

# A Cloud Computing Based Framework for Storage and Processing of Meteorological Data

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**Abstract.** This document shows an analysis of emerging technology for the recovery of meteorological data and its cost-benefit using GPRS (General Packet Radio Service) data transfer in automatic meteorological stations to improve the monitoring and the prediction of the atmosphere and inland water behavior in Ecuador. In different areas of study comparisons between data or generated registers coming from Automatic Weather Station (AWS) and Conventional Weather Station (CWS) have been made. Therefore, here the authors mainly underline the importance of storing meteorological information using cloud computing. Among the benefits of cloud computing there are high data availability access and high efficiency in technical/scientific studies at lower cost due to the decrease of local investment in technological infrastructure, upgrades, maintenance of equipment and applications.

**Keywords:** Cloud computing · GPRS · Meteorology · Weather Station

## 1 Introduction

In the last few years decision makers and general public have recognized the importance to have a meteorological station network in-situ that provides accurate information to be used for both surveillance and forecast of weather, hydrological surveillance, agrometeorological prediction or to reduce climate risk [1]. In this way the WMO –World Meteorological Organization –established the creation of the Global Framework for Climate Services (GFCS), to promote the best access and use of the climate information for the users [2]. Moreover regional efforts have been done, for example the “Latin American Observatory for Climate Events” [3] which through a database (<http://dato-teca.ole2.org/>) gives access to different resources for hydro-meteorological data as well as climate forecast that could be directly query by the users in an interactive manner. In