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National Data Centre Experience with the use of NDC-in-a-Box Software

Thursday 22 June 2023 09:20 (1 minute)

We present results from our use and analysis of the most recent release of NIAB, which contains the NET-VISA associator integrated into SeisComp3 (SC3). This version allows for the configuration of non-International Monitoring System (IMS) stations using both the International Data Centre (IDC) DFX detector and NET-VISA. Non-IMS stations from the Australian network and from other regions of interest were integrated into the system and results are presented. We made a comparison of Australian earthquake catalogue with the automatic bulletin produced by the NIAB system. Further, as NIAB now allows for the calculation of IDC magnitudes, (mb_ave and mppln) in both an automatic and interactive mode, these results are also compared with magnitudes in the IDC bulletin. A detailed review of some notable events detected automatically by the NIAB software within Australia and nearby regions is made. These include the Hunga Tonga submarine volcano in January 2022. Finally, this version of NIAB allows for the automatic creation of mixed events i.e. using seismic, infrasound and/or hydroacoustic detections. We present and review examples of these events. Overall it is shown that the current suite of software performs well and can be a reliable verification tool with the ability to satisfy requirements of both regional and local monitoring.

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Promotional text

The presentation shows performance of SC3 NET-VISA software in Australian NDC with IMS and non-IMS stations, compares locally calculated IDC magnitudes with magnitudes in IDC bulletin and makes detailed review of some notable events in the region.

Oral preference format

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