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The Güralp smart seismic range of instruments benefit from enhanced networking functionality with the new Güralp Data Centre (GDC) software package for easy mass data acquisition and station metadata observing

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Güralp's smart seismic range of seismic instrumentation (incorporating Certimus, Fortimus, Minimus, Radian and Aquarius) prioritizes technical features like low-latency, communication, and computational processes, as well as practical features like compatibility and modular design for easy adaptation and integration with existing networks.

The Güralp Data Centre interface offers 'one click' tools to configure seismic instruments to stream data to a central (typically cloud based) server. From here the data is saved in miniSEED form in configurable folder structures. This application is particularly important for operators dealing with large volumes of seismic waveform data from regional and national networks. The GDC proves to be particularly effective when coupled with low-latency transmission protocols, where data is streamed from seismic stations to the GDC and then efficiently forwarded to the desired location and in the most appropriate format, reducing the overall latency of the system.

Additionally, the data can be streamed on to downstream processors such as Earthworm or SeisComP to build more advanced large-scale seismic monitoring and data analysis systems. Industry standard protocols are employed throughout whilst offering a simple interface to set up and monitor the operation of the network, meaning that the GDC can be easily implemented into existing systems and networks with minimal configuration.

Long term latency monitoring, network outages and bandwidth usage are all captured and displayed in a number of applets that make the maintenance of large networks straight forward. The Güralp Data Centre includes the Discovery software dashboard which allows network managers to monitor key SOH parameters in Realtime and to also configure system on mass.

Trigger events from instruments can be recorded and displayed on a map as part of a range of features dedicated to EEW implementations. This information is conveyed using the open Common Alert Protocol (CAP). The CAP messages are created as a result of individual station or sub-network triggers and will contain important parameters such the on-site recorded PGA, PGV and PGD. This method provides the lowest possible latency for simple network early warning.

