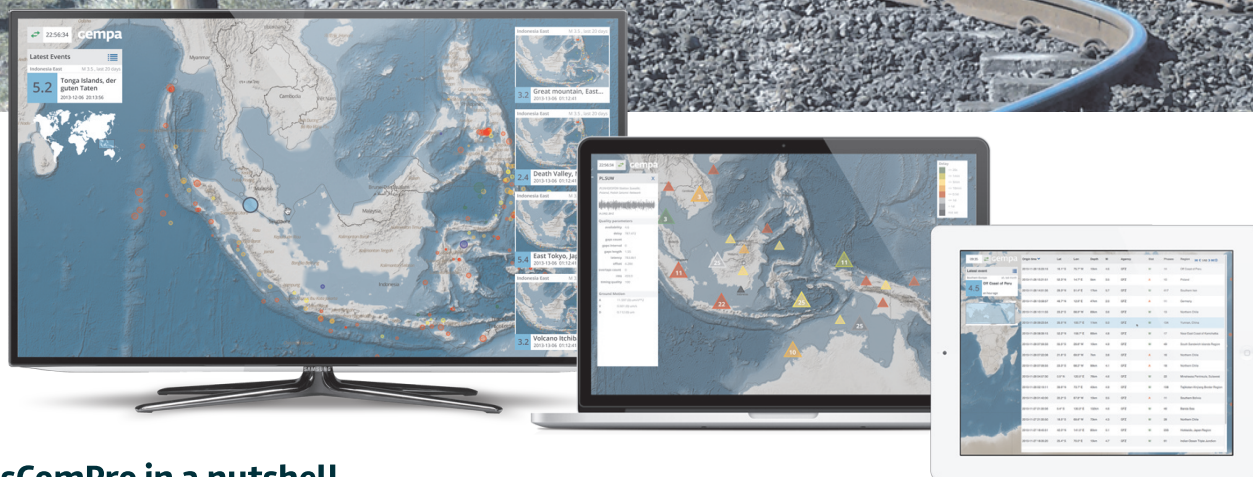


SeisComPro  
Earthquake monitoring



# SeisComPro: Software Extensions and Web Applications for SeisComP



## SeisComPro in a nutshell

SeisComPro provides gempa's extension modules to SeisComP for fulfilling the requirements of an enhanced real-time analysis of natural local earthquakes and for induced microseismicity.

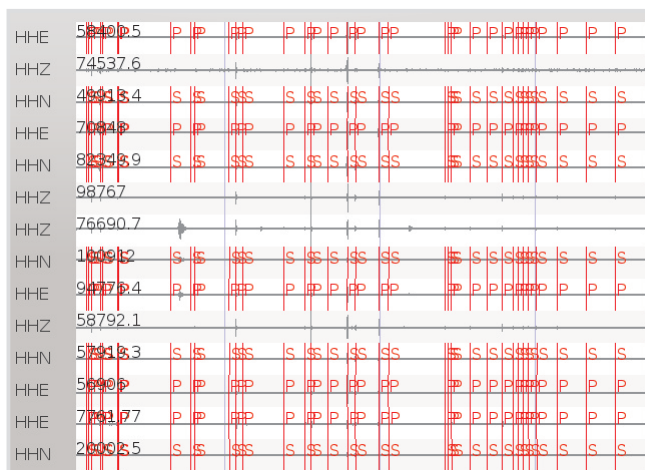
The SeisComPro modules are especially tailored to monitoring high-rate seismicity at a wide range of magnitudes during earthquake swarms, mining or volcano activity, geothermal energy production or extraction of crude oil or natural gas.

- **ccloc** detects microseismicity and classifies earthquakes, explosions or blasts by cross-correlating waveforms with master templates
- **scanloc** clusters and associates phase picks ensuring that earthquake monitoring in high-rate seismicity areas delivers reliable hypocentres
- **sceval** evaluates detections to identify fakes
- **GAPS** allows earthquake analysis from anywhere
- **Recommended extensions:** npeval, scqceval



ccloc

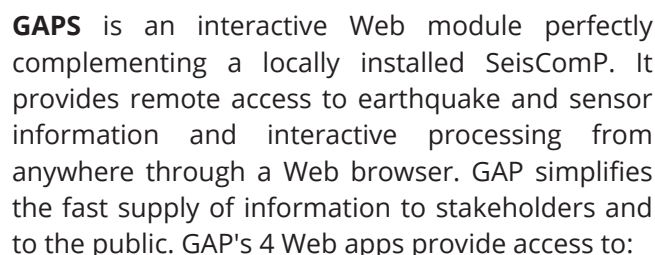
Cross-correlation detection with templates



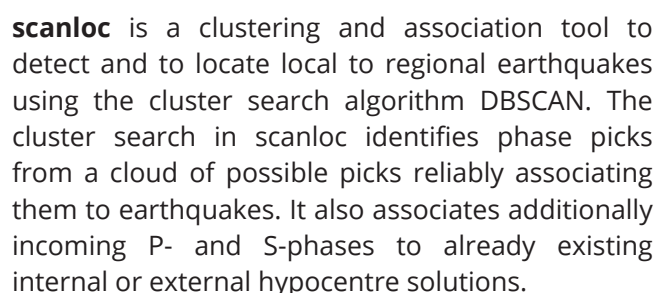
**ccloc** detects earthquakes and other seismic events at very low to large magnitudes by matching waveform templates from known master events to real-time or archived data.

### Monitoring applications:

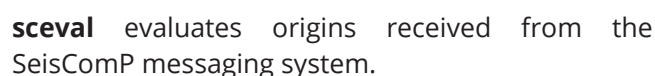
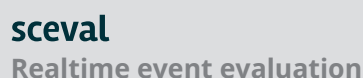
- High-rate natural seismicity including earthquake swarms
- Micro-seismicity
- Induced seismicity at geothermal power plants, in mines or near oil and gas production wells
- Nuclear explosions
- Discrimination of earthquakes from other seismic sources such as explosions



- Earthquake activity in customized source regions and magnitudes: **EQView**
  - Network state and activity: **StationView**
  - Real-time seismogram plots: **TraceView**
  - Interactive seismic analysis: **OriginLocatorView**
- Visit: <https://demo.gempa.de/gaps/>.



In high-seismicity areas scanloc ensures reliability of earthquake hypocentres at a wide range of magnitudes. It is just perfect for monitoring local earthquakes, geothermal sites, mines or carbonhydrate production.



Due to noisy data or unfavourable coincidences of automatic detections of seismic phases from different earthquakes or picks at wrong times earthquake locations may be unreasonable or even fake events. Such outliers are tagged as rejected by sceval and prevented from being mistaken as a real earthquake. Real seismic events are recognised and confirmed. In this way, operators and stakeholders are provided with the correct information on earthquakes avoiding unnecessary work load or excitation.