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Combining IMS and non-IMS seismic stations using CTBTO distributed software (NDC-in-a-Box)

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NDC-in-a-Box is an independent software package developed, distributed, and supported by PTS, which is intended for NDCs to establish a verification regime with a number of functions including receiving, archiving, processing and analysing data from IMS stations. To simplify installation and configuration of NDC-in-a-Box package, most software tools and applications are provided via a distributed virtual machine. SeisComp3, which has a large installed base, has been integrated into NDC-in-a-Box since 2016. Automatic data processing is now possible in addition to interactive data analysis.

The standard way to configure non-IMS seismic stations is to use SeisComp3 scripts. Station parameters are imported into the OSDB database or saved as data files within the NDC-in-a-Box virtual machine. An alternative method is introduced here for configuration of non-IMS seismic stations. Based on basic parameters and instrument response file of non-IMS seismic stations, a program developed in Matlab is used to process stations parameters including calculation of instrument response parameters and export them into the database. Standard data files of non-IMS seismic stations can be accessed by NDC-in-a-Box via the shared folder of virtual machines, which simplifies the management of parameters for non-IMS seismic stations parameters and data exchange.

Promotional text

Based on basic parameters and instrument response file of non-IMS seismic stations, a program developed in Matlab is used to process stations parameters including calculation of instrument response parameters and export them into the database.

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