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TACTICAL ADVICE

## GIS Data: A Storage Puzzle

*The exponential growth of big data from geospatial technology is forcing businesses to be smarter with storage.*

by [Karen D. Schwartz \(/author/karen-d-schwartz\)](/author/karen-d-schwartz)    posted Apr 03, 2012

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Companies that work with geospatial data face unique storage obstacles.

The data itself is voluminous; the files in geographic information systems (GIS) can include satellite and aerial images (raster data), computer-aided design data, surface modeling or [3D data \(http://www.biztechmagazine.com/article/2012/03/coming-soon-desktop-near-you-3d-computing\)](#), Global Positioning System coordinates, survey measurements and attribute data. Given the large size of these types of files, organizations typically store this information in relational database management systems optimized for geospatial data.



The advent of high-resolution imagery and new types of imagery — such as multispectral, 3D and thermographic — compound the storage challenge. Each of these, while providing more details and information, also suck up large amounts of space.

The booming growth of satellite-based mapping represents another challenge. A high-resolution satellite image of just one mile of road can produce several terabytes of data.

GIS stores, therefore, are growing exponentially.

The quick and constant growth of these data types requires a new approach to storage for companies — one that is flexible and scalable, and that allows them to manage, process and store this data efficiently. For many, the solution is to combine a comprehensive geospatial data storage framework such as ESRI ArcGIS with either an on-premises network-attached storage system that can scale up on the fly or with cloud-based storage that can be expanded as needed.

For more on GIS, learn how one company expanded and optimized its storage system to better accommodate geospatial data in the *BizTech* feature "[Big Data Needs Push Firm to Explore Storage Options.](http://www.biztechmagazine.com/article/2012/04/big-data-needs-push-firm-explore-storage-options)" (<http://www.biztechmagazine.com/article/2012/04/big-data-needs-push-firm-explore-storage-options>)

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