

OCF SOLUTIONS: 128 Core DELL Solution for Ansys

SUCCESSFULLY
TRANSITION FROM
WORKSTATIONS TO
HPC

SOLUTIONS BASED ON
ANSYS BEST
PRACTICES

DELL REFERENCE
ARCHITECTURES

HPC SOLUTIONS
SUPPORTED END-TO-
END BY OCF

TRAINING

SUPPORT

OPTIONAL MANAGED
SERVICES

OCF DELL 128 core reference architecture for Ansys CFD

For Ansys users that understand the benefit of multiprocessor and multi-node high-performance computing (HPC), but are not yet ready for a full HPC cluster deployment, OCF offers the below reference architecture.

This solution combines Dell Hardware configured to the "Dell EMC Ready Solution for HPC Digital Manufacturing" reference architecture and OCF configured software, services and support.



Leveraging two basic building block (BBB) servers, the solution directly supports computational fluid dynamics (CFD) modeling, specifically, Ansys Fluent and Ansys CFX. This enables customers to create simple but powerful HPC systems and are based on the 4-socket Dell EMC PowerEdge R840 server.

' THIS SOLUTION OFFERS 128 CORES @ 2.8GHZ, 384GB MEMORY, NVIDIA QUADRO P2000 AND 8TB USABLE STORAGE IN A COMPACT 4U FORM FACTOR.'



FIGURE 1: Two Dell EMC PowerEdge R840 Servers configured as a 'couplet'

Installed with Linux or Windows, the R840's configuration's two BBBs are coupled together via 25GbE, removing the need for an additional high-speed switch, which allows single jobs to be scaled across both servers. As an option, if selecting Linux, the servers can be upgraded to a 100Gb InfiniBand for improved performance. To support smaller requirements, users may select a single BBB and for larger requirements, multiple BBBs can be configured into a full HPC cluster using Linux, InfiniBand and management infrastructure. OCF would be pleased to tailor this proposal to your individual requirements.

For further information on the Ansys-approved Dell EMC Ready Solution for HPC, along with reference architectures and performance benchmarks, please see the following [whitepaper](#).

Why OCF?

As an Ansys partner, works collaborates closely with Dell to deliver proven HPC solutions, leveraging Ansys best practices. This eliminates the guesswork and complexity from sizing, building, deploying, managing and using HPC clusters for Ansys workloads - removing the barrier to high-fidelity insight and productivity for your business.

OCF offers the following services:

- Technical Pre-sales advice and consultancy
- Dell Workstations configured to Ansys' best practices in support of Ansys workloads
- HPC Solutions based on Ansys' approved Dell Reference Architectures - for four to to hundreds of sockets - specifically designed to meet the demands of Ansys workloads
- Bespoke HPC & Storage Solutions for larger/more complex requirements
- Delivery of fully configured turnkey solutions which include cluster management, monitoring and scheduling.
- Process driven and project managed solution delivery
- Specialist Front-line support services
- Remote Managed Services
- Financing

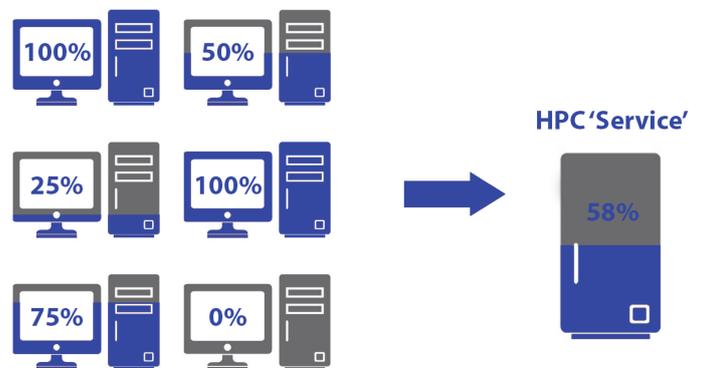


FIGURE 2: A HPC Service can dramatically improve utilisation