

HPC Starter Kit for ANSYS Environments

Turn-key, fully managed HPC clusters for CAE



HPE Apollo 2000 Gen10 System

Computer-aided engineering (CAE) analysts often push the limits of their desktop systems, constraining the size of their models and limiting the number of simulations. Scaling to high-performance computing (HPC) removes these limits, but can add complexity. HPC starter kits help eliminate these issues and make HPC easy and affordable.

Realize the impact of HPC

- Speed time to market—complete jobs in minutes, rather than hours, in days, rather than weeks
- Get deeper insights—larger models support increased complexity, improved designs, and quality
- Improve productivity—centralize system management and simplify collaboration

HPE Apollo 2000 Gen10 System—purpose built for HPC

- Up to 4 powerful servers in 2U chassis—2X the density of 1U servers
- Mix and Match servers for workload optimization
- Storage flexibility and a broad range of I/O options for workload optimization

Scale ANSYS workloads with easy desktop access to an on-site HPC cluster

TotalCAE, working with HPE and ANSYS, is offering a simple solution for engineers who use CAE and want to scale beyond workstations. HPE's Apollo 2000 Gen10 System's dense compute cluster solutions can scale from 2 compute nodes and up and can be easily customized to specific workload needs. The solution is delivered pre-configured, with applications installed, and integrated into your network to provide easy desktop access for engineers and CAE analysts. The system is remotely managed, with updates installed and user support included. There is no need for your IT staff to manage the resources and learn all the HPC tools—although training is available if you wish to develop on-site expertise.

Benefits

- Validated, optimized platform: Deploy quickly with a solution built for ANSYS HPC workloads and based on HPE's Apollo Systems purpose for HPC and the TotalCAE software suite.
- Peace of mind: This integrated system is fully managed in your data center by TotalCAE HPC FEA and CFD IT experts.
- Flexibility and scalability: The system components support a range of ANSYS applications and workloads, which can be adapted and expanded to meet changing requirements.

Resources

Visit totalcae.com/ansys for more information to get started with the TotalCAE HPE HPC Starter Kit for ANSYS.

Contacts

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What's included

- **Integrated HPE HPC cluster**—1 head node, up to 3 compute nodes featuring Intel® Xeon® Gold 6148 20 core 2.40 GHz with 20 cores, high-performance InfiniBand networking, plus a cluster software environment with job scheduler and resource management.
- **On-site install and startup services**—the cluster is integrated into your work environment, including installation of ANSYS applications, ANSYS RSM, TotalCAE Portal, TotalCAE license aware scheduling, HPC scheduler, and TotalCAE reporting tools.
- **Remote management of cluster**—this includes proactive monitoring and automatic remediation of issues detected in the HPC system, ANSYS solvers, ANSYS license server, TotalCAE web portal, job scheduler, and TotalCAE reporting tools. Also included is complete remote management with a dedicated TotalCAE IT department included to manage the complete appliance for you in your data center.

Table 1. Recommended components

ANSYS CFD (Fluent/CFX)-optimized compute nodes	Head node: HPE ProLiant XL170r Gen10 Compute node: HPE ProLiant XL170r Gen10
Optional ANSYS Mechanical, HFSS, Maxwell optimized compute nodes	Head node: HPE ProLiant XL170r Gen10 Compute node: HPE ProLiant XL170r Gen10
High-performance interconnect	Mellanox EDR InfiniBand
Admin and out-of-band networking	One Aruba 2920 Switch with 10GbE uplink
Chassis infrastructure	One Apollo 2000 chassis
Software environment	Fully installed and managed by TotalCAE ¹ Full ANSYS Suite of applications and ANSYS RSM O/S: RHEL or CentOS TotalCAE portal, TotalCAE job scheduler, TotalCAE Analyzer Reporting, all pre-integrated
On-site installation and start-up training	Delivery, installation, and on-site testing by TotalCAE; Training on usage of the system
Remote management and support	Complete management and support for all included hardware and software provided by TotalCAE
Financing	Lease or buy

¹ ANSYS license and support are purchased directly from ANSYS.

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