



International Federation of Digital Seismograph Networks

FDSN Working Group III Report

Closing Plenary Meeting
IAGA/IASPEI 2021, India (online)



Retained 2019 Action Items 1/2

Action Item: Related to QoS standards. Once feedback had been incorporated, a Survey Monkey will be developed to get input from data centers as to the priority order that they should be implemented as QoS standards for the Federated System.

Responsible: IRIS

Action Item: When an EIDA proposal related to a new authentication system is ready it should be distributed to the WGIII for comments.

Responsible: EIDA



Retained 2019 Action Items 2/2

Action Item: Standardisation of the required QA service API including request parameters, and is expected to be coordinated between IRIS and EIDA, those being the two Quality systems in operation at EIDA and IRIS.

Responsible: IRIS and EIDA

Action Item: An action was proposed that after the QA service API has been defined, then look towards getting this into SeisComp3 assuming funding can be found.

Responsible: FDSN



SeedLink v4 Proposal

An overview of a next generation SeedLink protocol specification was presented.

A Joint development of GEOFON and IRIS.

The screenshot shows the SeedLink 4.0.0 DRAFT website. The header includes the SeedLink logo and the FDSN logo. Below the header is a search bar labeled 'Search docs'. A navigation menu on the left lists: Overview (highlighted), Protocol, Versions, Software, and FDSN home. The main content area is titled 'Overview' and contains the following text:

SeedLink is a protocol designed for the transmission of seismological, and related, data in the miniSEED format. The protocol is TCP-based and has been used operationally in a wide variety of environments for many years.

The core protocol is designed to be very small with a number of optional capabilities defined for enhanced use. This allows for operation in a wide range of hardware and environments, from simple microcontrollers used in digitizers to powerful servers in a datacentre.

See [Protocol](#) for details.

History

SeedLink protocol was originally created in GFZ Potsdam around 2000. Version 3, the first widely used version of the protocol, was a result of the development within the MEREDIAN EC project under the lead of GEOFON/GFZ Potsdam and ORFEUS/KNMI. Later, a number of extensions to SeedLink v3 were added by GFZ Potsdam and IRIS DMC.

See the [Versions](#) for a history of protocol changes.

- [Overview](#)
- [Protocol](#)
 - [Abstract](#)
 - [Requirements](#)
 - [Overall Operation](#)
 - [Authentication](#)
 - [Data formats](#)

Action Item (2021): Send SeedLink v4 proposal package to mailing list and solicit parties interested in participating in the Proposal Review team for this submission.

Responsible: GEOFON, IRIS and WG Chair



Authentication for all web service specifications

CTBTO IDC requested that the web service specifications for `fdsnws-station` and `fdsnws-event` allow an authentication mechanism, i.e. as supported by `fdsnws-dataselect`.

Suggestions actions discussed:

1. Modify *all* web service specifications to include the *optional* `queryauth` method.
2. Advise CTBTO to implement the same authentication as `fdsnws-dataselect` even though it is undocumented
3. Make not changes

Concerns discussed included supporting increased data and metadata authorization is counter to the FDSN mission of promoting open data, supporting the positive direction of the CTBTO in this regard, and the effect of the specification on software implementers.

Action Item (2021): Call for discussion on the mailing list to determine the appropriate action to the request to include a `queryauth` method, the `fdsnws-dataselect` authorization mechanism, in all web service specifications or alternative solutions. A discussion period will be followed by a vote, potentially for a small variety of options.

Responsible: WG Chair and WG



Data Center Registry

This new service was discussed with these highlights:

- DOI or free-form Citation for Data Center
 - Separate citation from data via network DOIs
- More data centers exist, how to promote registration?

Action Item (2021): Data Center Registry, regarding how to best encourage registrations: Generate a message to be circulated by the FDSN via email, and specifically targeting coordinators in different regions, and potentially being translated into other languages.

A follow-on action may be to write an article to broaden awareness. Suggested journals were SRL and EOS. EOS in particular has a broad range and support for multiple languages.

Responsible: WG Chair and FDSN Chair



Potential JSON standardization for fdsnws-event

A question was raised about the potential for standardizing a JSON-formatted output for the fdsnws-event service, noting that different data centers are already offering JSON but in different, incompatible formats.

Action Item (2021): Call for an ad hoc committee to investigate the potential for a standard to adopt or develop for JSON output from fdsnws-event

Responsible: WG Chair