



WHITEPAPER



Data Center Relocations: Make A Good Move With Advanced Systems Group

Like most businesses today, your company depends on technology and data—the collection of essential electronic documents, digital images, electronic transactions, and databases generated as part of your normal business operations. You rely on your data center to manage this wealth of information for you. But what happens if your business is facing:

- A merger or acquisition?
- A lack space or power in the current data center?
- An expired lease on your data center building?
- An executive mandate to reduce costs?
- A need for a more efficient co-location?

All of these situations can be difficult, especially when you consider that they also likely require a data center relocation. Data center moves always pose a serious threat of disruptions or data loss that can jeopardize your crucial business operations. If you're serious about your business, then disruptions and data loss are unacceptable risks. That's precisely why you want a data center relocation specialist skilled in the industry best practices and proven methodology to ensure a successful move.

Advanced Systems Group: The Data Center Relocation Specialists

As a data center relocation specialist, Advanced Systems Group (ASG) has the comprehensive planning, technical skills, and the industry best practices required for successful, incident-free data center moves.

ASG Relocation Service	Full Service Relocation	Discovery Only	Equipment Move Only
Structured Data Collection Methodology	X	X	X
Review and survey data center	X	X	
Isolate and compartmentalize data sets	X		X
Establish and analyze business priorities	X		X
Data center migrations plan	X		
Planning and risk management	X		
Detailed analysis and documentation	X	X	

"Planning the move for our legacy data center was complex—there were data dependencies that were not well understood. ASG analyzed the entire environment and discovered that our business-critical data assets—large seismic datasets—were distributed throughout the storage environment. These critical assets could easily have been corrupted if ASG had not discovered their locations and handled the situation properly during the move."

—Michael Alessi, StatOilHydro

With the Structured Data Collection Methodology—the ASG proprietary and professional approach to data center relocations—ASG has demonstrated its professional approach in over twenty-five complex data center relocations for major clients in the civil engineering/consulting, newspaper publishing, oil and gas, web-based business indexes, and financial services industries. That's because ASG provides consistent execution, detailed documentation, and multi-disciplined engineering resources every step of the way.

The Advanced Systems Group Approach

ASG cultivated the Structured Data Collection Methodology throughout more than 28 years of experience as a leading provider of enterprise IT infrastructure solutions and consulting services. ASG specifically designed the methodology to include phases for:

- Discovery and Data Collection
- Analysis and Design
- Planning and Risk Management
- Smooth Implementation

The thorough discovery, planning, and analysis phases account for contingencies and potential problems. The ASG Approach also isolates and compartmentalizes data sets, minimizes known variables, and arranges potential back-out points. These steps reduce risk and downtime—so you can keep your business running smoothly.

ASG offers a variety of data center relocation services. Each includes the ASG Structured Data Collection Methodology to effectively relocate data centers without endangering business-critical data and applications.

Discovery and Design

Because your data center is essential to the success of your enterprise, ASG begins with a comprehensive review and survey of your data center. This preliminary survey includes an exhaustive inventory of your software and hardware, servers, and storage and networking equipment. ASG also schedules kick-off meetings and interviews key personnel in your company to fully identify both your technical and business requirements. Once ASG technical experts determine the key services your data center provides, they establish and analyze the business priorities, planning, and budgeting constraints of your data center relocation.

To complete this phase, ASG technical experts compile their findings into a comprehensive source of your data center information, thoroughly documented and archived for future analysis and reference.

Analysis and Design

Every data center move presents risks, and any interruption to your business could ultimately affect your bottom line. Accordingly, an ASG data center move always includes thorough analysis and documentation of the impact on your business. At this stage, ASG technical experts analyze the information they collected to prioritize business services, establish downtime—if necessary—and determine the hardware, application, and technology requirements for a non-disruptive move. ASG technical experts also define and analyze potential risks and prepare contingency plans to mitigate possible problems.

Then ASG technical experts architect several migration options, and you select the comprehensive solution that best addresses your particular business and technical requirements.

Planning and Risk Management

Once you've selected a migration plan, ASG experts assemble all previously collected data and documentation into an inclusive Data Center Migration plan, complete with an in-depth risk analysis. This plan encompasses floor layouts and rack diagrams, outlines the exact tasks to complete the relocation, and charts the matrix of the migration priorities. And because your data system likely contains complex interdependencies between your business-critical applications and assets, ASG experts provide detailed dependency mappings of your data center.

"Recently, we moved mission-critical server components for a large financial services corporation in Colorado. This corporation originally approached another company that refused to do the move, predicting a failure rate of more than 70 percent. ASG, however, was able to safely and efficiently move all of the components, worth over \$2 million, without a single failure—while still meeting the customer's 100 percent uptime requirement."

—Ted Burns, Director of Consulting Sales at ASG



The highly-trained consultants at ASG develop comprehensive plans to relocate data centers without disrupting access to data and applications during the move.

This comprehensive up-front planning and risk management ultimately ensures minimized risk and downtime so you keep your business running smoothly without endangering your business-critical data and applications.

Complete Implementation

The highly-trained consultants at ASG apply the comprehensive plan to relocate your data center and successfully implement the move. ASG personnel manage exit plans with the current facility and the installation plan with the target facility—making the transition as smooth as possible.

With the well-established ASG methodology, ASG technical experts efficiently move data centers and prevent interruptions to your business processes—thereby maximizing your uptime and data availability. To meet those goals, ASG personnel smoothly execute data center moves with a carefully controlled process. A typical non-disruptive move includes:

Discovery and Data Collection:

- Startup servers and apply new system information (e.g., IP addresses, name etc).
- Assist in verification of properly working systems and applications.
- Track, document, and scale data to be replicated.
- Track and document changes to replicated data.

Analysis and Design:

- Recommend an appropriate amount of bandwidth to maintain replication of applications.
- Ensure equivalent amount of storage is available at new site.
- Establish IP connection between the two sites.
- Document the external facing IP addresses at old and new sites.

Planning and Risk Management:

- Install and implement replication (VVR, SNDR, HORC).
- Begin replication and continue asynchronous replication until fully replicated.
- Prepare DNS propagation within the WWW / internal.
- Switch to synchronous replication to ensure transaction integrity.

Complete Implementation:

- Complete the switch over:
 - Shutdown applications at old site.
 - Suspend Replication.
 - Propagate DNS entries to WWW / internal.
 - Startup applications at new site.
 - Test applications using external and internal connection.
 - Fail-back to old site, if required.
 - Restore hardware/data if applicable.
- Manage the entire project, including the formal project plan and coordination of all parties.

Next Steps

It doesn't matter if you're moving across town, across the country, to a brand-new facility, or to an existing co-location- Advanced Systems Group has the talent, experience, and knowledge to transition your data center with ease. That's what makes us the data center relocation specialists. So save yourself the trouble and make a good move with ASG.

Get ready for your move now: identify your needs, gather an inventory list, and think about what level of service you might need. Then contact ASG today to learn how we can help:

E-mail: dcmoves@virtual.com
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About Advanced Systems Group

ASG has completed numerous successful data center relocations of IBM, HP, Sun, EMC, HDS, Cisco and NetApp environments. In addition to its data center relocation services, ASG also provides complete Information Technology (IT) solutions including comprehensive consulting services, storage and data management solutions, assessments and implementation services. As part of all its services, ASG focuses on customer needs, customizing unique solutions for companies to successfully address their particular IT challenges.

"Computing environments are not really about the hardware anymore, they're about the services they provide. Once you understand those services the benefits they deliver to the business, you get a better understanding of how the hardware infrastructure should support those services."

—Dustin Smith, Lead Consulting Engineer at ASG

"The ASG data center move methodology is a comprehensive approach. Right up-front, we learn and document your entire environment, making sure that we've already planned for any risks that could come up during your move. And we don't leave until we know that, not only is the move completed, but all your services are back online and running properly."

—Dustin Smith, Lead Consulting Engineer at ASG

Case Study

StatoilHydro

In early 2007, Hydro Gulf of Mexico approached Advanced Systems Group to relocate their legacy data center to a new facility in downtown Houston. Mid-way through the development of the move plan however, Hydro GOM merged with another company, StatOil.

As a result of the merger, Hydro GOM and ASG reconfigured the partially-completed relocation plans to include the data center assets from StatOil. These combined assets were to be located the StatOil City West facility in Houston, TX—in a location built especially for the new data center.

In the weeks prior to the move, ASG Consulting Services fully documented the new environment. Throughout the design and implementation of the new facility, ASG compiled and provided a comprehensive source of data center information including layouts and floor plans, server and storage documentation, as well as network, legacy, power and HVAC information.

Once the new facility was finished, ASG Consulting Services successfully completed the data center relocation project on-schedule, with no unexpected downtime and no major hardware failures or equipment damage. ASG and the newly-established StatOilHydro IT team collaborated successfully to handle all issues that arose as they moved the Hydro GOM IT assets over the course of just three weekends.

Michael Alessi of StatOilHydro, describes the success of the relocation, "Throughout the move, I was impressed with ASG's tactical excellence and considerable technical expertise in both storage and systems architecture. I was very pleased with the results."