Case Study: Data Center Relocation for Government Transport

Introduction

Digital Infotech, a trusted IT infrastructure partner, was entrusted with the critical task of relocating a government transport agency's data center. This case study outlines the meticulous planning, execution, and successful transition achieved by Digital Infotech.

Client Background

- Government Transport Agency: Responsible for managing transportation services, including road networks, public transit, and vehicle registration.
- Challenge: The client needed to relocate their aging data center to a more modern facility while minimizing downtime and ensuring data integrity.

Project Scope

- 1. Assessment and Planning:
 - Digital Infotech collaborated closely with the client's IT team and stakeholders.
 - Key considerations included:
 - Risk Mitigation: Identifying potential risks (power outages, equipment damage, data loss) and developing mitigation strategies.
 - Downtime Tolerance: Understanding acceptable downtime windows for critical services.
 - Infrastructure Audit: Documenting existing hardware, applications, and dependencies.
- 2. Infrastructure Migration:
 - **Physical Relocation:**
 - Digital Infotech orchestrated the physical move of servers, storage arrays, and networking equipment.
 - Rigorous labeling ensured accurate reassembly at the new site.
 - Network Replication:
 - A redundant network was set up at the new location.
 - Data replication mechanisms (such as synchronous or asynchronous replication) were implemented.
 - Testing verified failover capabilities.
 - Application Migration:
 - Critical applications (ticketing systems, license databases, traffic management) were migrated with minimal disruption.



- Virtualization technologies (VMware, Hyper-V) facilitated seamless transitions.
- Database servers were carefully moved to maintain data consistency.
- 3. Testing and Validation:
 - **Rigorous testing included:**
 - Failover Testing: Simulating data center failures to ensure seamless transition.
 - Performance Testing: Validating system responsiveness under load.
 - Data Integrity Checks: Verifying data consistency post-migration.
 - Security Audits: Ensuring compliance with government standards.
- 4. Post-Migration Support:
 - Digital Infotech provided ongoing support during the stabilization phase:
 - Monitoring: Real-time monitoring of system health and performance.
 - Fine-Tuning: Optimizing configurations for peak efficiency.
 - User Training: Educating IT staff on the new environment.
- 5. Documentation and Handover:
 - Detailed documentation provided to the client:
 - Inventory: Updated inventory of all relocated hardware.
 - Network Diagrams: Schematic representations of the new data center.
 - Runbooks: Step-by-step procedures for routine tasks.
 - Emergency Procedures: Contingency plans for unexpected events.

Results

- Minimal Downtime: The transport agency experienced only planned downtime during the migration.
- Improved Resilience: The new data center design enhanced redundancy and disaster recovery capabilities.
- Cost Savings: Energy-efficient infrastructure reduced operational costs.
- Compliance: The migration adhered to government security and privacy requirements.

Conclusion:

Digital Infotech's expertise in data center relocation ensured a smooth transition for the government transport agency. By combining technical proficiency with meticulous planning, they successfully moved critical services without disrupting public transportation operations. Digital Infotech LLC 30N Gould Street, Sheridan WY 82801