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Research Foundation Flanders
Opening new horizons

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vscentrum.be

What can we offer you?

Consultancy

We offer a free intake interview:

- How can your company benefit from supercomputing?
- What can we do for you?

User support

Experienced technical and scientific staff can help you:

- Optimize your computational workflow
- Share best practices on supercomputing

Compute time

Buy compute time at internationally competitive rates; dedicated helpdesk included:

- Step by step guidance
- Software installs done for you
- Request your free trial today!

Training

Frequent training events, open to all potential customers.
Topics include:

- Introduction to supercomputing
- Basic Linux
- Programming languages
- Code performance improvements
- End-user applications: material science, computational fluid dynamics, bioinformatics, ...

Tailor-made and on-site training possible on demand.

Research Partnership

The VSC is your one stop shop for everything concerning supercomputing and scientific computing. We facilitate industrial academic research collaboration and joint research projects, and can help you find suitable top-level research partners for your business.

Start Today

Request a trial at

info@vscentrum.be

Vlaanderen
is supercomputing

WHAT CAN **SUPERCOMPUTING** DO FOR YOU?

VLAAMS SUPERCOMPUTER CENTRUM

Innovative Computing for a Smarter Flanders

www.**vscentrum**.be

WHAT CAN **SUPERCOMPUTING** DO FOR YOU?

SUPERCOMPUTING

The increase of computational power in the last few decades has created exciting opportunities. Supercomputing is today an indispensable tool in R&D: computer simulations and modelling enable rapid prototyping, reducing the need for costly experiments. But it doesn't stop there: supercomputing can help your business too.

To out compute is to out compete

Supercomputing can help spark your business innovations. It can improve design turnaround time for new products, reduce time to market and increase your overall competitiveness.

A wide range of industries benefit from supercomputing, to name a few:

- Engineering and materials design: prototyping and development of new materials
- Marketing: analyse and match customer data
- Renewable energy: optimize production of solar/wind farms
- Pharmaceutics: develop new medicines
- Retail: optimize distribution of stock

User in the spotlight

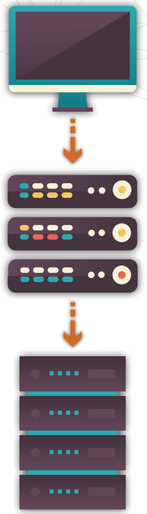
3E NV, a Belgian renewable energy consultancy firm, relies on supercomputing for weather/climate modelling. These simulations yield a representation of the long-term wind resource, which they can use in power generation predictions for the benefit of wind park development studies. By assessing the risk profile and viability of wind farms in this way, developers and owners can increase performance and return on their projects, and can attract and inform investors.

> *Over the last few years, 3E has been able to rely on the (human) resources of the Flemish Supercomputer Center. This has allowed us to streamline our procedure and deliver mesoscale assessments in a cost-effective way, both in terms of FTEs and computer time.*

Rory Donnelly
Program Manager
Wind Simulations at 3E

Enter the Flemish Supercomputer Center

The Flemish Supercomputer Center (VSC) was founded in 2007 by the Flemish government. It is a partnership between all Flemish university associations and managed by the FWO and provides supercomputing services to academic as well as industrial researchers. The VSC offers access to competitive infrastructure and extensive assistance to do high performance computing (HPC). Our dedicated staff boasts system administrators, technical support as well as scientific user support consultants, and is at your service!



Infrastructure

From PC to HPC

Your laptop or desktop is limited in scalability and redundancy. Our supercomputers contain lots of computing nodes with fast interconnections and are designed to be under heavy load 24/7. They also have access to a large and fast file storage system."

Supercomputer: large collection of computing nodes with fast interconnections; designed to be under heavy load 24/7; each compute node has access to a large and fast file storage system.

The VSC has multiple computing clusters with over 40.000 CPU cores. Specialized solutions are available:

- Big data
- Accelerators
- Visualization
- Grid

Tier 1: the fastest supercomputer in Flanders
- 16.240 CPU cores
- 128 or 256 GB memory per node
- Superfast infiniband EDR interconnect

Questions

info@vscentrum.be