LIVEWYER

VMWARE KUBERNETES MIGRATION

Technical Assessment Pilot

Executive Summary

The Background

Following Broadcom's VMware acquisition, organisations face existential pressure from licensing changes that have increased costs by 200-500% for typical customers, with some experiencing increases exceeding 1000%. This external disruption forces organisations to evaluate infrastructure platform alternatives whilst maintaining operational stability and preserving years of accumulated expertise.

The organisational challenge extends beyond simple technology comparison to encompass systematic assessment capabilities, risk evaluation frameworks, team readiness for new approaches, and strategic decision-making under compressed timelines with significant business continuity implications. The landscape presents multiple categories of solutions, each with different strategic implications for long-term organisational capability and vendor independence, where open source approaches offer genuine technical control and strategic flexibility whilst avoiding the lock-in cycles that create recurring organisational disruption.

The Opportunity

We transform urgent spending pressures into manageable technical challenges by providing independent assessment of KubeVirt capabilities against your specific operational requirements. Rather than vendor-driven recommendations requiring upfront commitment, our evaluation approach may conclude that KubeVirt isn't suitable for your environment, protecting you from costly project failures while demonstrating thorough technical due diligence.

This pilot addresses the unique tension between preserving technical expertise and embracing necessary modernisation. We work directly with your VMware specialists to build competence with cloud-native technologies whilst leveraging existing infrastructure knowledge, ensuring team confidence rather than resistance throughout the evaluation process.

Our Success Criteria

Your specific pilot success criteria will be defined collaboratively during our initial meeting, based on the particular business challenges you need to address.

Example criteria:

- → **Strategic Decision Confidence**: Provide comprehensive technical evidence enabling confident platform decisions, whether proceeding with KubeVirt migration, waiting for better conditions, or pursuing alternative approaches
- → **Technical and Operational Validation**: Demonstrate KubeVirt's ability to meet your performance benchmarks, operational workflows, and service level requirements through hands-on migration and testing of representative applications

Timeline

This three-week pilot provides structured evaluation of KubeVirt capabilities through hands-on technical validation. We work directly with your infrastructure team to assess migration feasibility, validate performance characteristics, and build the technical evidence needed for confident platform decisions.

Timeline Overview

- **Week 1**:
  Discovery, technical assessment, and KubeVirt environment deployment with your team
- **Week 2**:
  Live application migration with performance validation and operational testing
- **Week 3**:
  Operational readiness assessment and strategic recommendations with decision support

Week 1: Discovery and Technical Foundation

This week establishes the collaborative foundation needed for meaningful KubeVirt evaluation, working alongside your VMware specialists to understand operational requirements and deploy the technical environment where migration testing will occur.

Infrastructure Assessment and Team Evaluation

Your VMware environment represents years of accumulated expertise and operational refinement. Working directly with your infrastructure team, we examine current virtualisation workloads with particular attention to performance characteristics, operational dependencies, and migration complexity factors.

Current Environment Analysis

Our evaluation approach focuses on practical migration considerations:

- Virtual machine workload analysis including resource utilisation patterns and performance baselines
- Storage and networking architecture review identifying configuration dependencies and integration requirements
- Operational workflow documentation covering monitoring approaches, backup procedures, and recovery processes

Outcomes

Our assessment provides foundation for pilot success:

- Comprehensive technical assessment documenting current state architecture and operational requirements
- Team readiness evaluation identifying skill gaps and training requirements affecting

project feasibility

- Critical dependency mapping highlighting integration points and potential migration obstacles

Technical Architecture Workshop

Migration success depends on architecting a KubeVirt environment that maintains your operational standards while providing the performance and reliability your applications require. This collaborative design session combines your infrastructure expertise with our KubeVirt implementation experience.

Architecture Design Process

Our collaborative approach addresses technical decisions that impact operational success:

- Storage architecture design matching your performance requirements and availability expectations
- Network topology planning that preserves connectivity while enabling Kubernetes orchestration capabilities
- Resource allocation strategies ensuring application SLA requirements are maintained during transition

Outcomes

Workshop delivers concrete technical foundation:

- Detailed technical architecture specifically designed for your pilot environment and operational requirements
- Confirmed technology stack selections with clear rationale for configuration choices and trade-offs made
- Selected candidate application representing meaningful migration complexity and business criticality for testing

KubeVirt Environment Deployment

This deployment phase creates the KubeVirt environment where actual migration testing and performance validation will occur. Your team participates directly in installation procedures, gaining hands-on experience with Kubernetes and KubeVirt deployment while building confidence with the technology stack.

Infrastructure Implementation Approach

Our deployment methodology emphasises operational readiness alongside technical functionality:

- Production-ready Kubernetes cluster installation with KubeVirt configuration appropriate for your operational patterns
- Storage and networking infrastructure deployment matching your performance requirements and architectural standards

- Comprehensive observability stack implementation providing performance monitoring and operational visibility tools

Outcomes

Deployment creates working foundation for evaluation:

- Working Kubernetes and KubeVirt environment deployed and comprehensively validated against operational requirements
- Performance baselines established through testing with monitoring infrastructure providing comparison capabilities
- Complete installation documentation including procedures, configuration choices, and operational workflow guidance

Week 1 Achievements

Technical foundation for meaningful evaluation established through comprehensive assessment and working infrastructure:

- ☑ **Migration feasibility validated**: Current environment assessed with clear understanding of technical complexity and team readiness factors
- ☑ **Technical architecture deployed**: Working KubeVirt environment built to your specifications with monitoring and operational tools configured
- ☑ **Collaborative framework established**: Your team actively engaged throughout process with practical Kubernetes experience gained

Week 2: Implementation and Technical Validation

Week two moves from preparation to practical implementation through actual migration of your selected application, executing the migration while measuring performance and validating KubeVirt's ability to meet operational requirements under real-world conditions.

Migration Strategy Development

Working with your team, we develop migration procedures designed for scalability beyond our pilot application. Risk mitigation receives particular attention through establishing rollback procedures, defining success criteria, and creating monitoring approaches that provide early warning of potential issues.

Migration Planning Framework

Our planning framework addresses practical challenges your team will encounter during broader implementation:

- Workload dependency mapping and migration sequencing to minimise service disruption
- Network and storage migration patterns preserving existing connectivity and data access

- Rollback procedures and testing validation ensuring operational safety throughout the process

Outcomes

The migration planning framework ensures we build a repeatable process rather than a one-off experiment:

- Step-by-step migration workflow with clear success criteria at each stage
- Risk mitigation strategies covering common migration failure scenarios
- Performance testing framework measuring application behaviour before and after migration

Live Migration Execution

We migrate your selected application to the KubeVirt environment while documenting every challenge encountered and solution applied, measuring performance against your VMware baseline throughout the process. Your team participates directly in migration execution, gaining hands-on experience with tools and procedures while building confidence in the technology.

Implementation Methodology

Our migration approach emphasises learning and validation alongside successful workload transfer:

- Live migration execution with comprehensive performance monitoring providing detailed comparison against VMware operational baseline
- Real-time challenge documentation and solution development giving practical experience with troubleshooting scenarios
- Direct team participation in migration procedures and operational workflows building competence and confidence

Outcomes

Migration execution provides concrete evidence for evaluation:

- Selected application successfully migrated to KubeVirt environment with comprehensive operational validation completed
- Complete documentation of challenges encountered, solutions applied, and practical lessons learned throughout execution
- Solutions developed and tested during pilot migration with your VMware specialists

Post-Migration Validation and Analysis

Migration completion initiates comprehensive validation of application functionality and operational characteristics in the KubeVirt environment. This validation phase examines changes to daily operational workflows, highlighting improvements and additional complexity introduced by Kubernetes-based management.

Validation Framework

Our assessment methodology provides evidence supporting confident decision-making about KubeVirt adoption:

- Application functionality verification ensuring all features and operational workflows function as expected
- Operational characteristics analysis comparing daily management requirements with established VMware procedures
- Team readiness assessment documenting comfort levels, concerns, and additional training requirements for successful adoption

Outcomes

Validation delivers comprehensive assessment of KubeVirt capabilities:

- Comprehensive migration success analysis including detailed assessment of areas requiring attention or operational adjustment
- Quantified performance comparison data providing objective foundation for evaluating KubeVirt capabilities against requirements
- Documented operational workflow changes with realistic assessment of team training and adaptation requirements

Week 2 Achievements

Practical validation completed with comprehensive evidence supporting strategic decision-making:

- ☑ **Real-world migration demonstrated**: Actual application migrated with full performance validation and operational testing completed
- ☑ **Technical evidence generated**: Quantified comparison data enabling objective assessment of KubeVirt capabilities against requirements
- ☑ **Operational impact assessed**: Clear understanding of workflow changes, training requirements, and team readiness factors

Week 3: Operational Readiness and Strategic Decision Support

We complete the pilot evaluation by validating operational readiness and providing clear recommendations based on technical evidence gathered throughout the assessment. This final phase ensures you have the information needed for confident strategic decisions about VMware alternatives.

Operational Readiness Evaluation

Managing KubeVirt in production requires different operational patterns from traditional VMware environments. We assess your team's capability to handle day-to-day operations,

troubleshooting, and maintenance tasks in a Kubernetes-based virtualisation environment. This evaluation identifies specific training needs and operational changes required for successful transition.

Day-to-Day Operations Assessment

We examine operational reality across different team roles and responsibilities:

- System administration tasks including VM lifecycle management and resource allocation
- Monitoring and troubleshooting workflows using Kubernetes-native tools and approaches
- Backup and disaster recovery procedures adapted for containerised virtualisation environments

Outcomes

Operational assessment provides practical guidance for implementation planning:

- Team capability evaluation with specific training recommendations for successful transition
- Operational workflow mapping showing how existing VMware workflows adapt to KubeVirt management
- Support requirement analysis identifying areas needing external assistance during transition

Final Assessment and Strategic Recommendations

Strategic decisions require confidence in technical evidence and clear understanding of implementation requirements. Our final assessment synthesises pilot findings into actionable recommendations that balance technical feasibility with business requirements and organisational readiness. This final assessment enables confident decisions about whether to proceed with migration, strengthen foundations first, or pursue alternative approaches.

The outcomes of the pilot provide strategic direction through systematic assessment of technical and organisational factors:

- ☑ Migration viability based on application compatibility and performance validation
- ☑ Operational readiness evaluation covering team capabilities and infrastructure requirements
- ☑ Investment analysis including migration costs, operational changes, and long-term strategic value
- ☑ Risk assessment covering technical challenges and business continuity considerations

Conclusion: Strategic foundation for technical excellence

This pilot transforms external vendor pressure into an opportunity for infrastructure modernisation leadership whilst building organisational capability for evaluating emerging technologies. Your team gains practical experience with Kubernetes and cloud-native approaches that position your organisation at the forefront of infrastructure evolution, regardless of whether full KubeVirt adoption emerges as the chosen path.

The technical validation we conduct together creates a foundation for confident strategic decision-making that extends far beyond immediate VMware alternatives. Whether your evaluation leads to full migration, strengthening your foundations based on our recommendations, or alternative approaches, the technical competence and decision-making framework developed through this pilot becomes a competitive advantage in navigating future technology transitions with confidence and organisational consensus.