

Intel® Cluster Ready— Making HPC simpler

Boost productivity. Solve new problems. The Intel® Cluster Ready program makes it simpler to experience the power of high-performance computing.

Program Brief

Intel Cluster Ready

High-Performance
Computing



Developed in conjunction with hardware and software vendors, the Intel Cluster Ready program simplifies buying, deploying, and managing a high-performance computing HPC cluster. Intel Cluster Ready helps to ensure application and component interoperability from the moment you power up the cluster through the lifetime of the system.

Why Intel Cluster Ready?

Find the right configuration, right away.

Take the complexity out of purchasing an HPC cluster. Choose a certified Intel Cluster Ready system to reduce the time and risk of selecting a collection of independent hardware components for your applications. Certified Intel Cluster Ready systems have been thoroughly tested to ensure component interoperability.



“Being part of the Intel® Cluster Ready program allows AMAX to accelerate the introduction of clusters to more commercial, government, and academic users with less cluster expertise, who will now be able to leverage the superior price/performance ratio of Intel-based energy-efficient HPC clusters for their research and simulations.”

– Jean Shih, President, AMAX Information Technologies

Know that it works.

Select a certified Intel Cluster Ready system for your registered Intel Cluster Ready applications so you can be confident that hardware and software components will work together, right out of the box. Software tools such as Intel Cluster Checker help ensure that those components continue to work together, delivering a high level of quality and a low total cost of ownership over the course of the clusters lifetime.

Solve new problems.

Capitalize on the power of an Intel processorbased HPC cluster to enhance productivity and solve new problems. Intel Cluster Ready helps you realize HPC benefits faster by ensuring application and system interoperability.

How does it work?

Laying the foundation–Intel Cluster Ready Specification

Working with HPC ecosystem partners, Intel has defined the Intel Cluster Ready Specification a common basis for building clusters and registering applications for HPC. The specification which includes requirements for hardware, software, manageability, and functionality helps to make sure that each cluster component conforms to industry standards or, if no standard exists, best-of-class practices. Intel provides the specification to hardware vendors, software vendors, and systems integrators so they can build certified Intel Cluster Ready clusters and develop registered Intel Cluster Ready applications.

Simplification of HPC Operations

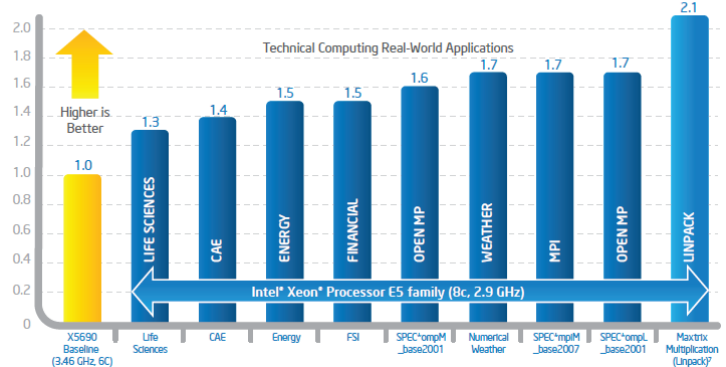
AMAXs ServMax 4200 Series Intel® Cluster Ready certified cluster solution provides end customers with increased productivity, faster time-to-results, an improved operating experience from initial power-on through continuing production operations, and reduced support effort and costs. The Intel certification also simplifies cluster management and application deployment for end customers.

By creating a common basis for clusters, the Intel Cluster Ready Specification also gives you the flexibility to customize your system based on your specific needs. Choose from a variety of hardware and software components that conform to the specification when you are first deploying the cluster or make modifications as your requirements change.

Ensuring interoperability–Certified Intel Cluster Ready clusters

Intel facilitates component interoperability by working with hardware vendors and systems integrators to assemble the right combination of components for HPC clusters. A certified cluster is a system built according to the Intel Cluster Ready Specification that has been rigorously tested for component interoperability.

Figure 1. Increased Application Performance up to 1.7x²
Intel® Xeon® Processor E5 Family



Intel® Cluster Ready

Intel® Cluster Ready Is:

- A program to make it easier for end users to buy, deploy, and maintain clusters

End User HPC Cluster Needs

- To Get Their Job Done
- Cluster Server with Enterprise Characteristics

Platform Solutions Provider

ISV Application

OEM Hardware and Component HW

+

Intel Cluster Ready

- Platform Specifications
- Reference Designs
- HW Certification
- Application Registration
- Tools, Labeling, and Marketing

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Making it simpler to buy an HPC cluster

Validating applications—Registered Intel Cluster Ready applications

A registered Intel Cluster Ready application is one that has been validated on a certified Intel Cluster Ready cluster. To register an application, either Intel or an Intel partner demonstrates that the software can run real-world workloads successfully on a certified cluster. When the software successfully passes the test, Intel issues the Intel Cluster Ready registration to the software vendor and posts the application version and requirements on a public Web page.

“The Intel Cluster Ready program makes it easier to purchase, deploy, and manage an HPC cluster by ensuring application and hardware platform interoperability at time of purchase and throughout the lifetime of the cluster.”

*— James Huang, Product Marketing Manager,
AMAX Information Technologies*

Because registered Intel Cluster Ready applications are all developed to run on clusters with the same base specification, you can run multiple registered applications on the same certified Intel Cluster Ready cluster without having to rebuild the software stack or reconfigure the hardware. Run different applications on different days. You can optimize your HPC resources and enhance productivity without adding costs or complexity.

Making it simpler to buy an HPC cluster

AMAX, the number one server and storage system builder in North America, launched an online Intel Cluster Ready inquiry forum to dramatically simplify the process of buying an HPC cluster. This tool allows customers to select the processors, memory, hard drives, and secondary switching fabrics they need, and send in an instant request for a same-day response cluster quotation. No matter what components customers choose, the cluster remains within ICR certification.

“Intel® Cluster Ready provides a simpler way for customers to experience and utilize the power of high-performance computing without the complexity of managing a large infrastructure. It eliminates sources of variability that do not impact performance usability or utility, but can spell disaster when left unspecified.”

– Jean Shih, President, AMAX Information Technologies

Expanding your infrastructure—Intel Cluster Ready recipes

Systems integrators build recipes with certified Intel Cluster Ready clusters and registered software. Using a recipe, you can create an exact copy of the cluster to expand your HPC infrastructure or deploy a cluster for another business group. Because the new cluster is Intel Cluster Ready, you can be confident that hardware and software will work together as they should.

Simplifying management—Intel Cluster Checker

Intel Cluster Checker is an essential software management tool that helps make sure system components continue to work together over the lifetime of the cluster. Provided

free with all certified Intel Cluster Ready clusters, Intel Cluster Checker analyzes the clusters configuration to be certain it remains within certification. If a software update causes software conflicts or a cable comes loose, Intel Cluster Checker can identify the problem quickly and provide detailed diagnostic information.

Use Intel Cluster Checker to dramatically reduce the time spent troubleshooting and minimize the need for specialized support skills. Run Intel Cluster Checker regularly to enhance system reliability and ensure optimal performance.

For more information, visit www.intel.com/go/cluster to discover which applications are Intel Cluster Ready and where to buy a certified Intel Cluster Ready cluster.

For more information on the AMAX ServMax 4200 Series HPC Cluster, visit http://www.amax.com/enterprise/productdetail.asp?product_id=4200, and see for yourself how AMAX's Intel Cluster Ready certified cluster can benefit you.

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