

# Server and Network Infrastructure Upgrade Case Study

This document details the successful overhaul of a supplements distributor's outdated IT infrastructure. By deploying new Dell servers, replacing legacy firewalls with FortiGate solutions, and transitioning from VMware to Hyper-V virtualization, CG Technologies delivered significant cost savings while enhancing performance and reliability. The 12-week project addressed critical challenges and delivered measurable improvements in system uptime, backup reliability, and overall operational efficiency.



# Client Challenges



## Performance Issues

Legacy servers and outdated network equipment were causing significant performance bottlenecks, frequent system crashes, and unexpected downtimes that disrupted business operations and reduced productivity.



## Escalating Licensing Costs

VMware renewal fees were becoming increasingly expensive, creating budgetary pressure and reducing funds available for other technology investments.



## Unreliable Backup Systems

Existing backup solutions failed to provide comprehensive data protection, creating significant business continuity risks and compliance concerns.

These challenges were significantly impacting the client's ability to efficiently serve customers and maintain competitive operations. With increasing frequency of technical issues, management was spending valuable time troubleshooting rather than focusing on core business activities.

# Solutions Implemented



## Infrastructure Upgrade

Deployed new Dell PowerEdge servers and migrated virtualization from VMware to Microsoft Hyper-V, providing modern computing capabilities while reducing ongoing licensing expenses.

## Backup Modernization

Implemented Veeam Backup & Replication to provide reliable, efficient data protection with rapid recovery capabilities and comprehensive monitoring.



## Network Enhancement

Replaced outdated Sophos firewalls with FortiGate next-generation security appliances, delivering improved threat protection, enhanced throughput, and more comprehensive security features.

## Remote Access Solutions

Configured secure VPN access through the FortiGate platform, enabling staff to access systems and data remotely with enterprise-grade security protocols.

# Implementation Challenges



## Migration Complexity

Transitioning from VMware to Hyper-V required careful planning to avoid data loss and minimize downtime. We developed a phased migration strategy with comprehensive testing at each stage.



## Security Integration

Integrating new FortiGate firewalls into the existing network architecture required reconfiguring security policies and ensuring compatibility with all network segments.

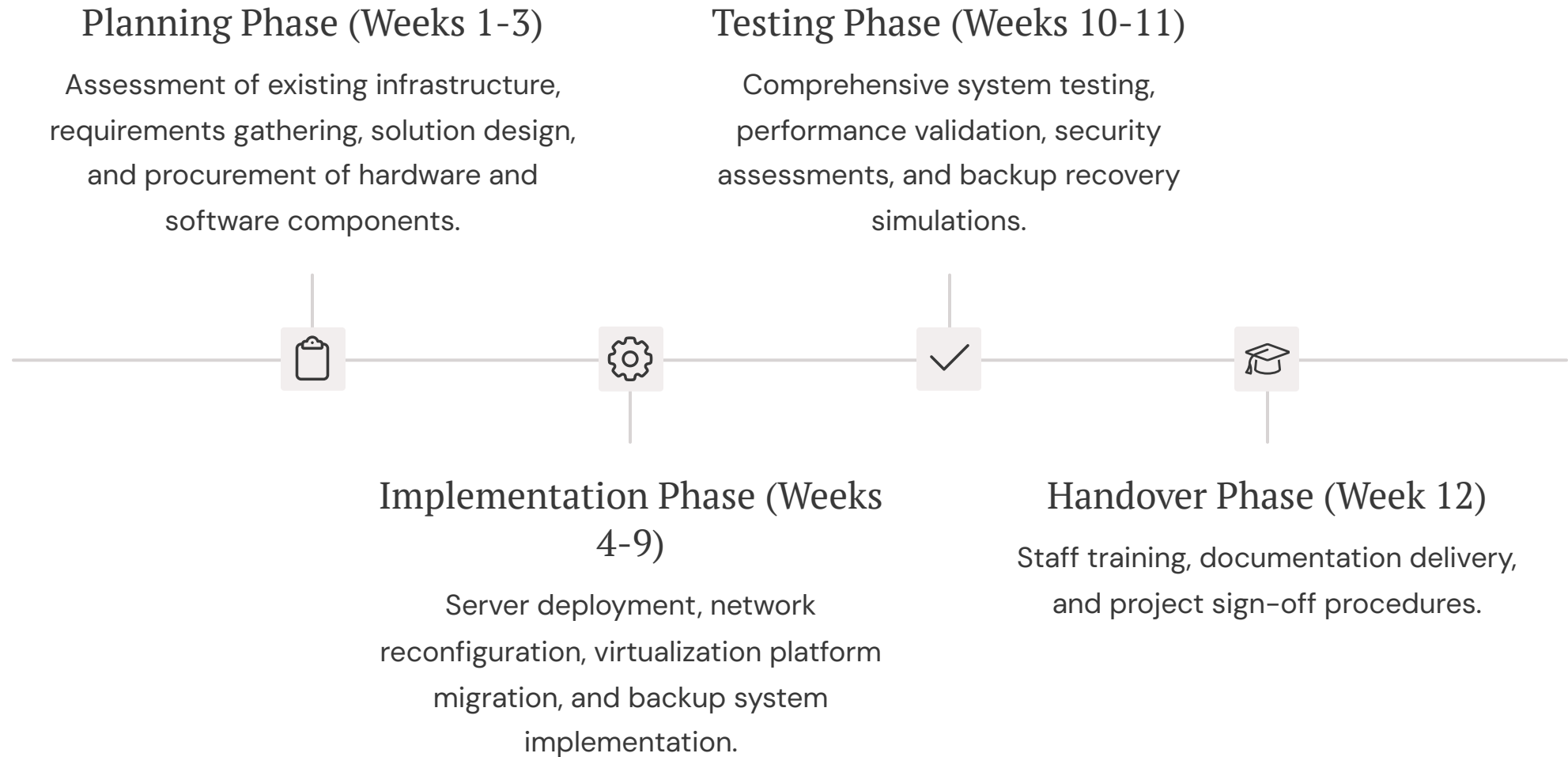
3

## Backup Transition

Moving to Veeam from legacy backup systems necessitated establishing new backup schedules, retention policies, and verification procedures while ensuring historical data remained accessible.

Each challenge required specialized expertise and close collaboration with the client's IT staff. Regular communication and documentation of configuration changes were essential to ensure smooth transitions between systems.

# Project Timeline and Methodology



The project followed a structured methodology with clear milestones and deliverables at each stage. Regular status meetings with stakeholders ensured alignment and addressed emerging concerns proactively.

# Measurable Outcomes and Benefits

30%

Licensing Cost Reduction

Annual savings by transitioning from  
VMware to Hyper-V

25%

System Uptime Increase

Improvement in operational  
availability

100%

Backup Success Rate

Reliability achieved with Veeam  
implementation

Beyond these metrics, the client experienced significant qualitative improvements including faster application response times, simplified IT management, and enhanced confidence in their disaster recovery capabilities. The reduction in system-related incidents freed up IT staff to focus on strategic initiatives rather than reactive troubleshooting.

# Lessons Learned

## Cost-Effective Virtualization Alternatives

Transitioning from premium solutions like VMware to Microsoft Hyper-V can deliver substantial cost savings without compromising performance when properly planned and executed. This approach works particularly well for mid-sized organizations with standard virtualization requirements.

## Backup Solution Criticality

The implementation of enterprise-grade backup solutions like Veeam proved essential for ensuring data integrity and business continuity. The investment in robust backup infrastructure pays dividends through reduced recovery time objectives and enhanced data protection.

## Strategic Infrastructure Planning

Comprehensive planning with phased implementation approaches minimizes business disruption during major infrastructure upgrades. Taking time to document existing configurations and future state architectures ensures smoother transitions.

These insights have informed our approach to subsequent infrastructure modernization projects, allowing us to refine our methodologies and better prepare clients for the changes associated with significant technology transitions.

# Client Testimonial and Conclusion

The infrastructure upgrade has transformed our operations. With improved performance and reliable backups, we can focus more on serving clients without IT concerns. The transition was smoother than expected, and the cost savings have allowed us to invest in other areas of our business.

– Operations Director, Supplements Distribution Company

## Key Takeaways

- Modern infrastructure solutions can simultaneously reduce costs and improve performance
- Proper planning and phased implementation minimize business disruption
- Comprehensive backup solutions are essential for business continuity
- Alternative virtualization platforms can provide excellent value

This project demonstrates how strategic technology investments can address multiple business challenges simultaneously. By modernizing server infrastructure, enhancing network security, and implementing reliable backup systems, we delivered a comprehensive solution that improved performance while reducing ongoing costs. The success of this implementation provides a blueprint for similar organizations looking to optimize their IT infrastructure investments.