TotalCAE

Turnkey HPC for Ansys

Many engineers only have access to workstations for Ansys engineering simulation software and are unable to achieve the known productivity increases from high-performance computing (HPC). The main holdback is the difficulty and perceived cost of managing HPC clusters and the applications. Dell Technologies and Intel, in conjunction with TotalCAE, have partnered to deliver a completely managed HPC private cloud in your data center to overcome this challenge. TotalCAE is your single point of contact and is available via phone, email and web to keep Ansys engineers working productively and not dealing with IT or CAE application issues.

Solving Your HPC Challenges

Together, TotalCAE, Ansys and Dell EMC have developed an integrated HPC Appliance solution that makes HPC accessible to companies of all sizes. The entire solution is deployed and managed by TotalCAE to provide unlimited simulation within the capacity of the system for a fixed affordable monthly cost. TotalCAE wheels the appliance, plugs it in and you are off and running your simulations in just a few clicks, with TotalCAE there to manage and operate the upkeep of the HPC system and your Ansys applications to keep you productive through the life of the system.

Focus on Engineering, not IT

The HPC appliance is pre-integrated with all of your software along with the TotalCAE Platform so it runs out of the box within just a few clicks. The solution will automatically route your jobs to the appropriate included hardware for popular Ansys solvers such as Ansys Fluent, Ansys HFSS, Ansys CFX, Ansys Mechanical, and Ansys LS-DYNA. Engineers are up and running quickly on the appliance with minimal effort.

TotalCAE Managed Dell EMC HPC Cluster with Ansys and the TotalCAE Platform

At a glance

An out-of-the-box managed HPC appliance that is optimized for a variety of Ansys workloads and preconfigured with Ansys simulation and TotalCAE job management, monitoring, and data management software.

Mechanical/HFSS

- Dell EMC PowerEdge R640 server
- Two Intel® Xeon® Gold 6226R processors
- 384 GB of memory
- PERC H740P RAID controller
- 2 x 2TB SATA in RAID 1
- 2 x 960B mixed-use SATA SSD in RAID 0
- Dell EMC iDRAC9 Enterprise
- Mellanox EDR InfiniBand HCA

Fluent/CFX

- Dell EMC PowerEdge R640 server
- Two Intel® Xeon® Gold 6240R processors
- 192 GB of memory
- 2 x 2TB SATA in RAID 1
- PERC H330 RAID controller
- Dell EMC iDRAC9 Enterprise
- Mellanox EDR InfiniBand HCA

Management Server

- Dell EMC PowerEdge R640 server
- Two Intel® Xeon® Silver 4214 Processors
- 192 GB of memory
- 2 x 2TB SATA in RAID-1
- 4x12TB Hard Drive (RAID-10)
- 1x960GB mixed-use SATA SSD
- PERC H740P RAID controller
- Dell EMC iDRAC9 Enterprise
- Mellanox EDR InfiniBand HCA

Benefits

• Validated configuration for Ansys workloads for maximum performance.
• Simple to use TotalCAE and Ansys RSM interface make it easy to use HPC without IT expertise.
• Fully managed by TotalCAE for worry-free operation by alleviating the need for you to maintain, manage, and update the HPC and Ansys applications, backed by TotalCAE 1-hour response.
• Ready to Go Install – TotalCAE integrates the TotalCAE Platform and all of your engineering applications so you are ready to go in days, not weeks.
• Unlimited simulation capability within the provided compute power with a fixed monthly fee.
• Ability to add on additional capabilities, including remote visualization, cloud and other simulation features.
• Ability to expand for future growth.

Quantifying Performance Benefits of Moving from a Workstation to Managed HPC?

TotalCAE has partnered with Dell and Intel to offer a free performance benchmark program that will enable you to see the advantage of moving from a workstation environment, to a Dell HPC cluster managed by TotalCAE. Once you provide us with your model, you will receive a time comparison from the HPC solution to your current workstation runtime. TotalCAE will provide a no-obligation quote for a TotalCAE HPC appliance with Dell hardware that TotalCAE will manage for you in your data center. The TotalCAE HPC appliance makes it easy to submit simulations to the HPC system in a few clicks, and is completely managed by TotalCAE, so you can focus on your engineering, and not IT.

> **"Upgrading from a workstation solution to a Dell EMC HPC-server solution increases the output of the most expensive simulation resources – the people who do the simulation."**
>
> Wim Slagter
> Director of HPC & Cloud Alliances, Ansys Inc.

Visit
https://totalcae.com/free-performance-benchmark-program-ansys

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