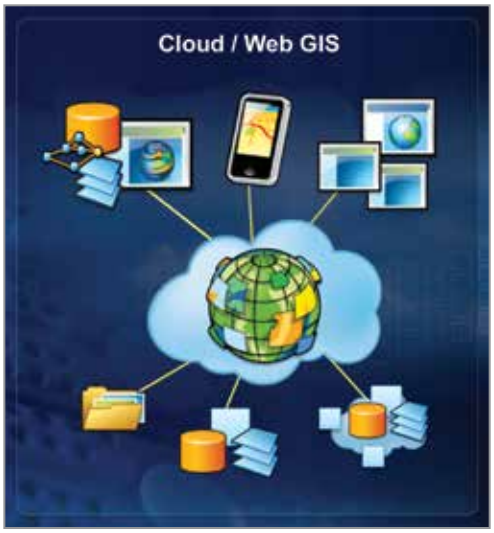
Internet-Based GIS Services

Use of the internet has been increasing dramatically over the last fifteen years. Starting in about 1998, Esri introduced the ability to interact with GIS technology over the web through the introduction of their ArcIMS software. Since then, Esri has been providing increasing capability for GIS data development/maintenance, analysis, and map production utilizing internet-based solutions. The current Esri offering utilizes the ArcGIS for Server technology. ArcGIS for Server offers a full range of GIS server capabilities that allow you to transform the maps, imagery, data and GIS tools that are commonly used in the workstation environment into fast, reliable web services that you can access anywhere.



ArcGIS for Server is available in three editions—Basic, Standard and Advanced. Each of these editions is available in either Workgroup or Enterprise configurations. License pricing from Esri varies from about $4k to more than $32k depending on the level of license obtained, and annual maintenance costs are a percentage of the relevant license purchase price. In addition, if the server on which the Esri software will reside contains more than two "cores" or CPU's, additional fees will apply no matter which flavor of ArcGIS for Server is selected.

ArcGIS for Server can be deployed either on your own server or on a commercial server in the "cloud." Several organizations are currently offering hosting services in the cloud, including Amazon through their EC2 service structure. If you were to elect to have your ArcGIS server software hosted on a service provider's network, you could eliminate the need to purchase, maintain, and back-up your system. Further, many service providers will guarantee availability of the server by providing services through multiple geographically-dispersed server "farms." This would provide a measure of security from loss of service in the event of an incident that would otherwise make your data and applications unavailable, such as a natural disaster or a simple power outage.

Hosted services are offered at competitive prices based on the level of service required, the amount of disk space consumed, and the number of requests for service expected on a daily basis. As your customer's need for services increases, availability of computer resources is guaranteed by the service provider without the need to consider the time and expense of acquiring additional computer equipment. Thus, the scalability and reliability of access to computing power becomes the responsibility of the service provider rather than your IT department, much like the timesharing concepts of years ago.

Whether you are a current ArcGIS Server licensee or you are just now considering the use of web technology and need to determine the most appropriate level of Esri license you need, there are many competing decisions that need to be made in your selection of both the license level and a hosting environment. Spatial Systems Associates (SSA) has been implementing Esri's web-based technology since their first offering of ArcIMS was made available in the late 1990's. SSA is now actively working with our customer base to deploy and maintain ArcGIS for Server technology both on our customer's in-house server hardware and in the "cloud." We are familiar with capabilities and limitations of the variety of Esri license alternatives and can assist you in selecting the most appropriate level of technology needed to satisfy your current requirements. As your use of server-based GIS grows, we can assist in upgrading your Esri licenses as needed.

Should you elect to go directly to a cloud-hosted environment, SSA can assist in:

- Selecting the appropriate Esri ArcGIS for Server licenses
- Establishing the hosted environment
- Loading the Esri software and your GIS data
- Integrating your existing applications
- Developing new custom applications and interfaces
- Monitoring and managing the "cloud-based" environment for you
- Building and/or maintaining the appropriate datasets needed for the applications, and
- Providing as-required consulting services or training in the use of hosted technology

SSA understands the competing interests within your organization and within the Esri/IT community and will assist you in making informed decisions to ensure your requirements are met at a minimal start-up and ongoing operational cost.

We also understand security requirements for cloud-based services (i.e. FISMA), and we are prepared to assist you in meeting those requirements.

Spatial Systems staff is available to assist your organization in:

- Evaluating the various possibilities for incorporating "cloud" based technology into your work environment
- Identifying the most appropriate mobile devices to interface with, including tablets, smart phones, GPS-enabled data collection devices, etc.
- Designing the interfaces for these devices that fit the work flow of your intended customers
- Programming both for the specific devices and the interfaces that would be used on the selected servers
- Developing user manuals as necessary
- Providing either web-based or on-site training of staff
- Providing ongoing support as needed

All graphics courtesy of Esri

To discuss the many alternatives for deployment of Esri technology in the cloud, please contact Spatial Systems at **HostedServices@SpatialSys.com**. Become one of the many organizations to discover the ease with which you can deploy and utilize Esri's GIS technology in the cloud.