The interdependencies between applications, databases, servers (virtual and physical), storage, network and other devices are complex and critical to post move performance and availability. When planning a data center migration it is essential to completely understand these interdependencies to minimize the risk of unplanned downtime and ensure project success.

**Benefits**

Major changes to IT infrastructure are always associated with an increased risk of application outage or performance impact. A data center migration, from reorganization and redeployment of virtualized servers and their applications, to wholesale relocation of one or more facilities, has the potential to wreak havoc on operations. By thoroughly understanding all of these interdependencies before a migration:

- The risk of unplanned disruption will be minimized
- Planned downtime can be limited or even eliminated
- Unexpected impact on IT staff can be prevented
- Successful migration can be ensured

**Methodology**

→ Complete an application inventory while assigning all applications a Critical Index Factor (CIF) and acceptable downtime window
→ Determine the interdependencies between applications, servers, storage, etc.
→ Generate dependency maps and verify using tools that monitor traffic between devices
→ Group servers and applications into bundles that must be moved together and will be assigned to move events

**Service Description**

Dependency Analysis is a multi-stage process that begins with a complete inventory of assets involved in the migration, and culminates with the creation of “move groups” (virtual and physical) which are assigned to specific migration “move events.”

**Virtual / Physical Inventory**

A complete inventory of the physical and virtualized equipment at the originating data center(s) is the first step in a successful data center migration project. TDS performs a bottom-up inventory at the source data center(s) to identify all assets. Working with the company’s Subject Matter Experts (SME’s), each device is assigned a disposition relative to its end-state (Move, Virtualize, Retire, etc.).
Client Success Story

Over 1,000 Devices Relocated With no Unplanned Outages

Cedars-Sinai is a nationally recognized teaching and research hospital with more than 2,000 physicians and 10,000 employees. The 15 year old data center at Cedars-Sinai, in Los Angeles, was inefficient and had insufficient cooling capacity, and the facility’s PUE reflected its age. The hospital knew it needed a new facility and turned to TDS for help with relocation planning and execution.

Because the data center supports critical hospital operations (many of which directly affect patient wellbeing), unplanned system outages during the relocation were unacceptable and planned downtime needed to be confined to very narrow windows. The IT department was in the midst of a server virtualization project, leaving few internal resources to plan and execute the critical move project.

TDS Approach

TDS provided planning oversight and relocation execution services for Cedars-Sinai. The relocation included approximately 1,000 devices, and was accomplished in 15 move events. By carefully understanding and validating application, server, and other device interdependencies, before the move events, TDS was able to identify and avert issues prior to move day.

Client Benefits

There were no unplanned disruptions throughout the entire relocation. Cedars-Sinai achieved a worry free move with “core” day to day operations continuing unaffected by the major changes taking place. Because TDS is expert in data center facilities, relocations and IT operations, Cedars-Sinai used TDS for other services to improve operations. For example, TDS assisted Cedars-Sinai with the rack layout and server elevation planning for the new data center. TDS also helped Cedars-Sinai evaluate CMDB solutions.