

KuBench: A Kubernetes-Based Environment for Standardized REST API Framework Performance Evaluation

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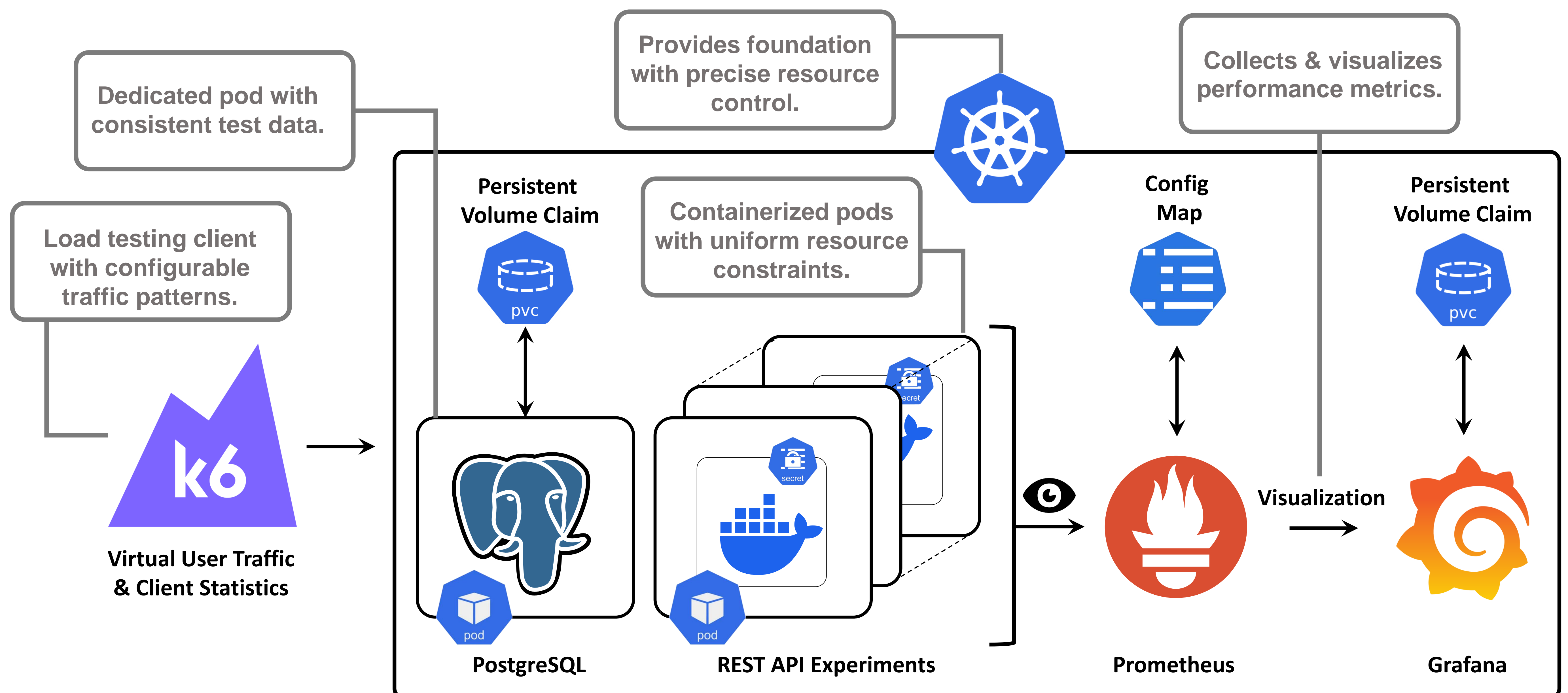
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1 KuBench

KuBench revolutionizes REST API framework selection by enabling direct comparison of multiple implementations across different languages under identical conditions. Our Kubernetes-based solution delivers comprehensive performance metrics that existing single-implementation tools cannot provide, empowering teams to make framework decisions based on genuine performance requirements rather than assumptions.



2 KuBench Architecture



Consistency

Fair comparison of REST API frameworks under controlled conditions.

Isolation

Containerized approach prevents cross-contamination.

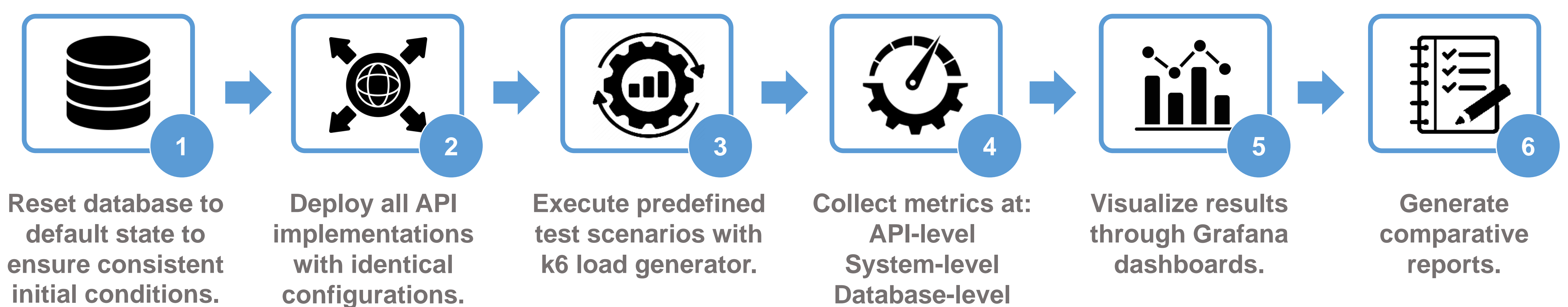
Reproducibility

Tests can be reliably reproduced across infrastructures.

Extensibility

Modular design allows easy integration of additional frameworks.

3 Testing Methodology



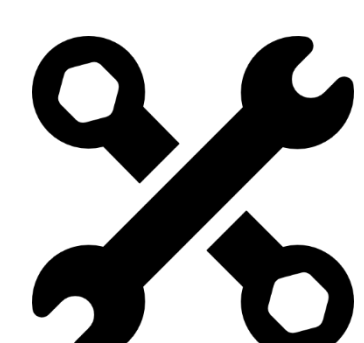
4 How to Use It?



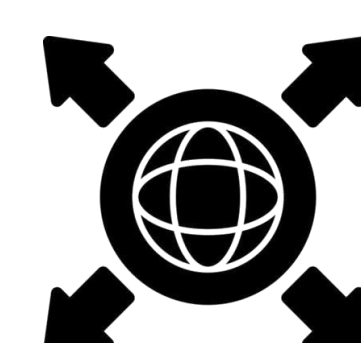
5 Future Work



Multiple database instances for concurrent test execution



Simplified configuration process



Distributed deployment scenarios for microservice architectures



Automated analysis tools for performance bottleneck identification