



# MODELING AND ANALYSIS OF WATER SUPPLY SYSTEMS (MSWSS)

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### WHAT:

Online Water service for analysis of water supply networks integrated with EOSC Cloud computing services and EGI Check-in.

### FOR WHO:

Water supply network operators and researchers.

### ACCESS:

<https://www.eosc-synergy.eu/results/mswss>

## MODELING AND ANALYSIS OF WATER SUPPLY SYSTEMS (MSWSS)

### Description

The “Modelling and Analysis of Water Supply Systems (MSWSS)” on-line service integrates the analysis of toxins in drinking-water supply networks with water distribution networks simulation (EPANET). The MSWSS service allows water infrastructure operators and researchers to analyse hazardous events (e.g. toxics propagation within a pipe system) and may be used in risk management and risk mitigation planning for water utilities. Its integration with the EOSC computing infrastructure and data sharing services enables more complex modelling of water supply systems thereby increasing the number of scenarios that can be analysed.

### Target audience/beneficiaries

The target beneficiaries of MSWSS are water supply/distribution network operators and researchers on water transportation and environment.

### Benefits

By providing a user friendly collaborative web portal with elastic computing backend, MSWSS is going to enhance the exploitation of relevant technology, into an easy-to-use service which can help water distribution network operators and crisis management and prevention authorities (civil protection, national health authorities, police, etc.) to make their intervention more effective in the case of drinking water contamination incidents.

### Use and Impact after EOSC Synergy

The MSWSS service endpoint main interface is based on a customised Galaxy portal integrated with EGI Check-in service to make the access easier for EOSC users. Thanks to EOSC integration it integrates EC3 (Infrastructure Manager, CLUES) for creation and management of computational backend based on elastic virtual clusters built from EOSC Cloud computing resources.

With regard to the protection of drinking water, the economic impact of the MSWSS service will be very high, as the risk of drinking water can have an incalculable financial impact.

MSWSS is being promoted through direct contacts, publications and participation in conferences and events. It was presented on various occasions starting from autumn 2021.