DATA CENTER MIGRATION PLANNING & EXECUTION:
LESSONS LEARNED FROM CONSOLIDATING DATA CENTERS AND MIGRATING APPLICATIONS FOR A CENTRALIZED HOSTING FACILITY

Introduction

The Department of Homeland Security (DHS) decided to migrate its Immigration and Customs Enforcement (ICE) mid-range systems from the Department of Justice Data Centers in Dallas, TX and Rockville, MD to the DHS Data Center 1 (DC1) for production processing. In addition, DHS decided to implement the ICE mid-range Disaster Recovery (DR) Environment at the DHS Data Center 2 (DC2). Knight Point was contracted to provide the planning and execution of the logical application migrations.

Description of Problem and Goals

Following the events of September 11, 2001, DHS was formed to provide for increased information sharing and efficiency among the twenty-two agencies that now form the Department. DHS built two data centers to begin the process of centralizing information. Data Center One (DC-1), which is government-owned, contractor operated and the other, (DC-2) which is contractor owned and operated.

The challenge faced by agencies as they migrate to DC-1 and DC-2 is that they are required to move into a new operational environment in a shared facility and must adapt to the new business model. Immigration and Customs Enforcement (ICE), through this project, set out to fully migrate to these facilities and establish a functional DR environment in a timely manner.

Description of Approach, Rationale, Results, and Timeline

Since August 2010, KPS has been supporting the ICE Integration and Engineering Migration Project encompassing systems integration and engineering phases from concept development through implementation/maintenance migration of the DHS ICE systems (62 applications, 17 mission critical, and 600 servers) from several DoJ datacenters to Stennis DC1 for production and operations, and to Clarksville DC2 for Disaster Recovery. Knight Point delivers our proven methodology by leveraging interdisciplinary talent including application and infrastructure engineers, migration architects, program managers, to our staff logisticians. Our process covers the full lifecycle of the IT relocation process from data center selection and design through minute-by-minute management of all execution activities. After incorporating the lessons learned into our three-phase
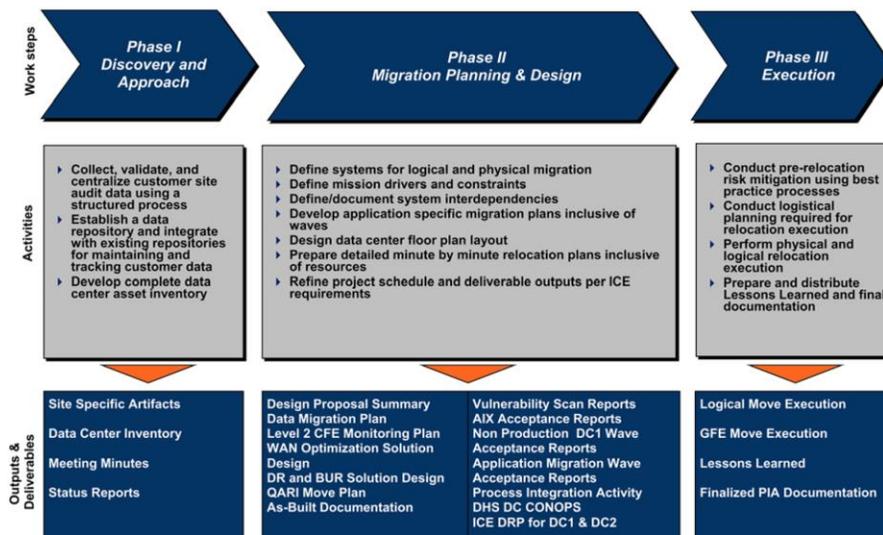
methodology from multiple enterprise relocations CSC will ensure a smooth transition to your new IT facilities.

Our Enterprise Data Center Migration Methodology divides our approach into three distinct phases that were implemented for this migration:

1. Discovery and Approach
2. Migration Planning and Design
3. Execution

Critical to the success of the migration, is the program management and oversight provided. Knight Point utilized a proven, effective, and repeatable Data Center Migration Project Management Methodology and project planning that will be implemented at ICE in accordance with the goals, timeline, and schedule of the ICE mission. Knight Point will provided regular updates to project staff and management with regard to schedule, upcoming tasks, obstacles, risks and mitigation strategies, and roles and responsibilities. The team will maintain constant and open communications throughout the project.

Transparency and organization-wide communications were critical to the success of the migration effort. Sharing knowledge about the project is essential to the project's success. Knight Point established a framework for informing all participants of project status throughout the duration of the project both internally to the team, and externally to the ICE IT staff and the organization as a whole.

Strength in leadership is one of the components of our management approach. Knight Point selected its management team based on strong data center migration qualifications, industry knowledge, best practices, outstanding accomplishments, and past performance. Knight Point provided a full-time data center migration experienced Project Manager (PM)

to serve as the single primary point of contact, with a designated backup to manage our conformance to the SOW, coordinate requirements and ensure timely and accurate submission of deliverables.

Additionally, Knight Point maintains a library of standard templates and tools that are specific for the development of migration work products. These templates and processes have been tested and proven at multiple Federal agencies. Our staff is familiar with the templates and tools, enabling our team to "jump start" projects and hit the ground running at the time of award. The Planning and Engineering Design Phases were successfully completed. Knight Point developed a $40M BOM for all servers, switches, routers, etc. to replicate the As-Is to the To-B environment at DC1 and DC2, much of which has already been delivered and is being prepped for installation and turn up. Trust & Verify/C&A security audits were conducted for the 62 applications. A 'moves group/wave plan' was designed and a schedule developed that has been executed as applications are migrated to the new facilities and into the new operational environment. Knight Point provides Operations and Maintenance (O&M) support at DC-1 and continues to execute successful Inventory Management and Data Center Migration for several DHS components to DC-1.