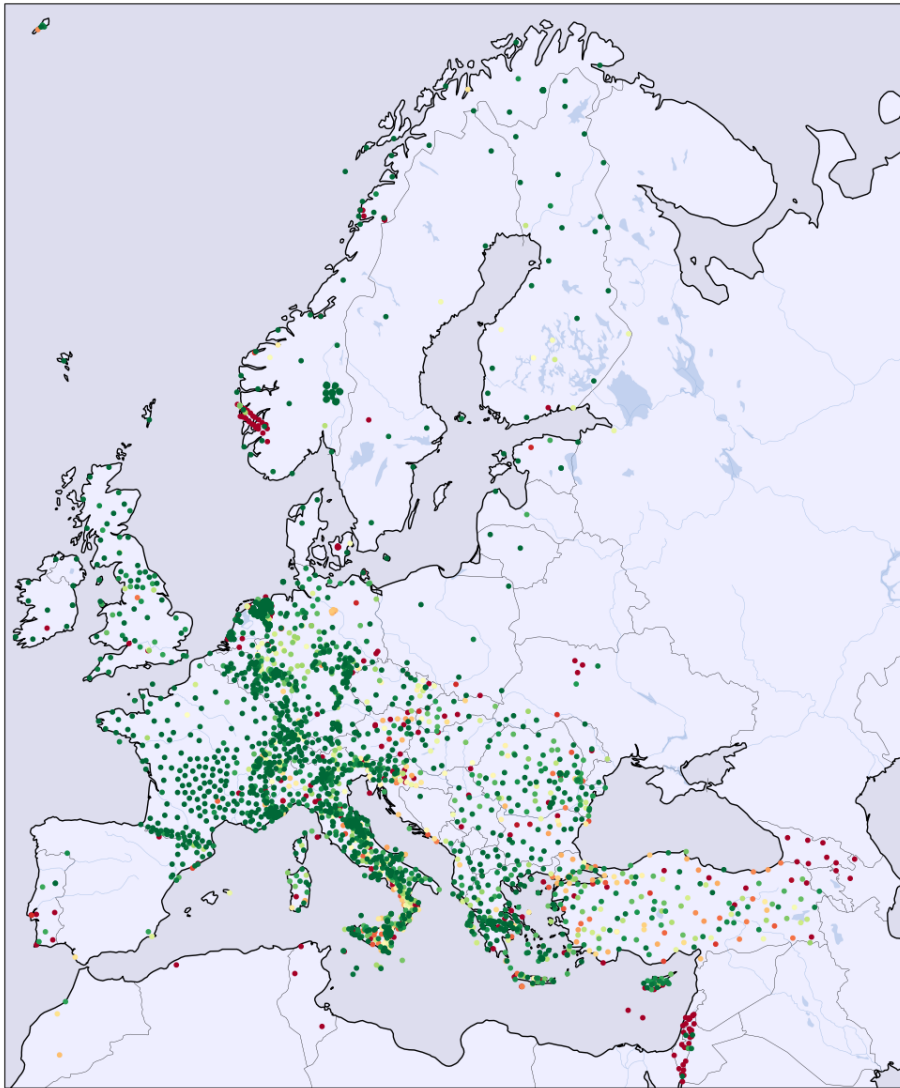


Figure 1: Availability of stations: green 100%, yellow 50%, red 0%

**Request status statistics of networks:**

net	OK	OK in %	NODATA	FRAGMENT	INCOMPL	METAFAIL	NOSERV	RESTFAIL
1D	76	87	11	0	0	0	0	0
1I	72	62	43	0	0	0	0	0
2D	192	83	38	0	0	0	0	0
2E	4	100	0	0	0	0	0	0
2I	216	84	40	0	0	0	0	0
3D	73	32	154	0	0	0	1	0
4P	414	57	288	4	17	0	0	0
5A	7	46	0	8	0	0	0	0
5B	32	100	0	0	0	0	0	0
5R	105	60	68	0	0	0	0	0
7B	582	53	502	2	4	0	0	0
7C	0	0	139	0	0	0	1	0
7F	122	96	4	0	0	0	1	0
8D	41	97	0	1	0	0	0	0
8N	49	52	43	1	0	0	0	0
9L	33	64	18	0	0	0	0	0
9S	50	54	41	0	0	0	0	0
AB	0	0	134	0	0	0	0	0
AC	423	91	33	0	0	0	4	0
BE	1234	94	63	0	2	0	0	0
BN	229	64	117	10	0	0	0	0
BQ	401	93	14	0	2	0	13	0
BS	724	65	373	10	4	0	0	0
BW	1890	78	508	0	0	0	0	0
C4	84	69	37	0	0	0	0	0
CA	844	86	108	17	2	0	0	0
CH	3438	91	222	91	1	0	0	0
CL	572	88	71	0	1	0	0	0
CP	0	0	100	0	0	0	0	0
CQ	425	55	335	10	2	0	0	0
CR	535	38	860	0	6	0	0	0
CZ	670	84	116	1	2	0	1	0
DK	586	41	803	0	7	0	1	0
DY	54	32	111	0	0	0	0	0
DZ	0	0	43	0	0	0	0	0
EB	43	100	0	0	0	0	0	0
EE	193	82	40	0	0	0	0	0
EI	387	92	33	0	0	0	0	0
ES	155	81	29	7	0	0	0	0
FN	386	99	3	0	0	0	0	0
FO	122	91	12	0	0	0	0	0
FR	7557	96	272	7	6	0	4	0
GB	2353	94	113	20	3	0	0	0
GE	2564	72	971	2	5	0	3	0

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

net	OK	OK in %	NODATA	FRAGMENT	INCOMPL	METAFAIL	NOSERV	RESTFAIL
GO	0	0	232	0	0	0	0	0
GQ	173	80	29	4	0	0	8	0
GR	3425	86	472	1	2	0	43	0
GU	1050	80	237	18	0	0	1	0
GX	99	86	12	3	1	0	0	0
HA	1197	92	98	0	1	0	0	0
HC	383	65	193	3	0	0	10	0
HE	683	79	180	0	0	0	0	0
HF	0	0	51	0	0	0	0	0
HL	1965	73	659	51	1	0	0	0
HP	810	93	39	20	1	0	0	0
HS	496	82	97	1	0	0	5	0
HT	1813	80	416	14	7	0	3	2
HU	569	87	81	0	1	0	0	0
IP	0	0	85	0	0	0	0	0
IS	0	0	1624	0	0	0	2	0
IV	14544	79	3462	207	19	0	6	45
IX	428	67	190	13	2	0	0	0
IY	465	62	262	10	1	0	7	0
JS	0	0	204	0	0	0	0	0
K3	17	77	5	0	0	0	0	0
KO	4380	62	787	1666	55	0	91	0
KQ	220	69	43	50	0	0	2	0
LC	0	0	43	0	0	0	0	0
LE	1441	91	95	0	0	0	33	0
LU	455	97	13	0	0	0	0	0
LX	71	64	38	0	1	0	0	0
M1	270	67	130	0	0	0	1	0
MD	116	87	16	0	0	0	0	0
ME	28	62	17	0	0	0	0	0
MK	368	99	1	0	0	0	0	0
ML	52	71	21	0	0	0	0	0
MN	732	66	356	17	0	0	1	0
MT	348	83	67	2	0	0	0	0
NH	319	63	172	0	0	0	13	0
NI	153	68	66	2	1	0	0	0
NL	9688	87	1243	117	24	0	2	0
NO	3371	87	196	9	6	0	252	0
NR	33	12	235	0	0	0	0	0
NS	1656	42	1961	1	0	0	265	0
OE	877	79	210	0	20	0	0	0
OT	538	79	89	5	2	0	0	41
OX	491	69	209	3	1	0	2	0
PL	348	99	2	0	0	0	0	0

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

net	OK	OK in %	NODATA	FRAGMENT	INCOMPL	METAFAIL	NOSERV	RESTFAIL
PM	33	13	214	0	0	0	0	0
QE	230	55	161	1	0	0	22	0
QM	254	72	96	0	0	0	0	0
RD	523	98	5	0	1	0	0	0
RF	46	100	0	0	0	0	0	0
RN	197	45	208	6	17	0	8	0
RO	4070	81	879	7	11	0	2	0
SI	135	53	118	0	0	0	0	0
SJ	454	75	139	6	4	0	0	0
SK	240	50	237	0	0	0	0	0
SL	1054	81	215	6	19	0	0	0
SS	30	85	5	0	0	0	0	0
ST	346	99	1	0	0	0	0	0
SX	592	70	231	1	0	0	14	0
TH	1422	90	133	3	1	0	20	0
TQ	213	50	198	7	1	0	0	0
TT	0	0	143	0	0	0	0	0
TU	104	22	361	0	1	0	0	0
TV	19	44	24	0	0	0	0	0
UD	80	32	168	2	0	0	0	0
UP	423	94	23	0	4	0	0	0
UR	282	71	106	5	0	0	0	0
UT	207	93	15	0	0	0	0	0
VI	257	80	55	4	2	0	0	0
VM	49	100	0	0	0	0	0	0
WE	0	0	34	0	0	0	0	0
WM	98	45	118	0	0	0	0	0
XE	216	57	158	0	0	0	1	0
XP	1472	99	3	0	0	0	0	0
Y8	178	79	45	0	0	0	0	0
YV	99	55	81	0	0	0	0	0
ZO	298	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.

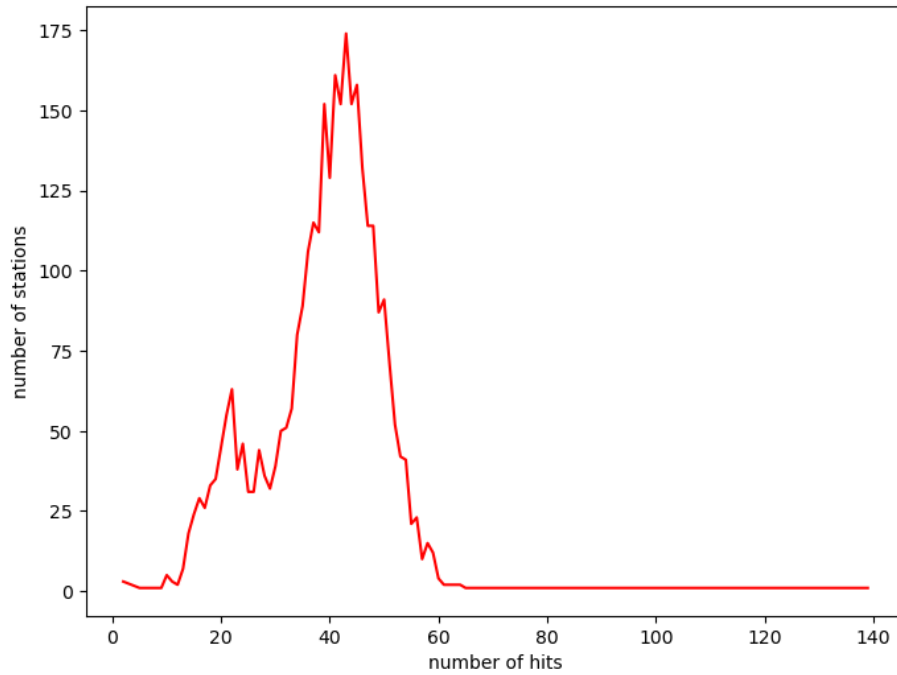


Figure 2: Request hit statistics showing the distribution of the 125040 requests on the 3227 evaluated stations

## 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 27-12-2025 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%)	2010 (100.0%)
BGR	4 ( 0.2%)	9 ( 0.4%)	41 ( 2.0%)
BGS	0 ( 0.0%)	1 ( 0.0%)	4 ( 0.2%)
ETH	1 ( 0.0%)	2 ( 0.1%)	3 ( 0.1%)
GFZ	0 ( 0.0%)	1 ( 0.0%)	62 ( 3.1%)
ICGC	9 ( 0.4%)	6 ( 0.3%)	24 ( 1.2%)
INGV	10 ( 0.5%)	6 ( 0.3%)	8 ( 0.4%)
KOERI	43 ( 2.1%)	52 ( 2.6%)	14 ( 0.7%)
LMU	0 ( 0.0%)	2 ( 0.1%)	3 ( 0.1%)
NIEP	4 ( 0.2%)	7 ( 0.3%)	4 ( 0.2%)
NOA	20 ( 1.0%)	22 ( 1.1%)	12 ( 0.6%)
ODC	0 ( 0.0%)	1 ( 0.0%)	18 ( 0.9%)
RESIF	4 ( 0.2%)	1 ( 0.0%)	13 ( 0.6%)
UIB/NORSAR	4 ( 0.2%)	2 ( 0.1%)	10 ( 0.5%)

failures of routing client: 0

failures of federator: 5

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 24-01-2026 00:32 MEST usingpandoc 2.18.

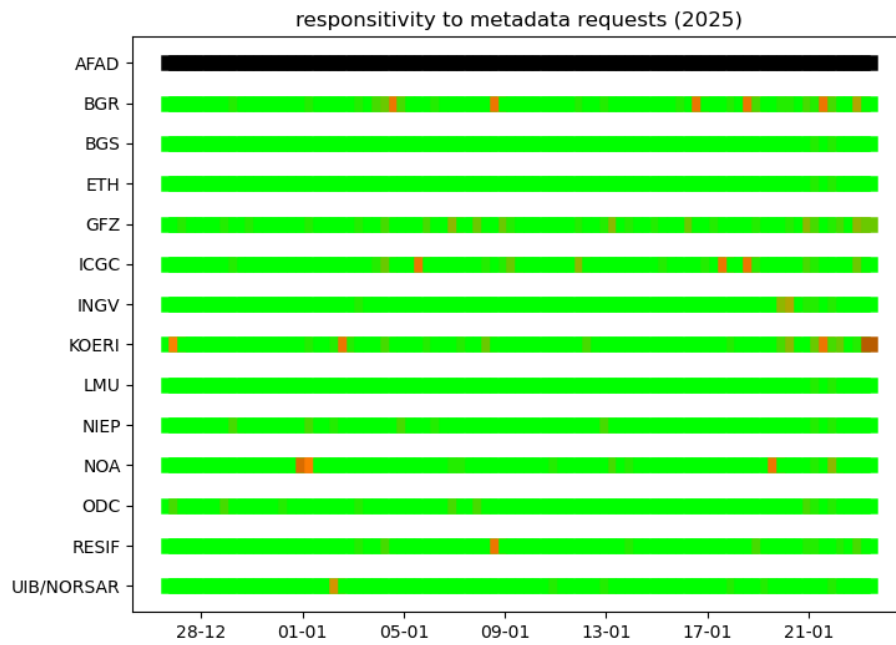


Figure 3: Responsiveness of all servers plotted with a granularity of 8h; green = 0% errors, orange = 10%, brown = 50%, black = 100%