

Performance and Cost Report

Prepared for: Manifold

Introduction

The purpose of this report is to demonstrate what the behaviour of Valence on your cluster and infrastructure as well as the resource savings and performance improvements Valence have provided. After an overview of the core findings, we will explain the results of cost savings, and Service Level Objective (“SLO”) compliance.

Core Findings and Summary

CPU

Actual CPU provisioned over time was 2.0 vCPU; with Valence CPU provisioned over time would have been 0.65 vCPU

Memory

Actual memory provisioned over time was 2 GB; with valence memory provisioned with valence over time would have been 1 GB.

SLO Compliance

We associated specific SLOs for each of your applications, as shown in the individual application reports. Over time, there were 812 SLO violations, while with Valence there would have been 73 SLO violations. Valence would have mitigated 87% SLO violations.

Savings

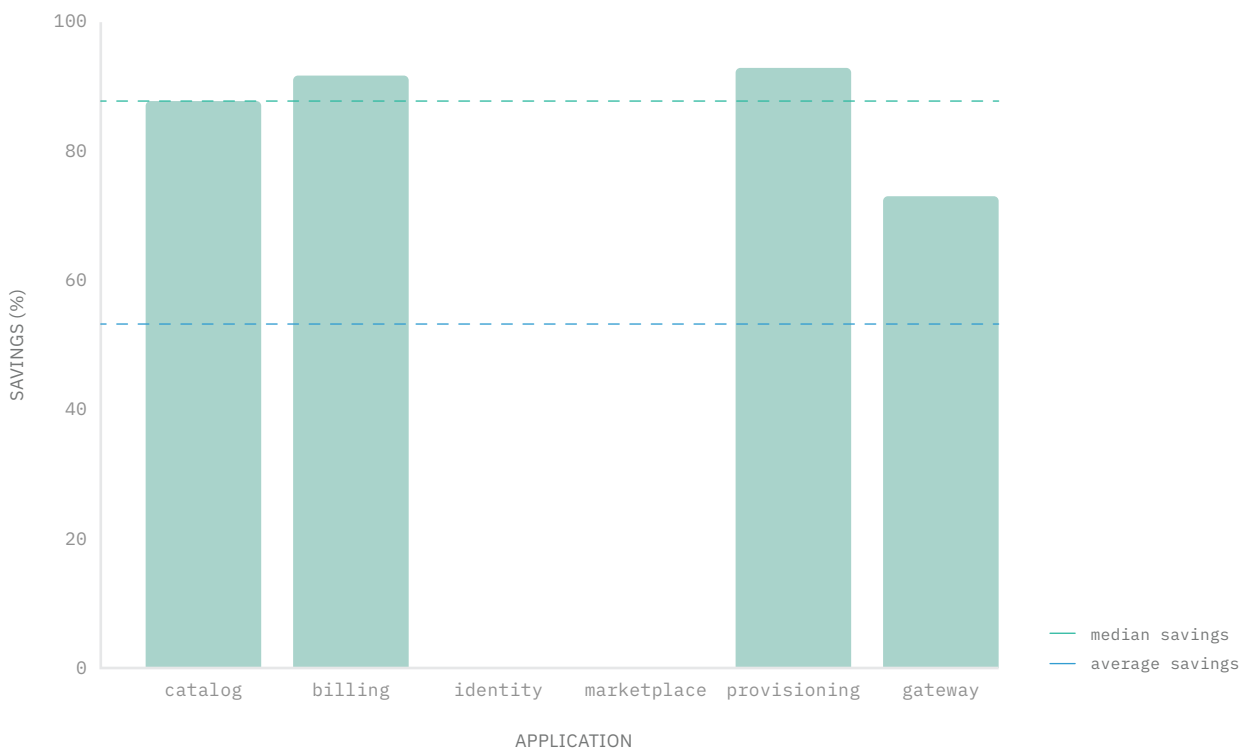
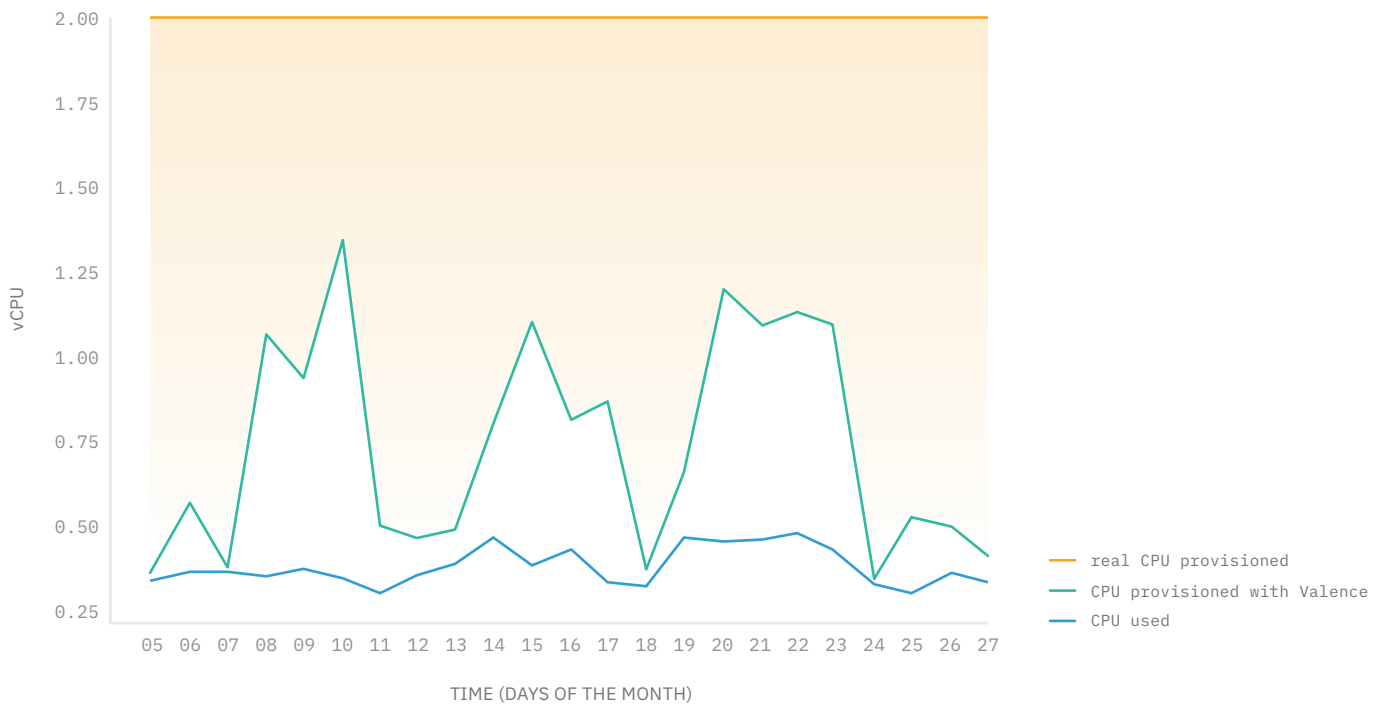
According to the below findings: with Valence running, Manifold was able to provision 4 less m4.xlarge machines resulting in total monthly savings of \$2000 per month (out of \$5500 total monthly cost) in compute cost with Valence operating Manifold’s Kubernetes cluster.

Valence results in a total of 67% CPU savings and 47% memory savings.

Resources Saved

Valence learns to provision the most optimal resources as time goes on.

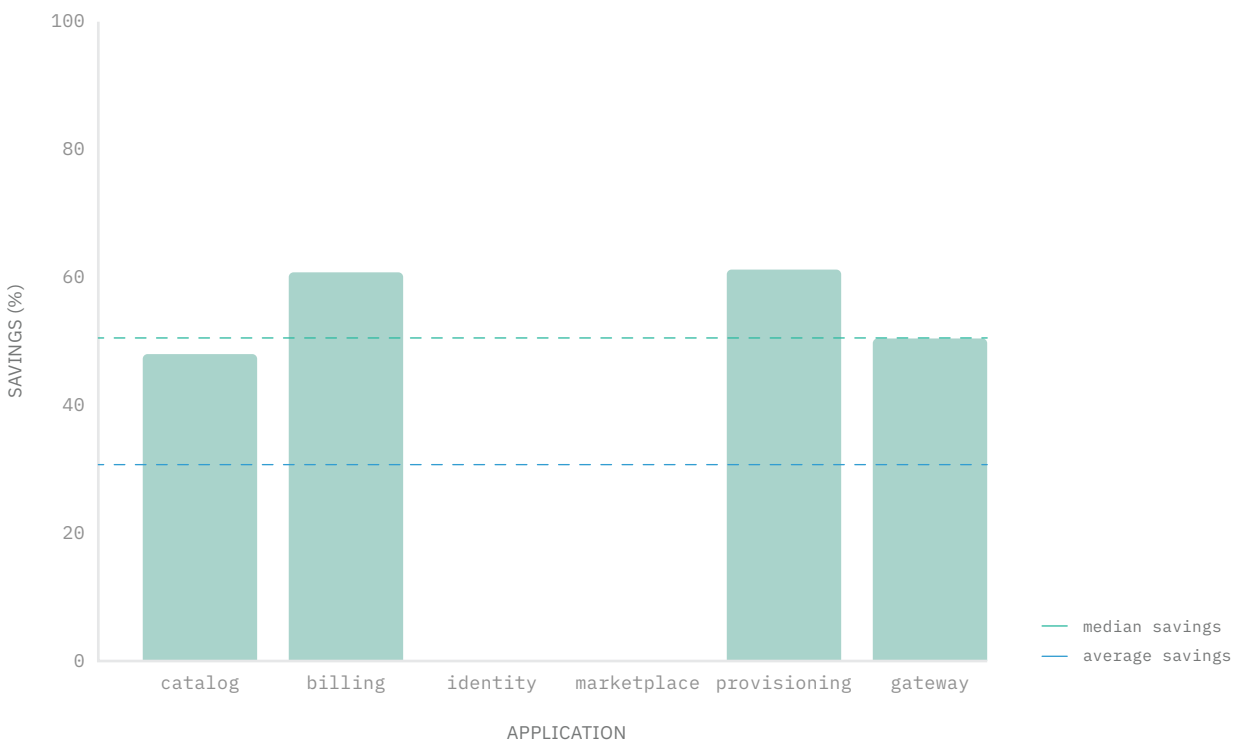
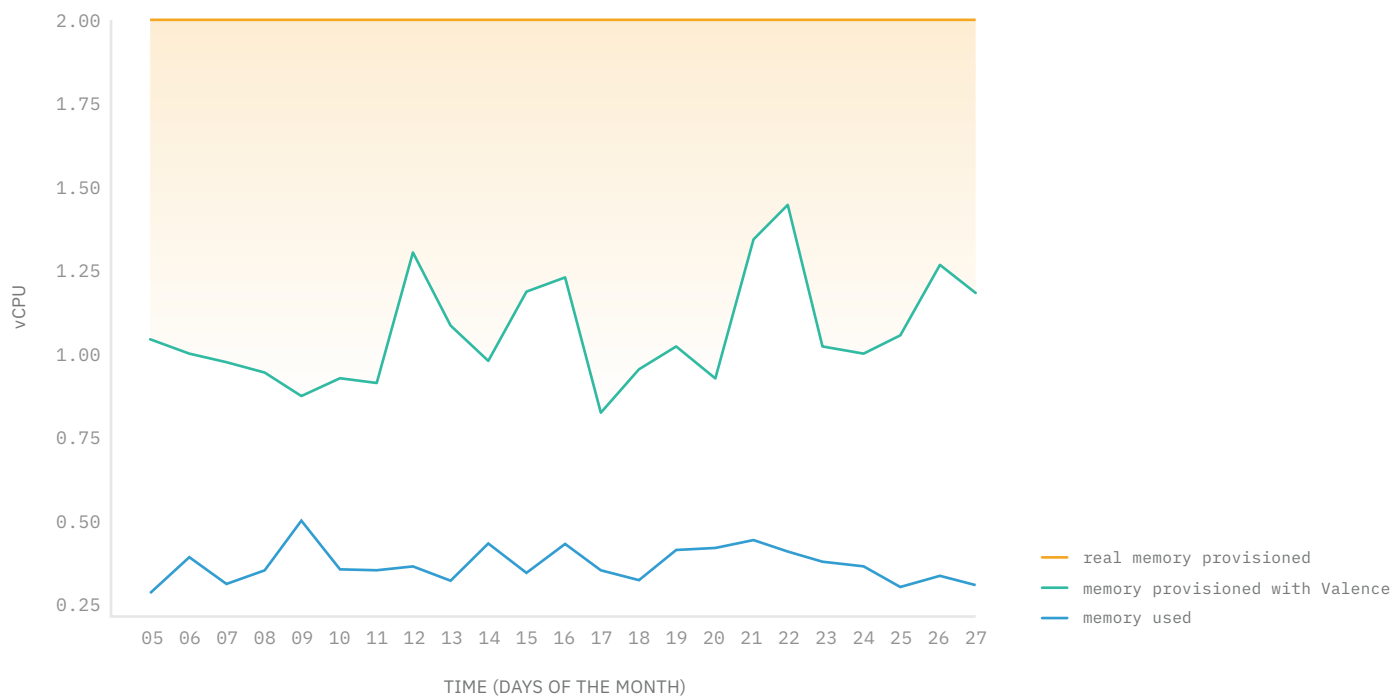
In total, valence would have saved 67% of CPU usage (see filled area in chart 1).



Memory Saved

Valence learns to provision for varied workload signatures such as when memory is not a bottleneck. Over time valence will be able to recommend extremely efficient resource utilization while still being able to adapt to code changes and other events that might make memory more dynamic.

Valence results in 47% memory savings (see filled area in chart 1).



SLO Compliance

Valence actively optimizes resources to ensure service level objectives (SLOs) are met. We associated specific SLOs for each of your applications, as shown in the individual application reports. Valence would have **mitigated 87.0% SLO violations**. Though the impact of SLO violations are difficult to calculate, a rough industry standard is customer lost per violation.

