

Five Key Reasons to Consider an Enterprise Cloud Strategy for Global Engineering Simulation



Virtual prototyping using engineering simulation has become a key enabler of product development, providing the insight required to deliver innovation and ensure quality, despite shorter design cycles. However, rapid growth in the use of these technologies is forcing global enterprises to seek more effective deployment strategies to gain and maintain an innovation advantage in today's competitive markets. Many of these organizations are looking to consolidate simulation assets, effectively moving simulation from the desktop or department to regional data centers. Cloud computing is a natural extension of this strategy.

Cloud computing offers strategic opportunities, such as:

1. *Delivering a global solution.* Implementing a cloud-based simulation platform will provide the engineering organization with a complete set of validated and consistent tools, easily accessed by end-users regardless of geographic location or business unit. Software version updates can be more easily managed, and latest generation infrastructure will ensure competitive performance is available to all users.

2. *Protecting, managing and leveraging key company IP.* Simulation data sets are key intellectual property that can be more effectively managed via a cloud strategy. Today, this data is typically managed in a decentralized fashion by individual users; a cloud strategy provides centralized data management, backup and disaster recovery. For engineering, this centralized approach to data enables global collaboration, with credentialed access and structured management making it easier to find, retrieve, share and reuse simulation data sets. Cloud security and encryption tools ensure that the data is secure.

3. *Ensuring business agility.* A cloud strategy can provide infrastructure and software capacity for peak demands or unexpected projects within hours or minutes, as opposed to the long procurement cycles typical for on-premise deployments. The cloud can also deliver auto-scaling HPC to support larger simulation model sizes or more extensive design exploration, with bill-back to individual projects or business units. The cloud's elastic capacity provides the software and hardware assets you need when you need them, without tying up resources in a fixed size (and aging) infrastructure.

4. *Optimizing asset utilization and reducing IT operational expenses.* The cloud provides increased visibility of asset utilization rates, allowing you to right-size your software and infrastructure assets while maintaining flexibility for overage and peak demand. You can consolidate vendors and tools, eliminating point solutions that detract from both engineering and IT efficiency. Standard cloud deployments across geographic regions yield an economy of scale by reducing IT complexity, adding redundancy and enabling centralized (or outsourced) management.

5. *Reducing or eliminating capital investments.* Moving to a cloud business model shifts your purchase of simulation assets from CAPEX to OPEX, providing greater flexibility to tie expenditures to current business needs. A cloud strategy for engineering simulation can eliminate the need to invest in a new datacenter, reduce the cost associated with high-end engineering desktop systems and free up capital for other uses.

Engineering simulation has unique requirements that can be delivered through carefully engineered cloud best practices. Learn more at www.ansys.com/enterprise-cloud.