

Geophysical Monitoring System Interactive Analysis Capabilities

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Sandia National Laboratories is developing the Geophysical Monitoring System (GMS) for modernization of the United States National Data Center waveform processing system. The United States is providing the common architecture and processing components of GMS as a contribution in kind to accelerate progress on International Data Centre (IDC) re-engineering. Open source releases of GMS, available on GitHub, have been made annually since 2018. Recently the GMS development effort is focused on interactive analysis capabilities, referred to as IAN. The 2022 GMS open source release includes capabilities to access and display station metadata, waveforms, signal detections, and events (QC mask display is also in development). IAN uses modern web technology, accessed with a common web browser. All displays are fully synchronized with a consistent user experience. The 2022 release also includes a mature, operational quality station state of health (SOH) monitoring capability for CD-1.1 protocol stations, to enhance the ability of system operators to quickly recognize and address station availability and quality issues. GMS is deployed using a cloud-ready Kubernetes containerized platform, hardened for cyber security accreditation. This presentation describes the current GMS interactive analysis and station SOH monitoring capabilities.

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Promotional text

The Geophysical Monitoring System (GMS) is being released as open source software to support IDC re-engineering and improve nuclear test monitoring. This presentation describes the interactive analysis capabilities in the latest GMS release.

Oral preference format

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