



TO:

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QUOTE DATE: June 11, 2010

QUOTE PRICE EXPIRES: 90 days from Quote Date

SWOVA CONTACT:

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PROJECT: ArcGIS Server Hosting

Based on your request, Swova has developed this quote for ArcGIS Server hosting services detailed in this document. If you have any questions or would like to discuss this quote in more detail, please do not hesitate to contact me via phone at 859.344.1383 or via email at angie@swova.com. Swova is a GIS implementation company headquartered in the Cincinnati, OH area and is an ESRI Business Partner. We propose the following services to address your immediate ArcGIS Server hosting and implementation needs:

Option 1 ArcGIS Server Hosting with EPA Owned Servers

At project inception, Swova will assist the Ohio EPA in specifying server configurations for the production and test environments that meet the specified requirements of ESRI's ArcGIS Server, your RDBMS, and your storage requirements. Swova will install and configure ArcGIS Server on the new servers purchased by the Ohio EPA utilizing the Ohio EPA ESRI server licenses. During this task, the software for the hosting servers will be installed and configured properly for the ArcGIS Server 9.3.1 for the Microsoft .NET Framework and ArcSDE. This includes proper user accounts, administration/user privileges, and the web server software. Swova will perform these setup and configuration services through this task along with configuring the web server to comply with ArcGIS Server 9.3.1 requirements.

This task also includes costs for Swova hosting Ohio EPA's dedicated ArcGIS server for 12 months. The hosting is renewable each year for a 12 month period. The Ohio EPA will have direct authenticated access to the servers through ArcGIS Server Manager to administer, manage, and setup new services. ArcGIS Desktop can also be installed on the servers to better manage local resources on the servers. The EPA would need to provide the ArcGIS Desktop license to run on the server.

Our hosting environment provides:

- Redundant network/internet connections
- Full suite of hot spare servers, routers, and network equipment
- Backup Power Supply units
- 24 hour x 7 days per week x 365 days per year system/environment monitoring
- Hot spare at a remote site
- Backups stored off site

<i>Deliverables</i>	Install and Configure Ohio EPA's Server in Hosting Environment One Year (12 months) of Hosting for each server Documentation of ArcGIS Server Manager Login and Use
<i>Production Server Cost (1st year)</i>	\$7,620*
<i>Development Server Cost (1st year)</i>	\$7,620*

**Ohio EPA will be billed on an annual basis for the hosting services for the upcoming 12 month period.*

Option 2 ArcGIS Server Hosting with Swova Owned Servers

At project inception, Swova will install and configure ArcGIS Server on Swova servers utilizing the Ohio EPA ESRI server licenses. During this task, the software for the hosting servers will be installed and configured properly for the ArcGIS Server 9.3.1 for the Microsoft .NET Framework and ArcSDE. This includes proper user accounts, administration/user privileges, and the web server software. Swova will perform these setup and configuration services through this task along with configuring the web server to comply with ArcGIS Server 9.3.1 requirements.

This task also includes costs for Swova hosting two dedicated servers for production and test ArcGIS server environments for 12 months. The hosting is renewable each year for a 12 month period. The Ohio EPA will have direct authenticated access to the servers through ArcGIS Server Manager to administer, manage, and setup new services. ArcGIS Desktop can also be installed on the servers to better manage local resources on the servers. The EPA would need to provide the ArcGIS Desktop license to run on the server.

Our hosting environment provides:

- Redundant network/internet connections
- Full suite of hot spare servers, routers, and network equipment
- Backup Power Supply units
- 24 hour x 7 days per week x 365 days per year system/environment monitoring
- Hot spare at a remote site
- Backups stored off site

Deliverables	Install and Configure the servers in Hosting Environment One Year (12 months) of Hosting for each server Documentation of ArcGIS Server Manager Login and Use
Production Server Cost (1st year)	\$9,420*
Development Server Cost (1st year)	\$9,420*

**Ohio EPA will be billed on an annual basis for the hosting services for the upcoming 12 month period.*

Sample Swova Server Configuration:

	Sample Server Configuration
OS	Windows Server 2003 Standard x64
Processor	E5520 Xeon Processor, 2.26 GHz 8M Cache
Memory/RAM	16 GB RAM, 1066Mhz
Disks	RAID 1 for OS/Programs, RAID 5 for Data, RAID 1 log files
Chassis	Rack Mount with Rails
Networking Hardware	GB Ethernet NIC
Drive(s)	DVD-ROM

Optional Services

Optional Task Administration and Technical Support Services

As an option, Swova will provide on-going support to the Ohio EPA for the ArcGIS Server administration and technical support. This on-going support will be available on a per hour basis for items requiring support that the Ohio EPA could encounter as it begins to utilize the ArcGIS Server implementation and application. These items include, but are not limited to: identify and implement user permission settings; management of web services/viewers, modification of application services/web viewers, creation/maintenance of data update automation scripts; addition of new or changed data. Initially, Swova will invoice for a block of 40 hours for the Ohio EPA to tap and utilize as necessary or required for server administration support services or application technical support. As utilized, Swova will send a monthly update of hours expended against the escrow hours. The Ohio EPA may renew additional hours at any time.

Deliverables	Administration/Technical Support (Block of 40 Hours)
Cost	\$5,200

Architecture Criteria

We have responded to each of your basic criteria in the matrix below. We have also provided you direct access to a demo via one of the Swova servers in the hosted environment. The demo includes the necessary information for connecting via ArcGIS Desktop to an ArcSDE database that has some of your feature classes loaded as well as a demo web application.

Basic Criteria for Ohio EPA GIS Proposal Evaluation	
6/3/2010	
Hosted Server Solution Required Criteria	Solutions SWOVA
Enterprise Server Hardware/Storage	
Stand alone, dedicated development/test and production environment/servers	Yes
Memory: 16-24GB RAM per server	Yes
Storage: centralized, internal or external - total 7TB or more	Yes
CPU: quad core servers; robust processing	Yes
OS: Windows operating system	Yes
Customizable architecture - optimized to agency business needs	Yes
Meet ESRI specifications	Yes
Environment flexible and scalable to adjust for future GIS growth (especially RAM, storage); provision to easily upgrade equipment over time	Yes
GIS Database And Web Mapping	
ESRI ArcGIS Server Standard Enterprise software (includes ArcSDE (Spatial Database Engine)); licensing for development and production	Yes, EPA License
Oracle Standard (or SQL Server) RDBMS/relational database; licensing for development and production	Yes, EPA License
Ability to fully utilize and access all ArcServer/ArcSDE software capabilities (e.g., web data services, tools, and applications; database versioning, editing, and data connections)	Yes
Resources available to migrate legacy ArcIMS (Internet Map Server) services to ArcServer/ArcSDE environment	Yes

	Data/Web connectivity: between ArcServer and internal/external data sources (including databases, geodatabases, and services); ODBC (open database connection) or other types of connectivity with internal agency databases (e.g., Preclaims, Core); must be able to link to/from agency web pages/web server	Yes
	Open Source tools: ability to implement non-ESRI geospatial web and database solutions; ability to link between agency ESRI applications/databases and open source geospatial tools/data (e.g. Google, Yahoo, Bing, GeoServer/MapServer, PostgreSQL, etc.)	Yes (it is your hosted server, you are free to do as you please)
	Customizable environment: scalable overall to meet the agency's growing needs; flexible and customizable SDE/RDBMS architecture to meet the agency's and divisions' various geospatial database needs; web developer resources (software, scripting tools) available to create customized tools, services, and web applications	Yes
	Adequate storage and memory to support web content (e.g., dynamic services, cached services)	Yes
	Access to information: content accessible to agency staff (internal) and the public (external) as appropriate to meet divisions' business needs	Yes
	Possibility to include purchase/subscription to geographic base data or web services, including commercial data layers, meteorological data	Yes
	Other software for servers: ArcMap desktop application installed on server(s) to better manage local server resources; MS Office	Yes, EPA License
GIS Developer Needs		
	Resources to enable development, management, and administration of ESRI GIS data, services, and application content for each division	Yes
	Resources to utilize and implement open source geospatial tools	Yes
	Ability to work independently within GIS development environment	Yes
	Ability to customize ArcGIS production, development, and test environments with specialized software or settings to implement division/agency priority functionality	Yes
Support		
	Network administration: provision for hardware/storage/backups/OS administration, troubleshooting, maintenance, support; server performance tuning; support/resources for installations and configurations/upgrades/patches/service packs, and regular maintenance; adequate provision of resources (e.g., storage) to support standard best practice backup and restore protocols	Yes
	Database administration: provision for database configuration, administration, troubleshooting, maintenance, support; database performance tuning	Yes

<p>ESRI administration: provision for ESRI product/environment administration, troubleshooting, maintenance, support; provide installation and configuration of web server environment (including ArcGIS Server) and database environment (including RDBMS and ArcSDE) per ESRI guidance and EPA usage criteria</p>	<p>Yes</p>
<p>Content administration: provision for division/agency content administration and management; support migration of content to new solution</p>	<p>Yes</p>
<p>24/7 support and system/environment monitoring for overall environment; up and running 95% of the time</p>	<p>Yes</p>
<p>In case of catastrophic (server) failure - guaranteed 24 hour disaster recovery</p>	<p>Yes</p>
<p>Guaranteed response to and action on support requests/calls within one business day</p>	<p>Yes, as long as support contract is in place</p>
<p>Security/Accessibility</p>	
<p>Administrative access/privileges for GIS Coordinators as defined in ESRI documentation: full administrative access to development environment, limited administrative access to production environment; direct authenticated access to servers through ArcGIS Server Manager and ArcSDE Manager to administer, manage, and set up data, services, and applications; remote access directly to GIS server environment</p>	<p>Yes</p>
<p>Secure servers: guaranteed security measures in place for equipment and content; on-site and off-site backups</p>	<p>Yes</p>
<p>Secure networks: best practices employed to secure connectivity and access to content (e.g. provide secure communications through the firewall); GIS content and tools securely accessible by agency users (network, browser) and public users (browser, ftp, metadata search)</p>	<p>Yes</p>
<p>Customizable administrative/user accounts and privileges - OS, ArcServer, web server, RDBMS, ArcSDE, etc.; flexible to accommodate different business needs of divisions/agency; permissions and accessibility (group or account level) must be configurable by OEPA</p>	<p>Yes</p>
<p>Ownership: specify agency rights/ownership for equipment and content within a hosted environment</p>	<p>Yes, depends on option chosen for ownership of equipment</p>
<p>Performance</p>	
<p>Meet standard requirements: meets the server performance and functionality requirements recommended by ESRI, meets agency standards for data/web servers</p>	<p>Yes</p>
<p>Scalable resources: resources available to support current server usage levels plus increase in GIS server traffic due to public access and growth within the agency</p>	<p>Yes</p>
<p>Agency user impact: agency user access to agency data/application resources (e.g., DERR users equal about 50-60 staff, with approximately 15-20 power users, and approximately 15-20 maximum concurrent users)</p>	<p>Yes</p>

Map draw times: web-based content (database access, data services, web applications) draw time and connection performance comparable to local file-based data sources	Yes
Other Solution Criteria	
Longevity: demonstrate sustainable solution for the long-term (5 years or more); ensure ongoing viability of hosting solution/company	Yes
Resource commitment: duration of solution commitment (year to year vs multiple years); level of resource dedication to implement solution (all funds up front vs contract renewal); affordable costs for the short term and long term (up-front vs ongoing costs)	Yes, see previous option choices
Technical evaluation: host must be equipped to support the business needs of participating divisions/agency, and demonstrate knowledge of the work we do; provide concrete examples of the same or similar services provided to other entities like ours	Yes
Testing: documented proposal with exact and specific technical details that can be evaluated; testing/pilot for proposed solution to evaluate exact resource needs and develop a plan to ensure successful implementation	Yes
Deployment: time required to plan, implement, and deploy solution (1-3 months preferred); know the physical location of solution components	Yes
Internal Agency Required Criteria	
ArcMap Client/Desktop Solution	
Licensing: shared client licensing needed for agency includes ArcInfo - 10, ArcEditor - 2, ArcView - 15, and desktop extensions (plan for growth); single use, stand alone client licensing needed by division	Yes, EPA Licenses
License Manager: software/server to distribute agency shared client licenses; accessible by GIS coordinators for administration and management; accessible by GIS client pc's to obtain floating licenses	Yes, with EPA Licenses
User Needs: maintain de-centralized, local data and applications; ability to develop and manage field-collected data and spatial analysis characterizations; view/edit access to agency data and applications	Yes
RDBMS client software required to direct connect to enterprise geodatabases	Yes, if Oracle
Provision for client resource support, administration, and management	Yes
File Transfer/FTP	
Dedicated FTP server/address/storage for GIS files - implementation of data/file transfer and download (by division)	Yes, with specific user accounts

Please note under your 1,000 foot view, you indicate that you wish to have the flexibility to accommodate version changes (to database/software) and maintain legacy versions if necessary. This type of capability can be offered under a different hosting scenario and would make use of either multiple servers or virtualization. The costs for these requirements are different than what is proposed to meet all other criteria.