

IS HPC CLOUD THE RIGHT CHOICE FOR YOU?



AN HPC CLOUD CHECKLIST

You've heard that cloud is democratizing high-performance computing (HPC), even for complex computing requirements that process many different variables or large data sets quickly and efficiently (such as found in real-time weather forecasting, aerospace and biomedical engineering, or nuclear fusion research and nuclear stockpile management). But how do you know if HPC Cloud will address the specific business and technical challenges you're facing?

Do you want to control capital expense (CapEx)?

You may be looking for a distributed computing environment that does not require the custom or high-end hardware or cooling elements that a supercomputer requires. Or, you may simply not have the budget to purchase a new HPC solution.

Is adequately staffing an on-premise cluster impractical?

You may not have the cycles to take on additional, system administrator duties. You may have concerns about your ability to quickly source new staff for the skills needed for performance/ reliability/ scalability of the computing environment. Or, perhaps, adding additional headcount is not an option or you just want to retain hires for your core competencies and not infrastructure.

Are on premise operating expenses (OpEx) a concern?

The power, cooling, and other facility costs necessary to maintain an on-premise solution – to say nothing of the demands of growing compute capacity – is both difficult and expensive. You may want to avoid long-term commitments and the maintenance and support that comes with them.

Are you working under significant time-to-computing constraints?

You may have a fixed deadline that does not allow the luxury of waiting for access to a busy existing supercomputer or existing distributed HPC solution. Or you may miss a market opportunity during the months or even years required for investigation, design, development, and installation of an on-premise distributed solution or supercomputer.

Do you need a sandbox to test applications before full deployment?

You may need to manipulate and analyze data sets – perhaps even on your own applications – but want to protect your production database environment from this experimentation. Or you may want to run your data through a new application but keep the resulting data separate from the rest of your data.

Are you unsure about your how much your computing will scale?

You may need unlimited scalability or need extra computing power only occasionally and, rightly, want to pay only for the computing power you actually use.

Do you need to support a variety of applications?

You may need to build a package of specific applications to run your data through – and only want to pay for the ones you use. Or you may not know which applications you will use in the future and need to rely on an outside, expert HPC team that is used to constantly adding, mastering, and running new applications.

Is high-availability (HA) a priority?

You may need to ensure your project is protected against downtime by running it through dedicated software that monitors systems and manages failover to redundant systems you simply don't have the ability to support.

Do you need to maintain organizational agility?

Perhaps you not only need to achieve computing quality with speed and capacity but perhaps you are also concerned about remaining flexible so that you can tap into future opportunities. Maybe you need to be show new clients – and even potential key new hires – that you have the computing capabilities on hand to take on the next level of challenge.

Learn More

For more details on how POD can help you, contact a representative by email at podsales@penguincomputing.com, call 1-888-PENGUIN (736-4846), or visit www.penguincomputing.com/hpc-cloud.

About Penguin Computing, a SMART Global Holdings Company

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