

# Application of GIS Analyzes with Cloud Computing

Sevket Bediroglu, Volkan Yildirim and Selçuk Erbas (Turkey)

**Key words:** Geoinformation/GI; Cloud Computing, GIS, Spatial Cloud Computing, Cloud GIS

## SUMMARY

Usage of Cloud Computing (CC) has been increasing day by day, due to the advantages at data store, data view and data processes. Common advantages of CC are, working regardless of place and offering economical solutions with the help of “pay as you go” model. Also ability of changing computer forces in a short time makes CC elastic. Although these advantages, CC has some disadvantages and these are about security, privacy and juristically problems. A new technology era occurred when CC and Desktop GIS integrated and this is called Spatial Cloud Computing (SCC). With the help of SCC, users may access their spatial data without any need of stationary operating system or devices. By this way, GIS analyses should be done via tablets, smart phones and other mobile devices on web browsers without requiring program installing. In SCC technology analyze operations are done in central servers and only results are sent to users so analyzes are too fast with the help of central parallel computers. In this work, the first aim is investigation of advantages of CC and SCC technologies. A sample geo database was designed at first step. Spatial data operations and GIS analyses has been done with the SCC technology. The performance compares of these two technology are researched in terms of, temporal compare, economic, time and ease of usage views. Turkey’s situation at this technology is observed, the possible problems may occur in future are defined and solution of them are researched. At the last, a survey work had done to show the spatial data users’ ideas about SCC technology.