CASE STUDY

Threadfin's Microsoft Hyper-V Quick Start

Customer: Tungsten Technologies
Industry: Engineering & Manufacturing
Employees: 1,200
Location: Headquarters + 3 plants

Duration: 5 weeks
Delivery Model: Fixed Fee
Investment: $25,000

EXECUTIVE SUMMARY

Tungsten Technologies, a mid-sized engineering and manufacturing firm, faced rising VMware licensing costs and aging data center hardware. The IT leadership team needed to refresh infrastructure, reduce virtualization expenses and establish a stable platform for future hybrid cloud expansion—all without disrupting plant or engineering operations.

Threadfin designed and deployed a new 4-node Microsoft Hyper-V cluster on modern hardware, integrated with Tungsten's existing SAN and network. Delivered in just five weeks, the Hyper-V Quick Start gave Tungsten a production-ready virtualization platform that lowered annual licensing spend, simplified operations, and positioned them for future scalability.

CURRENT ENVIRONMENT & CHALLENGES

- VMware ESXi environment nearing hardware end-of-support
- Licensing renewals projected to increase OPEX by 25%
- Fragmented VM management with inconsistent patching schedules
- Fibre Channel SAN storage underutilized but in good condition
- IT staff capacity consumed by ERP upgrades and plant automation

KEY OUTCOMES

Cost avoidance: Projected VMware licensing savings in the tens of thousands annually

Performance gains: Faster failover & VM recovery with modernized cluster design

Operational efficiency: Centralized management reduced weekly maintenance hours

Future-ready: Platform now supports Azure hybrid cloud integration

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EXECUTION SUMMARY

The Microsoft Hyper-V Quick Start was structured to include the following:

Discovery & design workshop

- Reviewed compute, storage & network architecture
- Aligned Hyper-V design with manufacturing uptime requirements
- Guided high-level hardware sizing & procurement

Pre-deployment planning

- Completed readiness assessment for hardware, networking & licensing
- Recommended network segmentation strategies for workload isolation

Hyper-V cluster deployment

- Built & configured a 4-node Microsoft Hyper-V cluster with Windows Server Failover Clustering (WSFC) & Cluster Shared Volumes (CSVs)
- Implemented switch-embedded teaming for network resiliency
- Enabled Cluster-Aware Updating to streamline patching cycles

Storage integration

- Provided LUN/volume sizing guidance & connected to existing SAN
- Optimized storage paths with Multipath I/O (MPIO) support
- Tested failover scenarios to validate high availability

Validation & handoff

- Executed test plan covering HA failover, VM migration & performance validation
- Delivered as-built documentation & knowledge transfer session with IT staff

ENGAGEMENT SUMMARY

Threadfin partnered closely with Tungsten's IT leadership to balance modernization with operational stability. By leveraging existing SAN investments and introducing high-availability Hyper-V clustering, Threadfin delivered a cost-conscious solution that required minimal internal bandwidth from Tungsten's IT team. The result was a seamless transition from VMware to Microsoft virtualization—completed without downtime to critical engineering and manufacturing systems.

REMEDIATION RECOMMENDATIONS

(outside scope) During the Quick Start, several opportunities for improvement were observed that fall outside the initial engagement scope. Threadfin recommends the following follow-on efforts:

- Implement System Center Virtual Machine Manager (SCVMM) for enterprise-scale Hyper-V management
- Evaluate Storage Spaces Direct (S2D) for hyper-converged expansion
- Extend high-availability to a secondary site for full disaster recovery
- Leverage Threadfin's VM migration services for workload consolidation or cross-platform transitions

CONTINUOUS ENABLEMENT

As part of the Hyper-V Quick Start, Threadfin offers ongoing enablement services to ensure Tungsten's new virtualization environment continues to perform optimally. This includes periodic health checks, patch cycle reviews, and advisory sessions for cloud integration planning. Rather than traditional managed services, this model provides strategic continuity—acting as an extension of Tungsten's IT team to help avoid drift, strengthen controls, and adapt to evolving business needs.

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