

# Rancher Kubernetes (RKE) Platform Deployment

Implements a production-grade Rancher Kubernetes Engine platform utilizing proven patterns from extensive enterprise deployments. This service delivers a fully configured RKE environment with enterprise-scale infrastructure, security controls, and operational capabilities aligned with Rancher best practices.

## Prerequisites

- Completed Kubernetes Readiness Assessment
- Infrastructure provisioning capabilities established
- Network and security policies approved
- Infrastructure access requirements met
- Platform team availability confirmed

## Foundation & Infrastructure (4 weeks)

- RKE cluster architecture implementation
- Rancher management plane setup
- Network and CNI configuration
- Longhorn storage deployment
- Monitoring foundation setup

## Platform Services & Integration (4 weeks)

- Istio service mesh deployment
- Fleet GitOps implementation
- Security tooling integration
- Backup and DR configuration
- Custom catalog development

## Validation & Optimization (4 weeks)

- Security controls and compliance validation
- Disaster recovery and backup testing
- Performance and scalability verification
- Production readiness validation
- Cost optimization implementation

## Technical Outcomes

- Production-grade high availability established
- Multi-cluster resilience validated
- Security controls aligned with CIS benchmarks
- Platform automation framework operational
- Cost optimization capabilities implemented

## Deliverables

- As-built RKE architecture documentation
- Infrastructure-as-Code repositories
- Security and compliance validation reports
- Operational runbooks and playbooks
- Platform validation matrix

## About Shadow-Soft

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