Operational Monitoring of Data Production at KNMI

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Within KNMI a new fully automated system for monitoring the KNMI operational data production systems is being developed: PRISMA (PRocessflow Infrastructure Surveillance and Monitoring Application).

Currently the KNMI operational (24/7) production systems consist of over 60 applications, running on different hardware systems and platforms. They are interlinked for the production of numerous data products, which are delivered to internal and external customers. Traditionally these applications are individually monitored by different applications or not at all; complicating root cause and impact analysis. Also, the underlying hardware and network is monitored via an isolated application.

Goal of the PRISMA system is to enable production chain monitoring, which enables root cause analysis (what is the root cause of the disruption) and impact analysis (what downstream products/customers will be effected). The PRISMA system will make it possible to reduce existing monitoring applications and provides one interface for monitoring the data production.

For modeling and storing the state of the production chains a graph database is used. The model is automatically updated by the applications and systems which are to be monitored. The graph models enables root cause and impact analysis. In the PRISMA web interface interaction with the graph model is accomplished via a graphical representation.

The presentation will focus on aspects of:
• Modeling real world computers, applications, products to a conceptual model;
• Architecture of the system;
• Configuration information and (real world) event handling of the to be monitored objects;
• Implementation rules for root cause and impact analysis.
• How PRISMA was developed (methodology, facts, results)
• Presentation of the PRISMA system as it now looks and works