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SDS Iterators for Accessing Seismology Data on Grid

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For the applications in the SEEGRID-SCI Seismology virtual organization, seismic data is being collected from various national seismology centers in Southeastern Europe and organized by utilizing grid storage elements and the LFC file catalogue. Our aim is to serve lists of earthquakes, stations , sensor information and waveform files using a high level interface that is easy to use and adapt. For this reason AMGA metadata catalogue is used to store the details of seismic data. High level Seismic Data Server (SDS) iterators developed in C++ can then be used to access the seismic data at the programming language level. SDS iterators can automatically generate AMGA queries for retrieving data given high level specifications such as dates, hours and locations. In this presentation, we wil discuss details and example usages of SDS iterators and also provide a list advantages and performance gains that can be obtained from using such iterators.