4.2.7.1 Platform Performance

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Platform Performance is concerned the abilities of a computer system matched with an Operating System (OS) to meet or exceed the requirements of a specific system (or project). The platform could be a real system or a virtual system running locally or in the cloud. Often this comes down to the cost of the hardware and OS, but this can also include social responsibility requirements such as energy consumption, geopolitical concerns, or even ethics which prevent the use of certain products.

Figure 1 show the salary of a Senior Software Engineer in the USA in July 2020, around $105,000. This is the take home pay, not the fully burdened cost.



Figure 1: Average Sr. Software Engineer / Developer / Programmer Salary - June 2020[1)]

Figure 2 shows the cost of either owning a Server or using a Infrastructure-as-a-Service (IaaS) solution. The Total Cost of Ownership (TCO) cost is about 1o times that of an IaaS.

	On-premises	Cloud	Savings $	Saving %
Year 1	39,347.18 $	3,766.80 $	35,580.38 $	90%
Year 2	9,063.19 $	3,766.80 $	5,296.39 $	58%
Year 3	9,063.19 $	3,766.80 $	5,296.39 $	58%
Year 4	9,063.19 $	3,766.80 $	5,296.39 $	58%
Year 5	39,347.18 $	3,766.80 $	35,580.38 $	90%
Year 6	9,063.19 $	3,766.80 $	5,296.39 $	58%
Year 7	9,063.19 $	3,766.80 $	5,296.39 $	58%
Total:	124,010.31 $	26,367.60 $	**97,642.71 $**	**79%**

Please note that inflation is not factored into these results

Figure 2: Average Total Cost of Ownership (TCO) versus Cloud [2)]

If your application is not performing well and it is estimated that it might take one year to upgrade the software, you could get a senior Software Engineer for the $105,000 or you could upgrade your server. If it is a purchase, you could get almost three servers for the cost of and engineer. If you decided to use IaaS, for the cost of the engineer, you could get almost 20 servers.

It is recommended to follow the guidelines for sizing a server provided on-line.[3)4)5)]

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