

# HPC starter kit for ANSYS environments

Turnkey, 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.

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

**X-ISS**, working with Hewlett Packard Enterprise and ANSYS, is offering a simple solution for engineers who use CAE and want to scale beyond workstations. HPE Apollo 2000 Gen10 Systems are dense compute cluster solutions that can scale from two (2) compute nodes and up. The cluster is customizable to meet your specific workload needs.

This solution is delivered pre-configured, with applications installed on-site and ready to integrate 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 these resources and learn all of the HPC tools.

### Realize the impact of HPC

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

### HPE Apollo 2000 Gen10 System—purpose-built for HPC

- Up to four 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

### Benefits

- Validated and optimized platform: Deploy quickly with a solution built for ANSYS HPC workloads and based on HPE Apollo Systems for HPC; it also comes installed with X-ISS monitoring software tools.
- Simple management: This integrated system is fully managed remotely in your data center by **X-ISS ManagedHPC** (your HPC Finite Element Analysis [FEA] and Computational Fluid Dynamics [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 [x-iss.com/ansys](http://x-iss.com/ansys) for more information to get started with an HPE HPC Starter Kit for ANSYS.

## Contact

X-ISS  
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### What is included?

- **Integrated HPC cluster from HPE**—1 head node, up to 3 compute nodes featuring Intel® Xeon® Gold 6248 20-core 2.5 GHz, high-performance InfiniBand networking, and a cluster software environment with job scheduler and resource management
- **On-site install and start-up services**—the cluster is integrated into your work environment, including installation of ANSYS applications, ANSYS Remote Solve Manager (RSM), HPC Scheduler, X-ISS ManagedHPC’s monitoring, management, and reporting tools
- **Remote management of cluster**—this includes proactive monitoring, management, automatic remediation of issues detected in the HPC system along with ANSYS applications, all supported by a committed team of **X-ISS HPC experts**.

**Table 1.** Recommended components


<b>ANSYS CFD (Fluent/CFX)-optimized compute nodes</b>	Head node: HPE ProLiant XL170r Gen10 Server Compute node: HPE ProLiant XL170r Gen10 Server
<b>Optional ANSYS Mechanical, HFSS, Maxwell-optimized compute nodes</b>	Head node: HPE ProLiant XL170r Gen10 Server Compute node: HPE ProLiant XL170r Gen10 Server
<b>High-performance interconnect</b>	Mellanox EDR InfiniBand
<b>Admin and out-of-band networking</b>	One Aruba 2920 Switch with 10GbE uplink
<b>Chassis infrastructure</b>	One HPE Apollo 2000 chassis
<b>Software environment</b>	Fully installed and managed by X-ISS Full ANSYS suite of applications <sup>1</sup> and RSM O/S—RHEL, CentOS, or Windows Server® X-ISS ManagedHPC tools, job scheduler, cluster manager, and DecisionHPC reports all pre-integrated
<b>On-site installation and startup</b>	Delivery, installation, and on-site testing by X-ISS and knowledge transfer on usage of the system
<b>Remote management and support</b>	Complete management and support for all included hardware and software provided by X-ISS
<b>Financing</b>	Lease or buy

<sup>1</sup> ANSYS license and support are purchased directly from ANSYS.

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