

Seamlessly Moving Critical Services Between Data Centers Without Disruption



Today, product development almost always involves a data center. And the data center is more than just a collection of servers and racks. For a global medical technology leader, it is the heartbeat of the engineering organization. It houses the mechatronics toolchains, the design history files, and the automated testing environments that ensure life-saving devices meet stringent regulatory standards. When a forced data center exit looms, the stakes are not merely technical. They are existential to the business's ability to deliver high-quality products on time. Infrastructure migrations in regulated environments are notoriously fraught with risk. A single day of unplanned downtime for a global engineering team can result in thousands of lost man-hours, delayed clinical trials, and missed market windows. This case study explores how a Fortune 500 MedTech firm partnered with SPK and Associates to migrate its largest, most globally impactful data center with zero disruption to engineering workflows.

CHALLENGES

This organization faced a significant business continuity risk when their primary data center hosting partner announced an exit from the business. This created a hard deadline to vacate their largest and most globally impactful facility. This facility supported nearly all business units, geographies, and time zones, making it the most critical node in their global engineering network. The scope of the challenge was immense. The migration required moving over 20 critical engineering applications and their associated servers. The list of impacted systems included:

- **Design & Licensing:** Altium FlexLM, Intel (Altera) Quartus, Siemens PADS, and Cadence.
- **Lifecycle Management:** PTC Integrity/Windchill RV&S and IBM ClearCase/ClearQuest.
- **Collaboration & CI/CD:** Atlassian Confluence, Bamboo, and Jenkins.
- **Specialized Tooling:** SmartBear Code Collaborator and TRUMPF TruTops Mark.

The risk was clear. These systems are not standard office productivity tools. They are the foundation of the mechatronics depth required for medical device development. A single misstep in moving the legacy license servers or the specific build environments could break the CI/CD pipeline. In a regulated environment, any loss of data integrity or traceability during a move leads to requirements drift, rework, and significant compliance risk.

THE SOLUTION: THE SPK MIGRATION FRAMEWORK

SPK and Associates stepped in to lead the transition by implementing a «business-of-engineering» focus. Rather than a standard IT «lift and shift,» SPK prioritized the engineering process and the specific technology that supports it. The solution was built on a mindset of complete ownership and collaboration, aligning Infrastructure Management Services (IMS), Application Management Services (AMS), and Business Process (BP) teams under a single set of objectives. The technical execution involved a phased «wave» approach to mitigate risk. SPK helped the client group logical applications together, ensuring that dependencies were mapped before any data moved. The strategy relied on several key pillars:



36 HOURS SAVED



ZERO WORKFLOW DISRUPTION



100% COMPLIANCE MAINTAINED

1. **Rigorous Pre-Verification:** Before the migration window, SPK ensured the target environment was optimized for the high-performance demands of engineering tools, such as high IOPS and low latency.
2. **Communication as a Technical Requirement:** SPK managed a strict communication cadence. By providing «friendly reminders» and clear instructions to the global user base, the team ensured every engineer knew exactly when to save work and log off, preventing data corruption.
3. **Legacy Debt Management:** SPK identified and prioritized the most volatile components—the legacy systems like IBM ClearCase and PTC Integrity, which often lack modern documentation and require specialized expertise to move without breaking hardcoded configurations.
4. **The Blackout Protocol:** A precise 48-hour blackout window was established, with SPK engineers working around the clock to execute the move, perform system testing, and verify workflows.

THE OUTCOME: OPERATIONAL CONFIDENCE AND QUANTIFIABLE SUCCESS

The migration was a resounding success, proving that complex engineering infrastructure can be moved without sacrificing velocity or compliance. Because of the rigorous planning and the «OneIT» collaboration, the transition was entirely seamless to the end users. The systems appeared identical pre-migration and post-migration, ensuring that the engineering teams could resume work without a «re-learning» period or a spike in help desk tickets. By focusing on the business needs of the engineering organization first, the MedTech leader turned a forced data center exit into a demonstration of operational excellence. They achieved a modernized, optimized data center environment that provides greater operational confidence for their future product development cycles.

“Migrating our largest global data center was an extremely important operation where any amount of unplanned downtime would have immediately impacted our product development timelines and regulatory commitments. SPK didn’t just treat this as an IT project. They understood the depth of our engineering toolchain. Their approach and rigorous pre-verification allowed us to complete the transition 36 hours ahead of schedule with zero disruption to our global engineering teams. SPK provided the operational confidence we needed to turn a forced migration into a seamless success.

Senior Director of Engineering IT, Global Medical Technology Leader

- **36 Hours Saved:** The migration wave was completed and verified ahead of schedule, allowing global engineering teams to resume normal operations 36 hours earlier than the projected 48-hour blackout window.
- **Zero Workflow Disruption:** The project achieved a 100% success rate in system verification, resulting in zero reported incidents of broken workflows or data loss across 20+ critical engineering applications.
- **100% Compliance Maintained:** All migrated systems, including those housing Design History Files and requirements traceability, passed post-migration validation, ensuring no interruption to regulatory standing or audit readiness.