

## EnQuest: A Cloud Datalake Infrastructure for Heterogeneous Analytics in Maritime and Tourism Domains

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Within recent years, transportation and supply chain have been affected by an avalanche of data including IoT devices, online services, social media and others. However, the implemented solutions so far are fragmented, physically distributed, require specialized IT knowledge to deploy, and involve significant IT experience to operate even for trivial tasks. In the context of the ENIRISST+ project, we developed EnQuest<sup>1</sup>, an online data lake that allows users without any IT background to harvest, store, organize, analyze and share heterogeneous, multi-faceted maritime/tourism data. EnQuest provides a zero-administration, zero-cost, integrated framework that enables scientists, practitioners and other stakeholders within the above domains to easily: (i) deploy data acquisition services (crawlers, dataset imports, questionnaire forms), (ii) design and manage versatile customizable data stores, (iii) share whole datasets or horizontal/vertical data shards with other stakeholders, (iv) search, filter and analyze data via an expressive yet simple-to-use graphical query engine and visualization tools, and (v) perform user management and access control operations on the stored data. To the best of our knowledge, this is the first approach in the literature that targets users without an IT background and focuses on collecting, managing, analyzing, and sharing diverse, multi-faceted data in maritime and tourism sectors.

The main goals of the proposed demonstration are to showcase the EnQuest system to the conference participants and promote the work of the ENIRISST+ project consortium. During the demo we will (i) deploy social media crawlers to gather maritime data and show the participants how to process and visualise them, (ii) create live questionnaires using the EnQuest functionality, ask the participants to fill them in and demonstrate the live processed data on appropriate dashboards, and (iii) demonstrate how to import data and subscribe to data flows of other users through the implemented publish/subscribe module. For the needs of the demo we will only require internet connection and a desk; we will have our own laptops to use at the demonstration.

*Keywords: datalakes, cloud systems, data analytics, big data, maritime, tourism*

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<sup>1</sup> <https://webapp.enirisstplus.uop.gr/> (please contact us at trifon@uop.gr for login credentials)