



# General Information Guide

## Data Center Relocation and Consolidation

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## INTRODUCTION

To accommodate the increasing demands being placed on IT and data centers in particular, many customers typically require an increasing amount of hardware, software and support resources. In some cases these increases could lead to multiple data center environments. In other cases organizations are consolidating data centers and workloads in order to control increases in the amount of hardware, software and support resources and enhance cost effectiveness of operations.

The availability of large scale processors with high MIPS, complex PC and workstation networks with ultra-high reliability and the ability to have multiple logical and physical domains based on organization alignment, has been a prime contributor in facilitating data center consolidation type projects including efforts involving data center relocation and startup, or workload migration. As part of these efforts, customers are required to plan the migration of workloads from one data center to another to enable enhancements to their workload processing and operational efficiency.

RL Information Consulting LLC has developed the Data Center Consolidation service to address these issues. The purpose of this service is to review, evaluate, and make recommendations for the operational efficiency in one or more data centers and then migrate all or part of the workloads currently processing in these data or computing centers to a lesser number of data center or computing centers. This includes project managing the effort associated with undertaking such an effort.

## DESCRIPTION OF THE SERVICE

The major focus of the Data Center Consolidation Service is to identify all appropriate applications, system software, and utility software that exist in the originating data and/or computing center(s), plan and manage the migration to the target data center, together with the associated files, applications and data bases. Prior to the workload migrations a review of the existing operational efficiency of all source data centers is done. This includes ensuring minimal interruption to the customer's current operations, and relieving the customer's existing technical staff of most of the migration effort. In some customer environments the "political" issues can cause customers to seek an outside agency to coordinate, plan and project manage the effort. RL Information Consulting LLC has the necessary knowledge and expertise for providing such a service.

In providing this service the following basic assumptions are made:

- the target data or computer center has the hardware, configuration and software in place to support the workload migration

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- the customer will ensure that the appropriate network changes are made in time to support the consolidation(s)
- a basic "lift" migration strategy will be used to migrate workloads "as-is" from one data center to a "mirror image" environment in another
- Software and applications will be moved in load library or file folder form, via dump/restore processing, or from existing backup files, where possible.
- reinstallation of software from source code will only be done where necessary
- data files and data bases will be moved via dump/restore processing, or from existing backup files

### Objectives

The objective of this service is to complete the migrations from source data and/or computing center(s) to a lesser number of target data/computing center(s) in a timely and non-disruptive fashion such as to support the following customer objectives:

- to facilitate focus of IT management on real business issues involved with "downsizing" IT operations, service and support without impacting productivity and service levels
- to reduce operational complexity
- to increase operation effectiveness and efficiency
- to reduce costs
- to facilitate common systems management processes and standards

It is recognized that realizing these latter objectives is in some cases post-consolidation; however the consolidation provides the base for them.

### Methodology

The scope of this service includes primary responsibility for ensuring that there will be sufficient functional testing to satisfy the customer's data center and technical personnel and the customer's user community, and to ensure that the consolidation/migration has been successfully completed. Customers vary considerably as to how much testing they require and a key part of the service is to determine the appropriate levels of testing.

While the basic strategy uses the assumptions outlined above and is an "as-is" lift, it is possible that the Operational Reviews proposed as the first tasks will reveal problems in the source data and/or computing centers that need to be corrected before migrating. Any work indicated from such a determination may give rise to additional tasks, or the customer may decide to make those changes independently such as issues relating to I/O, technology infrastructure and/or system performance for the target environment. They may however impact the duration of the project plan.

The Data Center Consolidation service follows this general approach:

- conduct an operational review (or a subset thereof) at each of the existing source data and/or computing center(s), to determine what impediments (if any) exist that will thwart the workload migration
- provide project direction, using a senior Consultant with considerable consolidation experience (that could include international consolidations)
- provide onsite project management assistance for all source and target data and computing centers
- design testing/rehearsal strategies for each workload migration, and to take part in any customer agreed to tests
- provide review and guidance assistance throughout the project, on hardware, software, network, operations, and other infrastructure and managing best practice issues or alternatives
- provide planning and implementation in layout and physical planning, as the final configuration is built in stages, using existing and new equipment
- provide expertise in identifying post-consolidation opportunities discovered during the migration

### **Time Requirements**

Time estimates for this service vary greatly depending on the number, size and complexity of the source and target data centers. In addition, the geographic locations of these data centers can have a major impact on service duration.

A rough estimate that can be used in approximation of service duration is about 6 months for all source and target data and computing center(s) involved in the migration including the migrating of workloads.

It should be noted that this is an estimate only, and might not include the time necessary to complete other customer responsible tasks that fall outside the scope of this service such as updating operational documentation, performance tuning, capacity planning and disaster recovery planning in the target data center, etc.

### **The Consultants**

An data center consolidation subject matter expert will be used in project manage the delivery of this service. They will have a focused knowledge of data center consolidations, workload migrations, and the business issues surrounding these type of projects. Their expertise includes the necessary project management, planning, presentation, and communication skills.

Additionally, they would have the necessary expertise in the following areas:

- Configuration planning and management
- Software for data backup and restore
- Operating system and logical infrastructure configuration planning
- Systems testing procedures such as online and batch execution, including regression testing and release management workload rollout
- Data Center and computing operations
- Availability management
- Service Level management
- Capacity planning
- Problem and Change Control management
- Quality Control
- Security

### **DELIVERABLES**

Since the Data Center Consolidation service is complex in scope and effort, the deliverables are listed by category for each service delivery area:

#### **OPERATIONAL REVIEWS**

- 1) A written report within 10 working days of the completion of the last review, together with a presentation of same to the customer. The report will contain the findings of the Operational Reviews for each data center being consolidated, general issues and recommendations, plus specific recommendations on any that need to be fixed prior to migration. In addition the report will identify apparent service levels. The customer should understand that these reports are "best efforts", following 2-3 week high level reviews.

#### **PROJECT DIRECTION**

- 1) An initial 3 week visit by the Project Manager, plus periodic visits of up to three weeks in any active project month.
- 2) Develop, review and recommend strategic project direction and strategies as required.
- 3) Management consulting on issues surrounding such consolidations.
- 4) Participation in major project reviews.
- 5) Post implementation consolidation project reviews.

#### PROJECT MANAGEMENT

- 1) Day to day liaison with all the customer's consolidation teams on those tasks, customer or Project Management, that are part of the total consolidation plan.
- 2) Management of specific tasks, resource allocation, periodic reviews and written status reports.
- 3) Participation in major project reviews.
- 4) Detailed plans for each "lift".
- 5) Management of each "lift".
- 6) Liaison with customer Project Director.

#### TESTING STRATEGIES

- 1) A detailed testing strategy (or rehearsal strategy) for each workload migration.

#### REVIEW HARDWARE/SOFTWARE/NETWORK/OPERATIONS STRATEGIES

- 1) Periodic review of hardware, software, network and operations strategies, as requested by the customer, with recommendations for alternatives.

#### PLANNING AND IMPLEMENTING STAGED EQUIPMENT MOVES

- 1) Review of imminent equipment moves or installations, with detailed recommendations for preferred courses of action.
- 2) Liaison with any appropriate vendors involved in the moves.

#### POST CONSOLIDATION OPPORTUNITIES REPORT

- 1) A written report identifying post consolidation opportunities.

#### RESULTS OF THE SERVICE

The overall result of this service is the realization of a successful data center consolidation project with a minimal disruption to customer business operations. The completion of this service provides the customer with several areas of potential benefit such as:

- enhancements to workload processing and operational efficiency
- facilitating the focus of IT management on real business issues involved with "downsizing" IT operations
- providing the required service and support without impacting productivity and service levels
- reducing costs and operational complexity
- facilitating common systems management processes and standards to better manage a less complex environment more effectively and efficiently