High Performance Computing – for everyone

Simplified cluster solutions with built-in expertise. **Be productive immediately**.

Powered by Intel[®] Xeon[®] processor.

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XEON[®] inside[™]

Read more: bcis.global.fujitsu.com/HPC

shaping tomorrow with you

FUJITSU

Can your computing power keep pace with your business aspirations?



High Performance Computing

Engineering companies, car designers, product manufacturers, science-based businesses, research institutes, universities, and a host of other organizations rely increasingly on significant computing power.

If you're one of them, you'll know how it can help you to accelerate design, reduce prototype costs, create ultra-realistic simulations, improve quality, eradicate errors, and launch products sooner.



Powered by Intel[®] Xeon[®] processor.

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Plenty of organizations rely on workstations. But if you're in a highly-competitive marketplace, you can't afford to stand still. Many small and mid-sized companies are now wondering how to achieve a power revolution by embracing High Performance Computing (HPC).

However, there's a problem. HPC can be incredibly complex. It usually means trying to configure, manage, and support your own server cluster – as well as knowing how to write elaborate scripts. Organizations are understandably nervous about the costs, risks, and potential distractions of stepping into unchartered waters. And who can blame them?



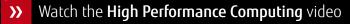




Here's some good news. It's now possible to harness the power of HPC without all the drawbacks – thanks to Fujitsu.













High Performance Computing: Made easier, so you can be productive immediately

Fujitsu has achieved a breakthrough in HPC, enabling small and mid-sized organizations to compete and succeed against their larger counterparts.

We've done this by dramatically simplifying HPC at every step, so you can reap the rewards straight away. With PRIMEFLEX for HPC, powered by Intel[®] Xeon[®] processor, instead of having to assemble, integrate, and support HPC yourself, you can get everything you need in one package – tailored for you and ready-to-go.

With PRIMEFLEX for HPC solutions from Fujitsu, you can:

- Meet your business requirements precisely with a tailored HPC solution
- Get everything included hardware, middleware, applications, and services
- Avoid complexity as solutions come pre-defined, optimized, validated, and factory installed
- Simply login and get started immediately, via an intuitive web-based, desktop-style interface
- Save time and money and get rapid results by using pre-built workflow packages for common ISV and open source software applications



Put simply, Fujitsu gives you the most productive and coherent HPC workplace available

This hasn't come about by chance. We've been a software and research pioneer for almost 40 years in the supercomputing arena – with our own labs leading their field. We have a Global HPC Competency Network and work alongside key hardware manufacturers and ISVs. Now we've used our knowledge to put HPC within the reach of virtually every organization.





» Thanks to Fujitsu, we have a stable, predictable and scalable HPC solution that is helping us make more accurate simulations of the copper and energy markets. This allows us to make the best decisions in a rapidly changing market.«

Dr. Christoph Tietz

Senior Key Expert Engineer, Siemens AG, Corporate Technology

>> Read the **Siemens AG** case study







Fujitsu drives home **HPC** advantages

See how we're helping Turkey's largest automotive manufacturer.

Read the **Tofaş** case study $\boldsymbol{\Sigma}$



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HPC and the science revolution

Watch this short video and see how we're enabling laboratory breakthroughs in the UK.



Watch HPC and the Future of Science video **>>**





Don't be surprised if your business suddenly shifts up a gear

Once a Fujitsu HPC cluster is installed, bottlenecks disappear and new opportunities beckon. Everyone will want to bring projects onto the platform. And there's room for them.

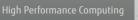
Pretty soon, HPC could be used in multiple ways for the first time, improving innovation, maximizing quality, speeding up time to market, reducing costs, and growing revenues. Used effectively, HPC has transforming capabilities, fostering greater innovation, and delivering insights, giving you a competitive advantage.





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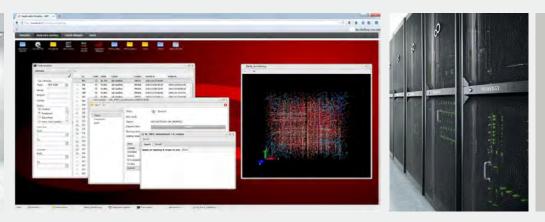
HPC Gateway Application Desktop

Anyone can take the controls. We've made it that simple.

Users with little or no IT skills can simply login to this comfortable, web-based, desktop-style interface and get to work right away. The HPC Gateway simplifies how you manage files, execute applications, and monitor results.

Collaboration is easy when you're running simulations on the cluster:

- Multiple users can get involved, so you achieve higher productivity and a faster ROI
- Data and applied workflows can be exchanged easily between users, teams, and projects
- Multiple concurrent views increase connections between activities and data, driving a more effective project workflow.



Importantly, with HPC Gateway there are no scripts to write. You can avoid wasting production and engineering time trying to eliminate faults caused by users.





HPC Gateway Application Catalogue

Choose from pre-built, ready-to-go workflows.

Our HPC Gateway Application Catalogue offers built-in expertise. This library provides intelligent and robust application processes for common ISV and open source software applications, reducing job set-up time from hours to seconds.

These best-practice, expertly-crafted workflows give your team a major head start, so you save money and get results faster. They include features to automatically rerun applications, check licenses, and represent application results graphically on the desktop. HPC: Now it's so accessible: Take a closer look at the intuitive HPC Gateway interface

White paper FUJITSU Software HPC Gateway

Fights brings HPC to the Desktop. Simplary of end as enables more earn— both new and expensionced – to work with LHC. While webuilt expertise on HPC applications allows your from tests to deplay robust and proved standards methods on more implies. BPC markly it was made as examplied team participations.



Read the HPC Gateway Whitepaper

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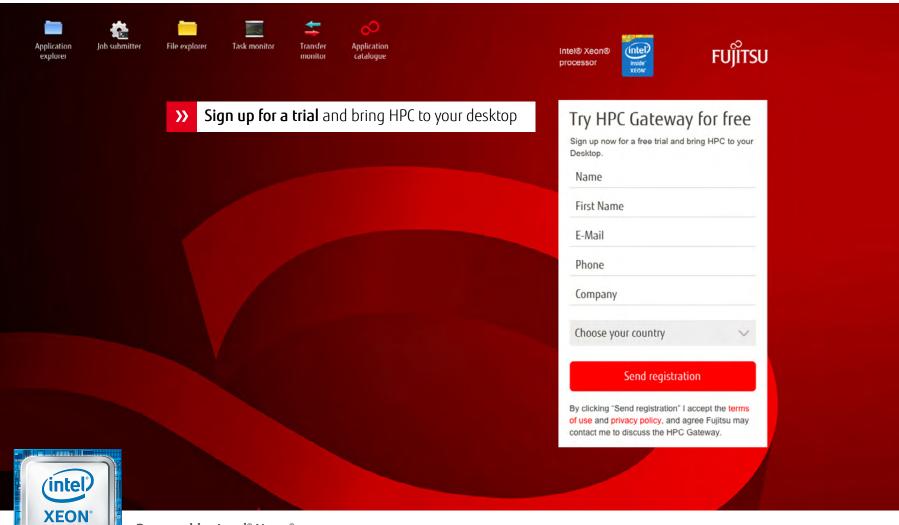
High Performance Computing



Discover the benefits for yourself

Try the HPC Gateway for free

inside"







Best-in-class servers and storage

Powerful, scalable, and optimized for you.

Our HPC solutions provide all you need, combining the HPC Gateway Application Desktop and Catalogue with best-in-class hardware from Fujitsu. Optimized for you, our PRIMERGY servers and ETERNUS storage systems complete your HPC package, which simplifies ordering, reduces risks, and lifts a heavy workload from your IT team.

Fujitsu's PRIMEFLEX for HPC solutions, powered by Intel[®] Xeon[®] processors, provide scalable x86-based cluster configurations, from an entry system to an advanced cluster with up to 32 compute nodes – and potentially more. We can also tailor solutions for your market segment-specific applications and workloads.

Solutions can be delivered for use immediately with the appliance application pre-installed, or our professionals can balance your new architecture for you to achieve the greatest performance. Either way, our 'Ready-to-Go' implementation guarantees rapid deployment at your site, while Intel Cluster Ready certification ensures proven performance and trouble-free operation.

Ready to take your first step?

PRIMEFLEX for HPC is ideal for small and medium enterprises

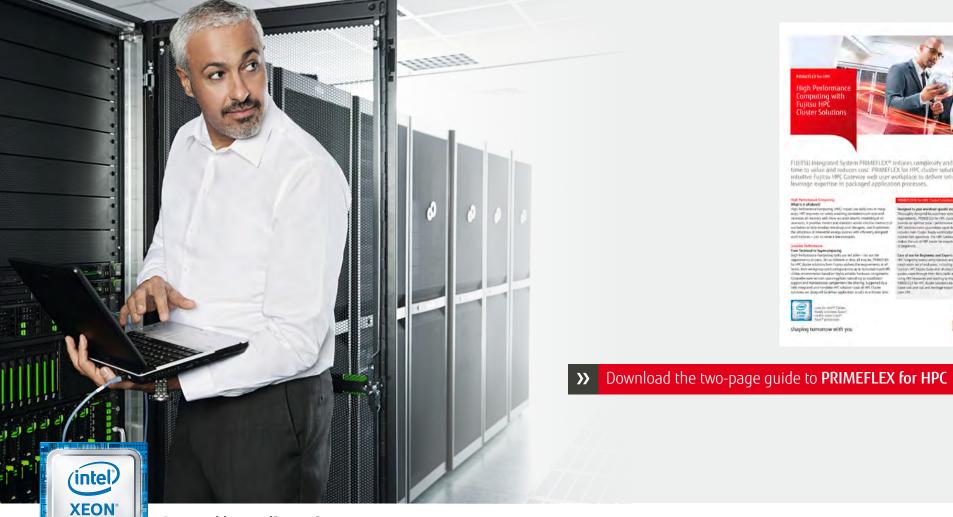






Get the key facts quickly





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FUJITSU Integrated System PRIMEFLEX® reduces complexity and risk, shortens time to value and reduces cost. PRIMEFLEX for HPC cluster solutions include the intuitive FuJitsu HPC Calaveave web user workplace to deliver simplicity of use and leverage expertise in packaged application processes.









Dr.-Ing. Peter Seggewiß Senior Manager Simulation & Quality Tools, KSPG AG

Read the **KSPG AG** case study

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High Performance Computing



We've brought HPC leaders together – for you

Our HPC solutions combine the best hardware technology and software. Our partners have been selected carefully for their expertise and specialized products. With Fujitsu, you can be sure their products work together seamlessly, so you can avoid complexity and enjoy the benefits of HPC immediately.



Intel is the strategic partner for our x86 based portfolio.

Intel has close to 90% of the x86 market share in HPC with its leading edge HPC processor and platform technology.

Altair is a leading ISV in the CAE segment.

Altair PBSpro is the most powerful HPC workload management platform and offers first-class maintenance and support services. Red Hat Enterprise Linux[®] and SUSE Linux Enterprise[®] offer enterprise-class support and maintenance services – key for HPC infrastructures used in commercial R&D, production, and manufacturing.

Mellanox is the only company worldwide that offers FDR InfiniBand technology – explicitly required by HPC users for performance optimized infrastructures. NVIDIA graphics processor technology and GPGPU technology is key for Fujitsu to address the image/rendering related workloads within High Performance Computing.





We've brought HPC leaders together – for you

ISV partners

ANSYS[®]

ANSYS is the largest CAE and modeling vendor. Its product range includes leading application in Computational Fluid Dynamics (CFD) [ANSYS Fluent, ANSYS CFX] and Mechanics [ANSYS Mechanical].



Autodesk is a leader in 3D visualization, providing real-time rendering for automotive design approval [VRED], offline advertising, movie generation, and the wider creative industries.

COMSOL is the developer of COMSOL Multiphysics software, an interactive environment for modeling and simulating scientific and engineering problems.



Dassault Systèmes is ranked fifth in the Global 100 Index of the world's most sustainable corporations. SIMULIA delivers a scalable suite of unified analysis products, noted particularly for linear and non-linear FEA simulation [Abaqus].



CD-adapco is the world's largest independent CFD-focused provider of engineering simulation software. Has a particular focus on new sectors such as battery, and oil & gas.

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ESI Group has broad coverage of most CAE domains, and is particularly noted for its Virtual Performance Solution (VPS) [based on PAM-CRASH solver] multi-domain simulation system (for safety, NVH – noise, vibration, harshness – acoustics, strength, durability). Another important code is PAM-STAMP used in forming industry.



MSC Software is a long-standing reference for FEA structural analysis and is dominant in the aerospace and automotive sectors, where it is used by most large manufacturers.



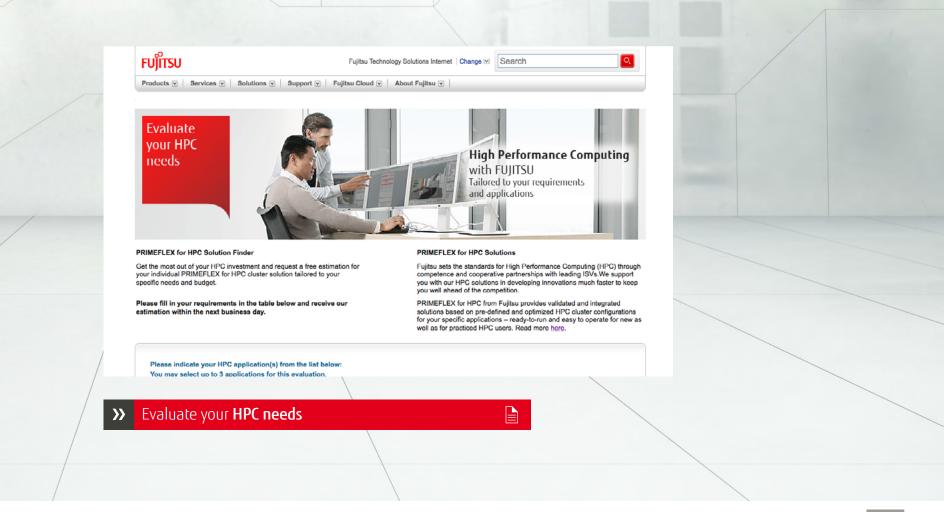
LSTC offers LS-DYNA, a generalpurpose finite element program (FEA) widely used by the automobile, aerospace, construction, military, manufacturing, and bioengineering industries. Widely referenced for contact simulation, especially for vehicle crash analysis.





Which applications do you use already?

Choose from this online list and we'll recommend the best HPC solution for you.



(intel) XEON inside

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High Performance Computing

Rapid deployment – with expert consulting and integration services

Once you've chosen Fujitsu for your HPC journey, we'll provide the professional consultancy and integration expertise to implement and optimize your solution. Services are delivered either by Fujitsu or by **Fujitsu SELECT Expert HPC Partners**, depending on your region and project requirements.

Benefits in summary

- Our PRIMEFLEX for HPC solutions, powered by Intel® Xeon® processors, are optimized and delivered quickly. We provide complete assembly, pre-installation, and quality assurance
- Every cluster is sized and designed to meet your individual requirements
- We can demonstrate the cluster performance with proof-of-concept testing
- We'll ensure the cluster fits seamlessly in your existing IT environment

Other Fujitsu services



Fujitsu Financial Services

Provides attractive financing options for organizations that want to implement HPC.



Fujitsu Solution Support

Available via a single point of contact. We serve customers worldwide with all levels of expertise, products, and service. Our follow-the-sun service desks support more than 30 languages.

Get more information





High Performance Computing with Fujitsu

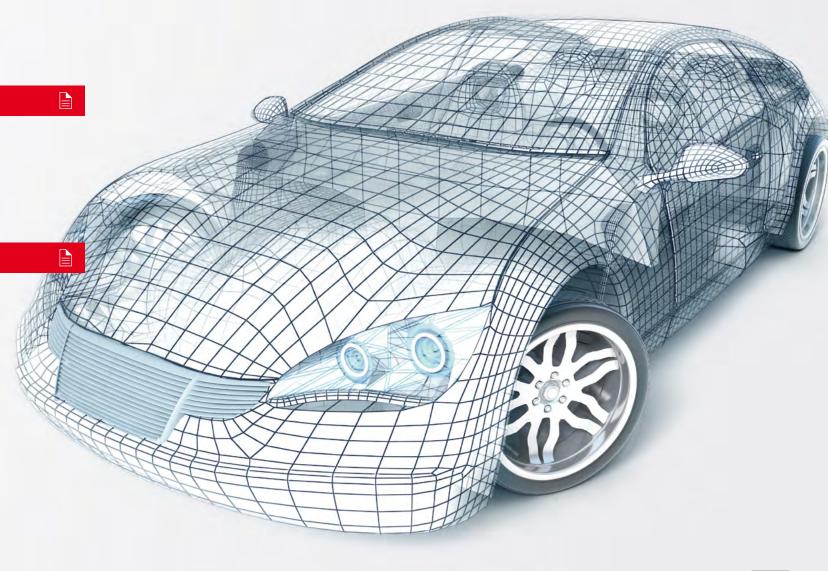
Find out about Fujitsu's HPC history, capabilities and portfolio.

>> Download the Brochure

How can I deliver innovation?

Read more about the Fujitsu Software HPC Cluster Suite.

>>> See the Data Sheet





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Discover more today

Email us at use.hpc@ts.fujitsu.com or visit www.fujitsu.com/hpc

See for more information Try HPC Gateway for free through our HPC Gateway Demo Center Evaluate your HPC needs See examples of HPC Case Studies



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