



## Copernicus Data Infrastructure NRW

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The Competence Center Remote Sensing of the State Agency for Nature, Environment and Consumer Protection North Rhine-Westphalia (LANUV NRW, Germany) uses data from the Earth observation infrastructure Copernicus to support nature conservation tasks. Large amounts of data and computationally intensive processing chains (ingestion, pre-processing, analysis, dissemination) as well as satellite and in-situ data from many different sources have to be processed to produce statewide information products. Other state agencies and larger local authorities of NRW have similar requirements. Therefore, the state computing center (IT.NRW) has started to develop a Copernicus Data Infrastructure in NRW in cooperation with LANUV, other state authorities and partners from research and industry to meet their various needs.

The talk presents the results of a pilot project in which the architecture of a Copernicus infrastructure node for the common Spatial Data Infrastructure of the state was developed. It is largely based on cloud technologies (i.a. Docker, Kubernetes). The implementation of the architectural concept comprised as a use case of an effective data analysis procedure to monitor orchards in North Rhine-Westphalia. In addition to Sentinel 1 and Sentinel 2 data, the new Copernicus Data Infrastructure processes digital terrain models, digital surface models and LIDAR-based data products. Finally we will discuss the experience gained, lessons learned, and conclusions for further developments of the Copernicus Data Infrastructure in North-Rhine Westphalia.