

# FDSN Working Group 3

## Meeting Minutes

16 July 2023, 12:00 - 13:00 CEST  
R2, City Cube, Level 3, IUGG General Assembly 2023

### Attendees

Name	Email	Organization
Nick Ackerley	nicholas.ackerley@nrcan-rncan.gc.ca	NRCan
Jerry Carter	jerry.carter@earthscope.org	EarthScope Consortium
Atalay Ayele	atalay.ayele@aau.edu.et	Addis Ababa Univ.
Tim Ahern	tim.ahern@earthscope.org	EarthScope-Oceans
Mark Chadwick	m.chadwick@gns.cri.nz	GNS-Science
Wen-Tzong Liang	wtl@earth.sinica.edu.tw	IESAS, Taiwan
Luděk Vecsey	vecsey@ig.cas.cz	IG CAS
Peter Danecek	peter.danecek@ingv.it	INGV
Martin Valee	vallee@ipgp.fr	IPGP, GEOSCOPE
Carlo Cauzzi	carlo.cauzzi@sed.ethz.ch	ORFEUS
Diego Franceschi	diego.franceschi@ingv.it	INGV
Alfonso Mandiello	alfonso.mandiello@ingv.it	INGV
Milena Moretti	milena.moretti@ingv.it	INGV
Lucia Margheriti	lucia.margheriti@ingv.it	INGV
Xyoli Pérez-Campos	xyoli.perez.campos@ctbt.org	CTBTO
Peter Voss	pv@geus.dk	GEUS
Jonathan Hanson	j.hanson@gns.cri.nz	GNS, NZ
Ionescu Constantin	viorel@inf.ro	NOEP, RO
Yinshuang Ai	ysai@mail.iggcas.ac.cn	CAS, China
Fernando Carrilho	fernando.carrilho@ipma.pt	IPMA
Nikolaus Horn	nikolaus.horn@geosphere.at	GSAT

Istvan Bondar	bondar.istvan@csfk.org	CSFK
John Clinton	jclinton@sed.ethz.ch	SED, ETHZ
Florian Haslinger	haslinger@sed.ethz.ch	SED/ETHZ
Michelle Guy	mguy@usgs.gov	USGS/NEIC
Tom Garth	tom.garth.isc.ac.uk	ISC
Angelo Strollo	strollo@gfz-potsdam.de	GFZ
Klaus Stammeler	klaus.stammeler@bgr.de	BGR
Adrienne Moseley	adrienne.moseley@ga.gov.au	Geoscience Australia
Pankaj Kumar	kumarpankaj.iitr@gmail.com	IIT Roorkee, India
Jérôme Salichon	j.salichon@gns.cri.nz	GNS Science TePu Ao
Mouse Reusch	topo@uw.edu	PNSN
Dmitry Storchak	dmitry@isc.ac.uk	ISC
Ryan Gallacher	ryan@isc.ac.uk	ISC
Wayne Crawford	crawford@ipgp.fr	IPGP/CNRS
Michelle Grobbelaar	michelle@geoscience.org.za	CGS
Javier Quinteros	javier@gfz-potsdam.de	GFZ
Chad Trabant	chad.trabant@earthscope.org	EarthScope Consortium
Phillip Crotwell [remote]	crotwell@seis.sc.edu	U. of South Carolina
Renate Hartog [remote]	jrhartog@uw.edu	PNSN/UW

## Review and adopt agenda

The agenda was presented and accepted.

## Review and approve 2021 meeting minutes

Minutes approved from 2021 meeting.

Minutes will be sent in a couple of weeks to be approved through the WG3 mailing list.

## Review Action Items

Action items and their status is included in the meeting overview:

[https://fdsn.org/media/wg/III/2023/FDSN\\_WG3\\_2023\\_Overview.pdf](https://fdsn.org/media/wg/III/2023/FDSN_WG3_2023_Overview.pdf)

There was general agreement that incomplete action items from 2019 should be kept.

Action on fee structure was completed and will be covered in the second plenary.

Action item SeedLink v4 proposal completed

Action item queryauth status completed, amended to clarify discussion on WG3 mailing list.

Action item on sending email to encourage registration of centers, services in the data centre registry. Request for volunteers to communicate the message in their region. Contacts in Central America, and South Africa offered to help. Email is drafted and translated, expecting to send out within the week. Call for more promotion via talks or meetings. FDSN could have representatives give talks; this would in particular increase awareness among early-career scientists.

Expand existing **Action Item** on JSON output in the fdsnws-event service: will be combined with a call to identify a group to work on this action and other JSON output.

## Federated authentication overview and status

Presentation: <https://fdsn.org/media/wg/III/2023/WG3-2023-AAI-Quinteros.pdf>

Javier Quinteros presented an overview of the authentication as specified in the FDSN specifications. Also, the approach adopted by EIDA and a potential roadmap for the future at the FDSN level.

Authentication merely identifies the user; authorization checks which claims for what the user has access to. Currently, only dataselect has a “queryauth” method.

An overview of the token used by EIDA and the JWT token apparently in the new AAI system of EarthScope was presented.

Recommendation was to standardize on JWT as the token type. Include the submission of JWTs via HTTP headers for all FDSN services and recommend this usage over the user/pass used in fdsnw-dataselect, which could be deprecated in the near future. It was noted that including a token in service requests could be optional or required depending on data center needs. This is a step in the direction for federated authentication, where tokens created by one group could be trusted by others, e.g. EarthScope tokens used with EIDA services.

## Discussion

Bondar - will this satisfy the CTBTO request for authentication? Quinteros - yes.

Voss - have you communicated about this with the CTBTO? Quinteros - No, but that's what we had in mind as we developed this solution. Strollo - It's ok because no action is needed from the organization to use it. Trabant - some users, like CTBTO, will need to see this in the specification so that they can adopt it. Danecek - It may be necessary to define under what conditions tokens are issued for some service providers.

Trabant - what about unmanned kiosks requiring non-human indefinite access. Quinteros - 1) authentication is not mandatory, anyone can still request data anonymously; 2) usage of brokers can also be a solution for data centres which do require authentication. Danecek - need a mechanism to void users if a federated token service is used.

## Updates to the FDSN recommendations for DOIs

Presentation: <https://fdsn.org/media/wg/III/2023/WG3-2023-DOI-updates-Quinteros.pdf>

Javier Quinteros presented an updated version of the "FDSN Recommendations for DOI for seismic networks". This includes a few improvements and updates driven also by the evolution of the DataCite metadata schema. Some of the changes come from a collaboration between GFZ, F-UJI developers, and ETH. The updated version went through some iterations in a discussion group formed by members of IRIS/EarthScope, GFZ, RESIF, ETH, GEONET-GNS, ANU (Australia), CSIRO, and many others.

## Discussion

Crawford - It would be beneficial if these new data (e.g. ORCIDIDs) could be entered via some sort of GUI, is this possible? Quinteros - yes it is labour-intensive. There is a form for network/DOI metadata now on fdsn.org, it may be possible to update it to include the new fields and make updates easier.

Crawford - Is the StationXML format specification really just "xml"? Quinteros - we don't have a mime type for StationXML - we can check if we can mint one. Trabant - do people think that would be valuable? General response - yes. Trabant - elsewhere the general feeling seemed to be that mime/media types is a "wild west" and unclear how broadly useful it is. Crawford - it would help with FAIR data-mining, though. Trabant - take minting of mime type as action item - needs to be done for miniSEED updates anyway.

Strollo - one thing that is motivating this is that since 2014 DataCite updated their metadata recommendations.

**Action item** - Investigate media type (MIME) registration of StationXML and review of the description of the registration for miniSEED.

Responsible: WG Chair

## SeedLink v4 proposal overview and status

Presentation:

[https://fdsn.org/media/wg/III/2023/FDSN2023\\_WGIII\\_SeedLinkv4\\_Heinloo-Strollo-Trabant.pdf](https://fdsn.org/media/wg/III/2023/FDSN2023_WGIII_SeedLinkv4_Heinloo-Strollo-Trabant.pdf)

Angelo Strollo presented the SeedLink4 proposal, giving an overview of it and showing what we can expect in the near future. See particularly <https://github.com/FDSN/SeedLink/issues>.

Not in presentation: JWT authentication has recently been added - this will please CTBTO.

### Discussion

Ackerley - suggested taking a different approach to votes - perhaps Google Forms or similar instead of email. The flood of voting emails is hard to track, and fills inboxes. Trabant - authentication is a problem with both email and tools like google forms.

Ahern - is the intention that data centres should support both versions of SeedLink for a time?

Strollo - Yes, the idea is that this should give time for transition (GEOFON). Trabant -

EarthScope will do both transparently. Strollo - The fact that we have a few representative manufacturers involved is a good thing.

Trabant - with the first SeedLink good penetration was achieved because end users demanded it from manufacturers & software providers - encouraged people to do that with SeedLink v4, too.

## Proposal: web services specification change team

Some details in meeting overview presentation:

A number of issues have accumulated in the GitHub repositories for the web service specifications. These range from typos, clarifications, to new features.

Trabant proposes to call for a group to review the issues. Would like feedback on the scope of this groups' work. Limited to backward compatible changes? Include breaking changes?

Trabant - example of a simple revision issue: we specified port 80 - this was unnecessary ("dumb"), and excludes HTTPS (default port 443).

Danecek - If you make the specification more specific, it may be unclear whether it breaks things. Quinteros - Could we add authentication? Trabant - Now is a good time for that.

Crotwell - If things move slowly, and we limit to non-breaking changes, it could be too slow. Encourages us to go ahead and address even breaking changes.

Trabant - Can group specification revision changes as breaking/non-breaking/grey categories for later consideration.

**Action Item** - call for an ad hoc team to review the accumulated web service specification issues, draft changes and propose specification revisions for WG review.

Responsible: WG Chair

## Any other business

- John Clinton proposes to make standard a web service run by ESM. The service provides waveforms, and other data, related to an event. It is incredibly useful. [ESM Event-Data Web-Service \(esm-db.eu\)](http://esm-db.eu)

The bigger question here is how many services do we want? They take maintenance, but consensus was that more than the current 4 is easily justified. Ahern - proposal for legacy data includes new services. Trabant - DAS data will require new services most likely, or at least largish revisions.

How can members share services that they think may be interesting for others? In a pre-proposal phase?

Trabant - an area could be created on fdsn.org that lists pre-proposal services, also the data center registry allows including non-FDSN services so they could go there.

- Strollo - proposes highlighting non-standard services at the FDSN registry
- Storchak - promoted IASPEI dinner - notes drinks are included in price

Adjourn 13:30