



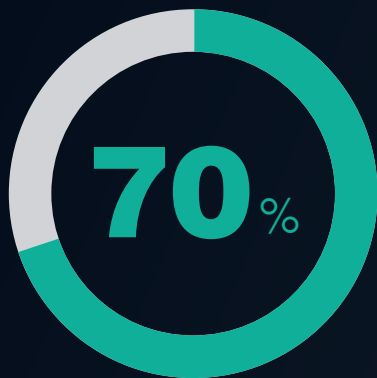
RAFAY



TOTAL COST OF OWNERSHIP ANALYSIS KUBERNETES MANAGEMENT & OPERATIONS: BUILD VS. BUY

EBOOK BY RAFAY

THE MOVE TO KUBERNETES



**OF ENTERPRISES
SAID THEIR
ORGANIZATION USES
KUBERNETES**

Kubernetes is now the de-facto technology for automating and governing the management of modern applications.

In a recent survey, 70% of enterprises said their organization uses Kubernetes and nearly one in three of those enterprises said they expected to significantly increase their use of containers during the next 12 months.

The big question now is: How does your enterprise best develop a Kubernetes management and operations practice?

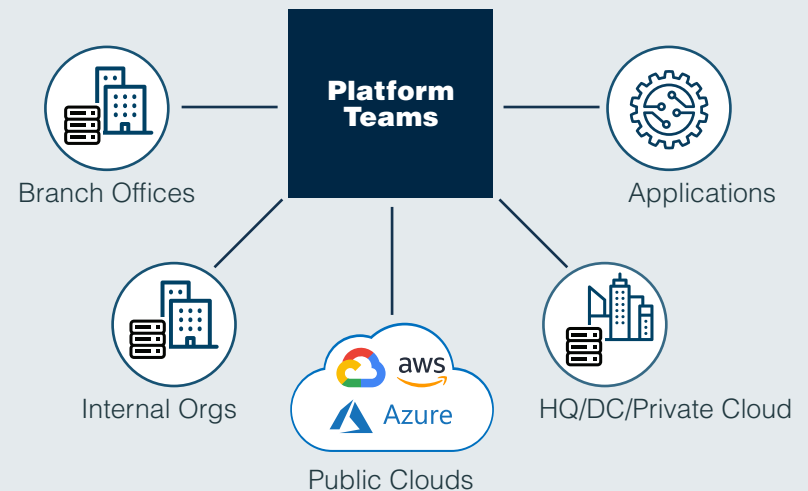
KUBERNETES IS EASY UNTIL IT ISN'T

Getting a single application running on a single infrastructure stack is easy, but managing Kubernetes and its software dependencies across applications, geographies, internal organizations, and infrastructure is not.

In order to achieve a Kubernetes management and operations practice that runs at enterprise scale, organizations face a build (DIY) or buy decision.

Two key decision factors that must be analyzed in order to make a build or buy decision are the total cost of ownership (TCO) and time to value (TTV).

MANAGING CLUSTERS AND APPS ACROSS HYBRID & MULTI-CLOUD ENVIRONMENTS IS TEDIOUS



DEPENDENCIES BECOME CHALLENGING

Multiple Tools & Systems





CALCULATE: TCO FOR K8S MANAGEMENT & OPERATIONS

A TCO calculator has been developed, using the collected experience of several dozen U.S. enterprises with over 1,000 employees that have shared their Kubernetes management experiences.

By examining these experiences, we were able to build a simple, repeatable mathematical model to help organizations project their TCO and TTV of a DIY versus managed service solution.

The intent of this eBook is to walk through an example analysis and review the cost factors and assumptions employed in the TCO calculator.

MAJOR COSTS **EXPLAINED**

Our TCO calculator is based on three categories of cost:



Yearly Vendor Fees

Controller/Platform
Subscription: Yearly fees
for licenses and/or support



Initial Build & Configuration

Number of Engineering,
QA and Architect
Resources Required



Maintenance & Support

Number of Engineering,
QA and Architect
Resources Required

MONETARY COST

In our calculator, this cost is zero for a DIY solution and, for a managed solution, is based on Rafay Systems' SaaS license fees for reference.

MONETARY COST

The calculator is pre-programmed with a multiplier for each resource headcount, and reasonably allocates that headcount per solution type.

MONETARY COST

This is the number of IT, Cloud, DevOps and SRE resources required for new integrations, upgrades and upkeep.

TIME TO VALUE

It also provides an educated estimate of time to build in months.

TIME TO VALUE

It also calculates the number of months for ongoing operations, as the difference between the total calculation length and the time to build in months.

WHAT MIGHT **THIS LOOK LIKE?**

Let's look at a possible scenario of total cost of ownership based on selected environment variables:

3

YEARS

DURATION

Length of time covered in this model

50

DEPLOYMENT

NODES

Indication of the size of the deployment

\$240K

YEAR

ENGINEERING RESOURCE

Software Engineering, Quality Assurance and System Architect Employees

\$180K

YEAR

IT RESOURCE

IT, Cloud, DevOps and Site Reliability Engineer Employees

20%

EACH SALARY

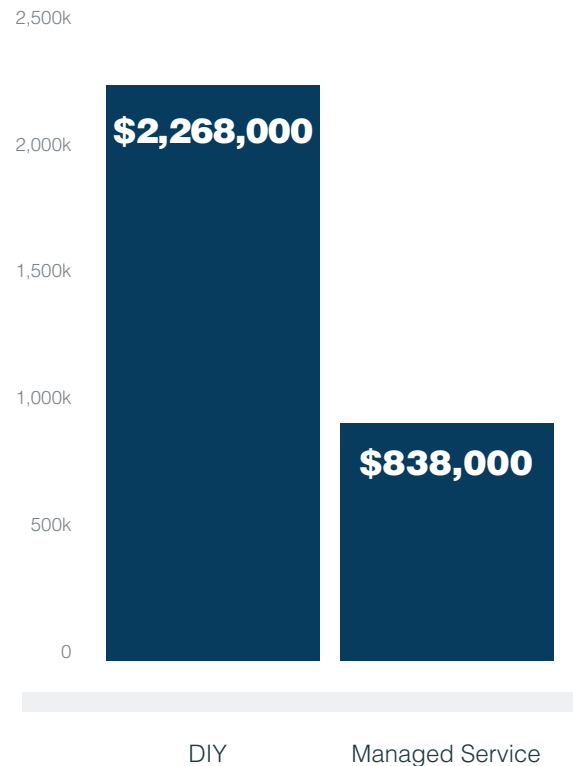
SALARY BURDEN

Cost of benefits, healthcare, office support, etc.

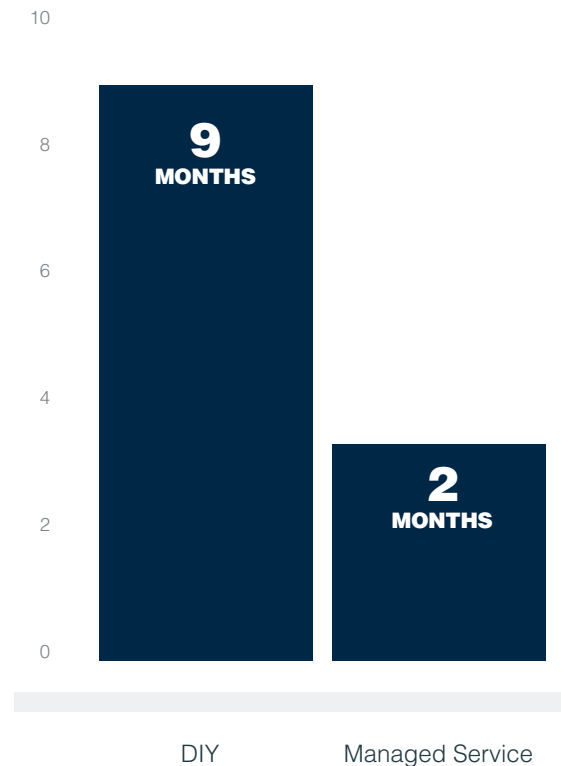
BREAKING DOWN **THE RESULTS**

TCO

Total Costs:
Over a 3 year
period, Managed
Service is
63% less
than DIY



Time to Value



Managed Service
has a faster time
to value by
7 months

To view number of resources required and other assumptions please visit: <https://www.rafay.co/tco-calculator>

DON'T FORGET THE SOFT COSTS

In addition to the hard costs detailed by the TCO calculator there are a number of “soft” costs that are not easily quantifiable. The soft costs included below are also important factors in an ultimate decision to build vs buy:

Resource Focus



There is an opportunity cost to having resources focused on building a solution for Kubernetes instead of core competencies.

In-House Skills Gap



It is difficult to find & keep skilled professionals that are familiar with Kubernetes and all the software addons required.

Long Term Maintenance

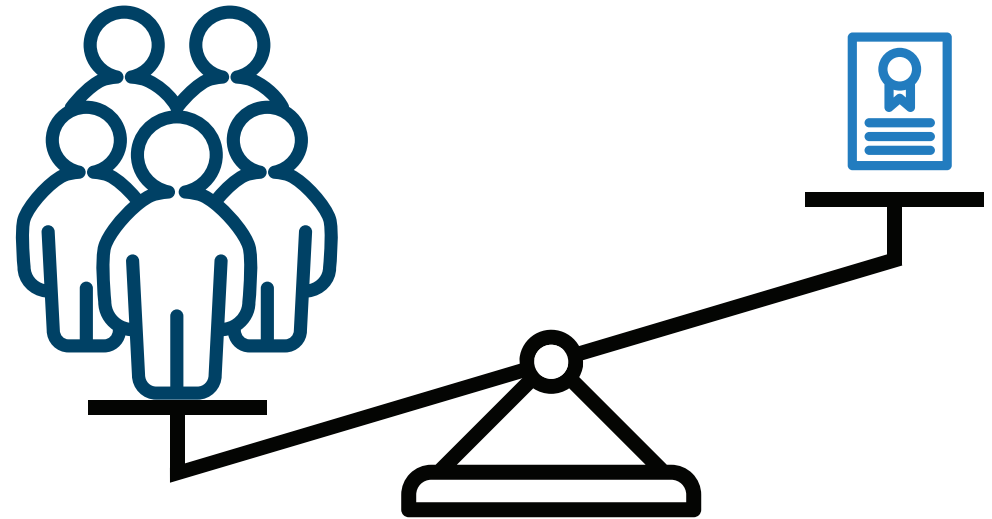


The lifespan of a Kubernetes infrastructure will expand beyond the 3 - 5 year TCO analysis, thus companies must plan for the long term cost of maintaining Kubernetes.

UNDERSTANDING **THE RESULTS**

What are the takeaways?

In general,
people are more expensive than
software licenses.



People with adequate Kubernetes experience are also difficult to find, and often retain.

Managed Services organizations can take advantage of a talent pool that serves many Kubernetes installations and develop resulting best practices.

While a build solution's lack of license fees may be attractive at first, the burden of additional technical resources becomes vastly more expensive over time.

FIND **YOUR** TCO VALUES ONLINE

Using the **Total Cost of Ownership Comparison Calculator**

**ONLINE
CALCULATOR**



You will need to provide the following inputs:



Duration of calculation in years



Number of Nodes



Yearly salaries of Engineering & IT professionals, and auxiliary costs as a percentage of salary

Our online calculator will use these inputs to generate a custom TCO and Time to Value report. This can provide a good view of what the real world implications of building your own Kubernetes solutions might be in the long run.

Run your own analysis here:
<http://www.rafay.co/tco-calculator>

Kubernetes Management & Operations TCO Calculator

Get a precise estimate of your Kubernetes cluster's cost with our TCO Calculator. Take into account infrastructure, resources, personnel, and more. Make informed decisions and budget effectively for your Kubernetes journey. Start using our tool now!

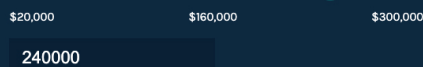
Number of Years for TCO Calculation



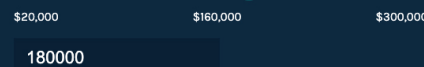
Number of nodes



Yearly Salary of 1 Engineering/QA/Architect Resource (\$)



Yearly Salary of 1 IT/Cloud/DevOps/SRE Resource (\$)



Additional Auxilliary costs Per Employee (%)





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