Recommendation of the Seedlink v4 Evaluation Review Team

In January 2023 working group 3 approved advancing the proposal for a revision of the SeedLink protocol to the evaluation stage. A review team was created to evaluate this draft specification, identify issues and make a recommendation on approval. The team has concluded its review and all issues have been addressed by the proposers.

The evaluation team recommends approval of the Seedlink version 4 specification as submitted and revised.

The SeedLink protocol is widely used but lacked an official specification. This revision proposal addresses this with a detailed document as version 4, corrects some issues with the prior version 3, and adds new capabilities like miniseed3 support, that will provide increase longevity. The protocol also permits dual implementation for both the existing version 3 and new version 4 specification via an upgrade command, allowing existing clients and servers to continue to use the prior version where needed. Also it allows security over TLS for raw sockets and over HTTPS/WSS for web sockets.

Adoption by the FDSN will provide an important standard for realtime streaming of seismic data and will facilitate adoption of the protocol by users, equipment vendors and data centers improving interoperability and data exchange.

Key features of the SeedLink version 4 specification include:

> FDSN miniseed2 and miniseed3
> FDSN source ids
> Variable length packets
> Improved error handling
> Authentication via passwords or JWT tokens
> Wildcards in selections
> Payload formats
> Websockets
> Secure sockets via TLS

The draft specification is available at https://seedlink.readthedocs.io/en/draft/ and issues and resolutions are available at https://github.com/FDSN/SeedLink/issues.

Thank you,

Charles Blais
Eliseo Banda
Mark Chadwick
Philip Crotwell
David Easton
Roman Racine