The Unmatchable ROI of Managed Apache Cassandra® Services

Why Managed Services?

There is no question that scalable data deployment is mission-critical. And Apache Cassandra® is emerging as the favorite database of choice for highly scalable, reliable, mission critical applications.

The question is:

1. Can you build the necessary expertise and infrastructure to meet this critical requirement in time, before your competitors do, or

2. Is the right strategy for you to outsource this responsibility to a Cassandra Managed Services Provider that has already made the necessary investments to build world-class expertise and infrastructure, so that you can focus on building world class expertise in your applications?

This is a serious decision to be made, one that can have major consequences.

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To help you analyze this decision and make the right options, we bring to your attention 3 key points to consider when deciding whether it makes sense to build your own Cassandra competency center, or to outsource Cassandra management to an expert Cassandra Managed Services Provider.

For companies that have made the decision to run their applications on Cassandra, the cost, timeline, and overall business risk levels of deploying their own Cassandra infrastructure are just too high to take on, especially when there are better options available.

Financial Considerations

Unless your company is willing to invest, *at a minimum*, $400,000 to $500,000 a year on building the necessary expertise, infrastructure, and processes, you should outsource this very critical operation to those who have already made such an investment. The chart below shows that, for the first year, a company can expect to spend at least $400,000 to $450,000 to deploy its own Cassandra infrastructure, and nearly as much for each year after.

At present, the demand for Cassandra expertise far outweighs the supply. Recruiting fees are high, and so is the cost of keeping these experts within your company. Each year, you can expect the salaries for your core Cassandra team to grow by 10% or more just to keep them in your company as recruiters call on them and try to lure the away with higher financial rewards. Compare this with the cost of outsourcing to a Managed Services Provider that charges an average of $60,000 to $70,000 per year to expertly deploy, manage, and monitor your Cassandra database—*for less than one-fifth the cost.*

Year 1	Base ($)	Burdened ($)
Cassandra Expert	200,000	236,000
Support 1	90,000	106,200
Recruiting Cost	58,000	58,000
Equipment	30,000	30,000
Other	5,000	5,000
Total First Year		435,200

Year 2	Base ($)	Burdened ($)
Cassandra Expert	220,000	259,600
Support 1	99,000	116,820
Equipment	15,000	15,000
Other	5,000	5,000
Total Second Year		396,420

Timeline Considerations

As has been indicated in the above section, there are very few Cassandra experts who have done enough Cassandra implementations to gain sufficient expertise in bringing your application into production quickly. Typical timelines for in-house deployments run between 4 and 6 months to get Cassandra up and running optimally.

Compare that with a Cassandra Managed Services Provider that can get you up and running expertly in a matter of 2-3 weeks—again this is an order of magnitude difference!

Unlike the cost consideration—which is a mostly operational in nature—this has strategic implications. In today's ever-changing customer needs, the ability to develop rapidly or to quickly release new features that can keep pace with growing customer needs must be matched with an ability to monitor 24x7 and rapidly make necessary changes to your Cassandra deployment. Otherwise, your very own agile development competencies could bring your production performance to a crawl.

Cassandra Managed Service Providers assume this to be the case. They constantly monitor throughput, latency, and disk usage, and make necessary adjustments on a 24x7 basis.

Overall Business Considerations

A third, and perhaps the most important, consideration is the risk of getting it all wrong. Cassandra is a different type of data store, and it takes some time to get a real feel for how it works and the proper way to implement and mange it. A team can spend months getting it up and running, only to find out it is not performing as expected, or have difficulty keeping up with changes in customer usage that affect the performance of Cassandra.

Furthermore, if one or more of your Cassandra team members leaves for any reason, you run a very serious risk of having little or no in-house capabilities to deal with any failures that may occur. And, as we have already indicated, the current demand for Cassandra experts far exceeds the supply, making it nearly impossible to find quality Cassandra resources quickly.

While this third consideration is the hardest to quantify, it is perhaps the most important consideration as it is difficult to determine the impact on your business, until it's too late.

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Summary Comparison

The chart below compares the cost, timeline, and overall risk considerations between deploying inhouse, and outsourcing to an expert Cassandra Managed Services Provider.

Issue	In house Deployment	Cassandra Managed Services	Remarks
Cost	$400,000 to $500,000 minimum per year	Typically $60,000 to $70,000 per year	An 80% cost savings
Timeline	Minimum of 4-6 months to go live in production	Typically 2-3 weeks to go live in production	Order of magnitude difference
Overall Risk	Risk of failure if one or more staff leaves	Minimal to no risk as 80% or more of technical staff are Cassandra experts	Significant to unacceptable for most mission critical apps

About Instaclustr

Instaclustr helps organizations deliver applications at scale through its managed platform for open source technologies such as **Apache Cassandra®**, **Apache Kafka®**, **Apache Spark™**, **Redis™**, **OpenSearch®**, **PostgreSQL®**, and **Cadence®**.

Instaclustr combines a complete data infrastructure environment with hands-on technology expertise to ensure ongoing performance and optimization. By removing the infrastructure complexity, we enable companies to focus internal development and operational resources on building cutting edge customer-facing applications at lower cost. Instaclustr customers include some of the largest and most innovative Fortune 500 companies.