

# EIDA Availability Report

**Created at 04-01-2026 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 04-10-2025 and 04-01-2026 00:32 using station metadata valid since 04-01-2025.

### Counters:

- unrestricted stations offering channels HHZ,BHZ,EHZ,SHZ: 3348
- evaluated stations: 3224
- number of requests: 125288

## Waveform availability plot

Color coded plot of evaluated EIDA stations. Shows results of 125288 random requests between 04-10-2025 and 04-01-2026. 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 (260104)

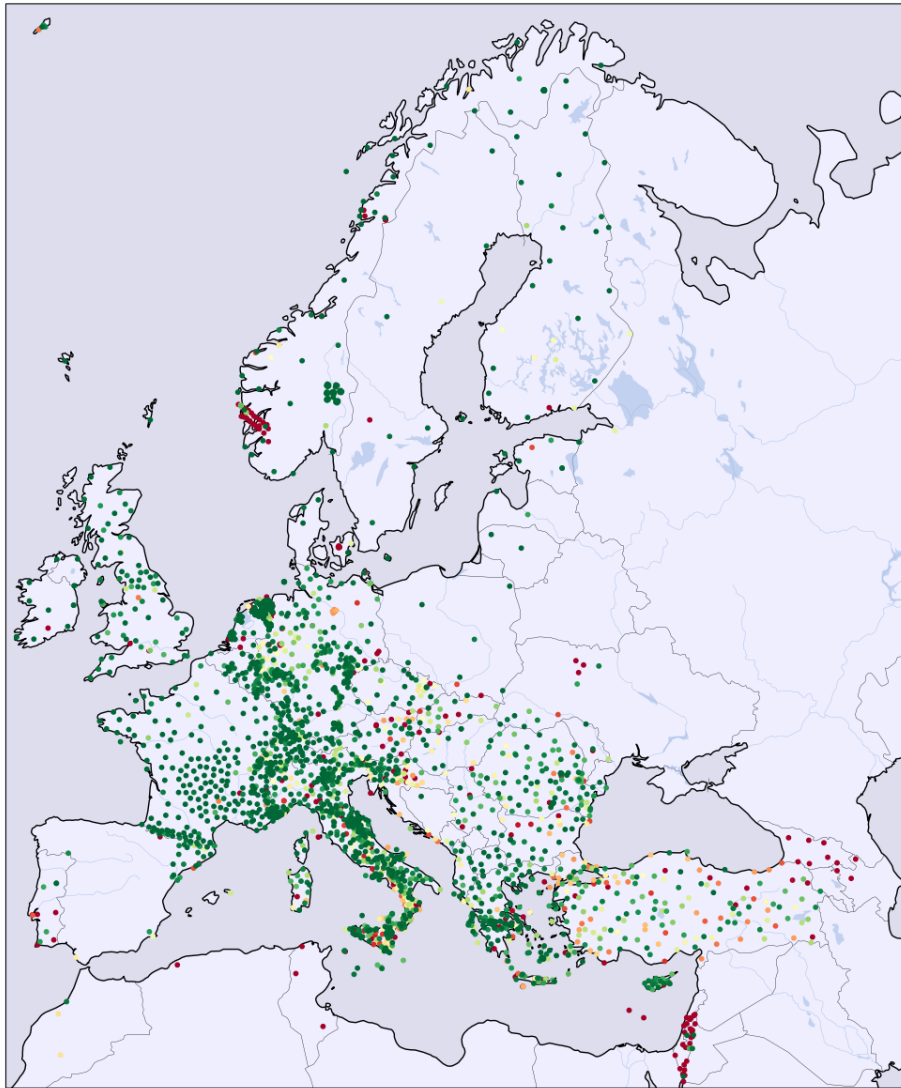


Figure 1: Availability of stations: green 100%, yellow 50%, red 0%

**Request status statistics of networks:**

net	OK	OK in %	NODATA	FRAGMENT	INCOMPL	METAFAIL	NOSERV	RESTFAIL
1D	74	83	15	0	0	0	0	0
1I	65	61	40	0	0	0	0	0
2D	195	82	42	0	0	0	0	0
2I	229	86	36	0	0	0	0	0
3D	79	35	145	0	0	0	0	0
4P	437	59	269	4	20	0	0	0
5A	2	50	0	2	0	0	0	0
5B	33	100	0	0	0	0	0	0
5R	105	60	68	0	0	0	0	0
7B	573	52	510	2	2	0	1	0
7C	0	0	133	0	0	0	1	0
7F	119	95	4	0	0	0	1	0
8D	40	97	0	1	0	0	0	0
8N	70	56	54	1	0	0	0	0
9L	32	64	18	0	0	0	0	0
9S	52	54	43	0	0	0	0	0
AB	0	0	131	0	0	0	0	0
AC	438	92	32	0	0	0	4	0
BE	1260	95	64	0	2	0	0	0
BN	219	64	111	7	0	0	2	0
BQ	398	87	40	0	1	0	15	0
BS	720	64	373	14	4	0	0	0
BW	1857	78	511	0	0	0	0	0
C4	82	66	42	0	0	0	0	0
CA	840	86	112	17	2	0	0	0
CH	3426	91	235	94	2	0	0	0
CL	577	90	62	0	0	0	0	0
CP	0	0	98	0	0	0	0	0
CQ	442	56	330	8	2	0	0	0
CR	509	39	784	0	6	0	0	0
CZ	649	83	128	1	2	0	0	0
DK	565	41	792	0	8	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	84	35	1	0	0	0	0
EI	395	91	36	0	0	0	0	0
ES	161	78	40	3	0	0	0	0
FN	402	98	5	0	0	0	0	0
FO	121	85	20	0	0	0	0	0
FR	7590	96	265	7	4	0	3	0
GB	2150	93	105	20	3	0	16	0
GE	2513	72	947	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	171	85	25	3	0	0	2	0
GR	3348	86	469	1	4	0	43	0
GU	1076	81	234	17	0	0	1	0
GX	85	85	13	2	0	0	0	0
HA	1211	92	101	0	1	0	0	0
HC	359	61	216	3	1	0	9	0
HE	685	78	183	0	0	0	0	0
HF	0	0	45	0	0	0	0	0
HL	1932	74	622	47	1	0	0	0
HP	810	93	38	20	0	0	0	0
HS	523	87	70	2	0	0	0	0
HT	1783	79	443	12	5	0	0	2
HU	550	85	91	0	1	0	0	0
IP	0	0	87	0	0	0	0	0
IS	0	0	1614	0	0	0	1	0
IV	14485	79	3501	204	28	0	3	44
IX	400	65	199	11	3	0	0	0
IY	439	59	281	6	1	0	6	0
JS	0	0	208	0	0	0	0	0
K3	21	80	5	0	0	0	0	0
KO	4377	62	764	1710	55	0	91	0
KQ	231	66	56	56	0	0	5	0
LC	0	0	40	0	0	0	0	0
LE	1405	90	105	0	0	0	45	0
LU	449	95	21	0	0	0	0	0
LX	78	63	42	0	2	0	0	0
M1	286	67	137	0	0	0	1	0
MD	118	87	17	0	0	0	0	0
ME	26	56	20	0	0	0	0	0
MK	373	99	1	0	0	0	0	0
ML	66	82	14	0	0	0	0	0
MN	750	66	361	14	1	0	1	0
MT	351	83	70	1	0	0	0	0
NH	261	53	215	2	0	0	9	0
NI	154	70	64	2	0	0	0	0
NL	9685	87	1239	116	22	0	2	0
NO	3413	88	193	8	7	0	252	0
NR	28	10	240	0	0	0	0	0
NS	1632	42	1948	1	0	0	266	0
OE	866	78	214	0	23	0	0	0
OT	541	80	91	7	2	0	0	35
OX	498	70	204	3	2	0	2	0
PL	352	99	2	0	0	0	0	0
PM	35	14	207	0	0	0	0	0

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

net	OK	OK in %	NODATA	FRAGMENT	INCOMPL	METAFAIL	NOSERV	RESTFAIL
QE	232	58	139	1	0	0	22	0
QM	256	72	98	0	0	0	0	0
RD	503	99	2	0	2	0	0	0
RF	40	100	0	0	0	0	0	0
RN	210	46	212	4	16	0	7	0
RO	4084	81	902	6	10	0	3	0
SI	135	54	111	0	0	0	0	0
SJ	442	75	140	4	3	0	0	0
SK	246	50	238	0	0	0	1	0
SL	1072	83	192	5	18	0	0	0
SS	30	85	5	0	0	0	0	0
ST	348	99	1	0	0	0	0	0
SX	641	71	240	1	0	0	9	0
TH	1385	89	131	3	2	0	20	0
TQ	201	51	178	9	1	0	0	0
TT	0	0	133	0	0	0	0	0
TU	100	21	368	0	1	0	0	0
TV	25	54	21	0	0	0	0	0
UD	85	31	180	3	0	0	0	0
UP	421	94	23	0	2	0	0	0
UR	256	70	99	4	0	0	5	0
UT	201	93	13	0	0	0	0	0
VI	231	79	57	3	1	0	0	0
VM	50	100	0	0	0	0	0	0
WE	0	0	37	0	0	0	0	0
WM	101	47	112	0	0	0	0	0
XE	227	59	156	0	0	0	1	0
XP	1472	99	5	0	0	0	0	0
Y8	159	79	41	0	0	0	0	0
YD	10	1	87	0	0	0	637	0
YV	104	57	77	0	0	0	0	0
ZO	309	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.

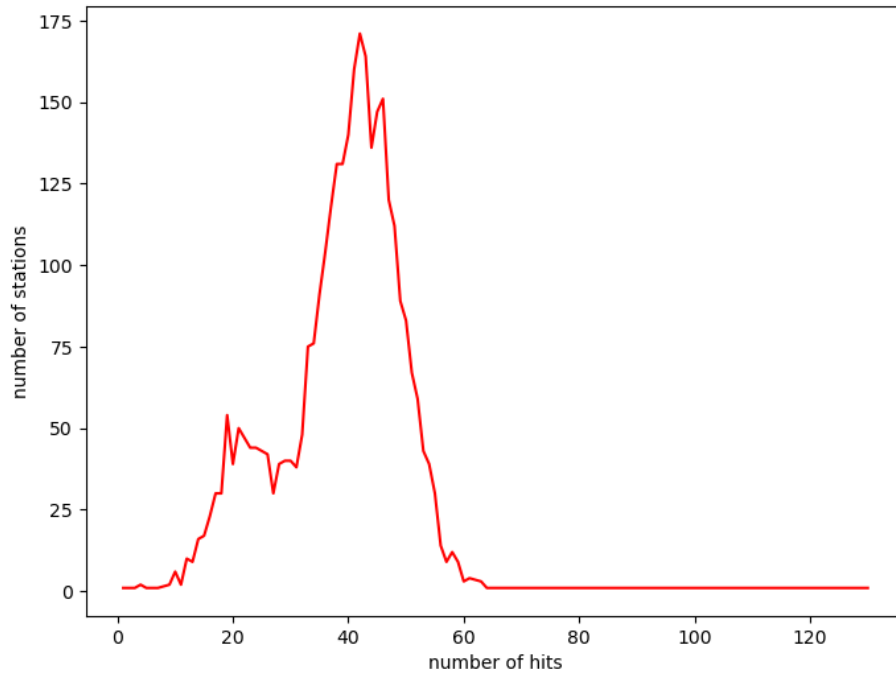


Figure 2: Request hit statistics showing the distribution of the 125288 requests on the 3224 evaluated stations

## 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 07-12-2025 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%)	1965 (100.0%)
BGR	11 ( 0.5%)	15 ( 0.7%)	36 ( 1.8%)
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%)	261 (13.3%)
ICGC	1 ( 0.0%)	1 ( 0.0%)	17 ( 0.9%)
INGV	1 ( 0.0%)	0 ( 0.0%)	19 ( 1.0%)
KOERI	19 ( 0.9%)	84 ( 4.2%)	10 ( 0.5%)
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%)	15 ( 0.8%)
ODC	0 ( 0.0%)	0 ( 0.0%)	75 ( 3.8%)
RESIF	3 ( 0.1%)	2 ( 0.1%)	15 ( 0.8%)
UIB/NORSAR	69 ( 3.4%)	231 (11.5%)	41 ( 2.1%)

failures of routing client: 0

failures of federator: 50

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 04-01-2026 00:32 MEST usingpandoc 2.18.

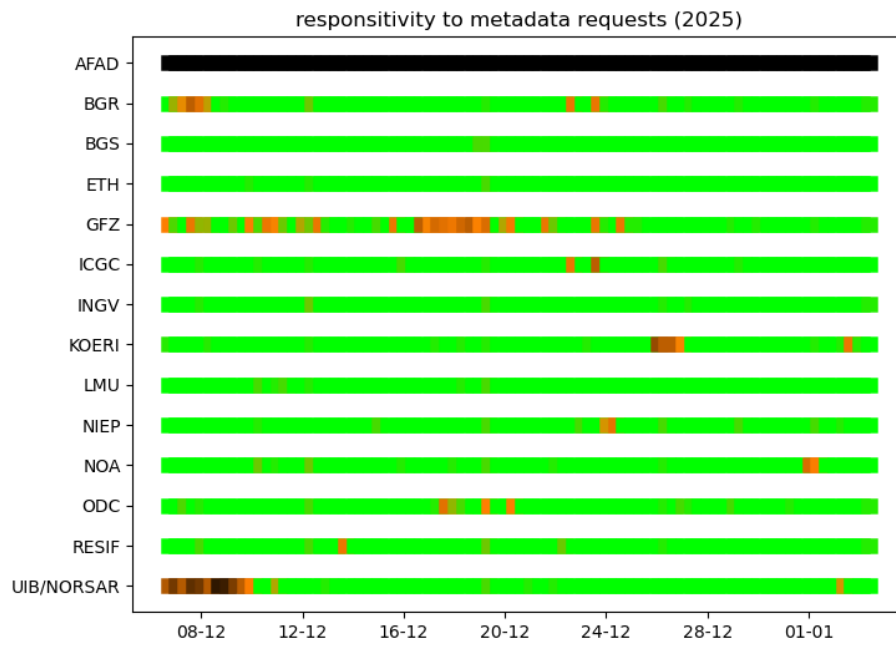


Figure 3: Responsiveness of all servers plotted with a granularity of 8h; green = 0% errors, orange = 10%, brown = 50%, black = 100%