



# HPC Wiki

Workshop HPC-Schulung, -Ausbildung und –Dokumentation  
Hamburg 31.07.2019

Daniel Schürhoff

<https://hpc-wiki.info>



# Site-independent HPC Knowledge Base: Wh

USER DOCS NEWS CENTER

Hochleistungsrechnen

## HLRN-III User Documentation

HLRN help: For questions, please contact the HLRN support crew [support@hln.de](mailto:support@hln.de).

- HLRN facilities and system overview

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## Getting Started

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### [Access or "How-to-be-allowed-onto-the-supercomputer"](#)

Depending on the specific supercomputer, one has to either register to get a user account or write a project proposal and apply for computing resources that way. The respective pages are linked in [this overview](#).

After this is done and login credentials are supplied, one can proceed to [login](#).

### [Login or "How-to-now-actually-connect-to-the-supercomputer"](#)

Most HPC Systems are unix-based environments with [shell](#) (commandline) access.

To log in, one usually uses [ssh](#) to reach the respective [Login Nodes](#) (computers reserved for people just like you that want to connect to the supercomputer). Sometimes this access is restricted, so you can only connect, when you are within the university/facility and its network. To still access the Login Nodes externally, one can 'pretend to be inside the network' by using a [Virtual Private Network \(VPN\)](#).

Once there, the user can interact with the system and run (small) programs to generally test the system/software.

### [File Transfer or "How-to-get-your-data-onto-or-off-the-supercomputer"](#)

To get your data (files) onto the supercomputer or back to your local machine, there are usually different ways. Sometimes there are computers specifically reserved for this purpose called [copy nodes](#).



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Hints for authors of the NIC-series

work

Danie

Programming in C++

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- Numerical Libraries
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### IC2 User Guide

- InstitutsCluster II User Guide [PDF]

### Intel Nehalem Processor

- Wikipedia: Nehalem (microarchitecture) [HTML]
- Intel Westmere-EP: Intel's Future Processor and System [HTML]

Comarc and support

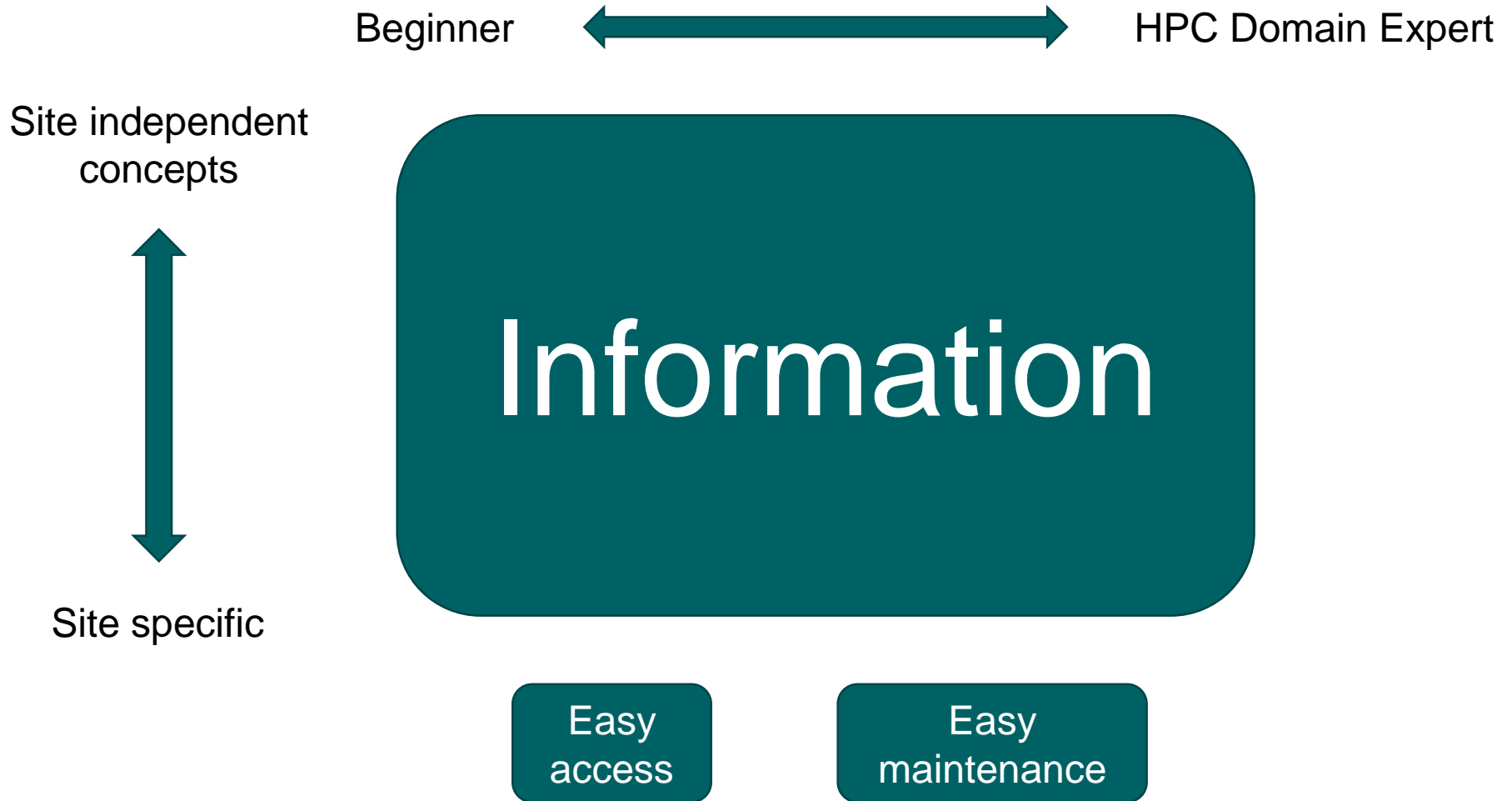
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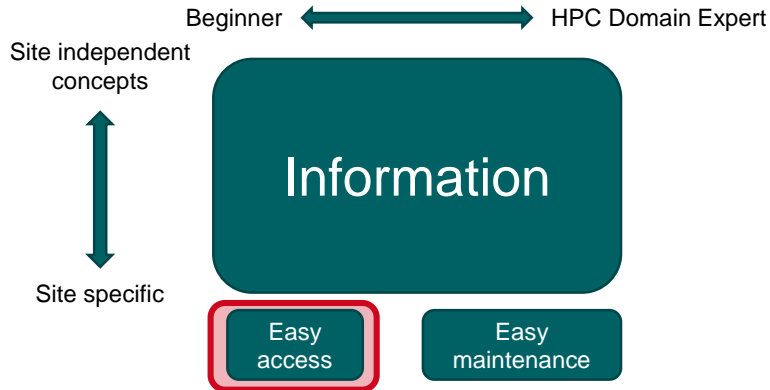


# Site-independent HPC Knowledge Base: Challenges



# Site-independent HPC Knowledge Base: Technology

Log in



## Mediawiki:

- Intuitive Interface
- Publicly readable
- Moderation possible
- Protected Sections possible
- Authentication per Shibboleth (eduGAIN) for patrolled editing



Main page [Discussion](#) Read [View source](#) More

## HPC Wiki

Welcome to the HPC Wiki! This aims to be a site-independent HPC documentation. This means all specific information about computing centers in different locations and their respective details are bundled in the site specifics section on the left hand site and all other articles should be held as general and site-independent as possible. This means everybody can use the same (this!! :) ) knowledge base, regardless where they are from and if information about the configuration of a particular system/computing center is needed, the site-specifics section should give an overview about where to find that.

Furthermore, there are different target groups with their respective material findable on the left hand menu.

## Categories

[Getting\\_Started](#) is a basic guide for first-time users. It covers a wide range of topics from access and login to system-independent concepts of Unix systems to data transfers. While this gives an overview, all articles in the Basics Section are written with really inexperienced users in mind, to explain concepts in an easy-to-understand way. A similar article in the Users and Developer Section are planned, but not yet finished. Look into the [FAQs](#) to see tips and instructions on [How-to-Contribute](#) to this wiki.

## In Progress

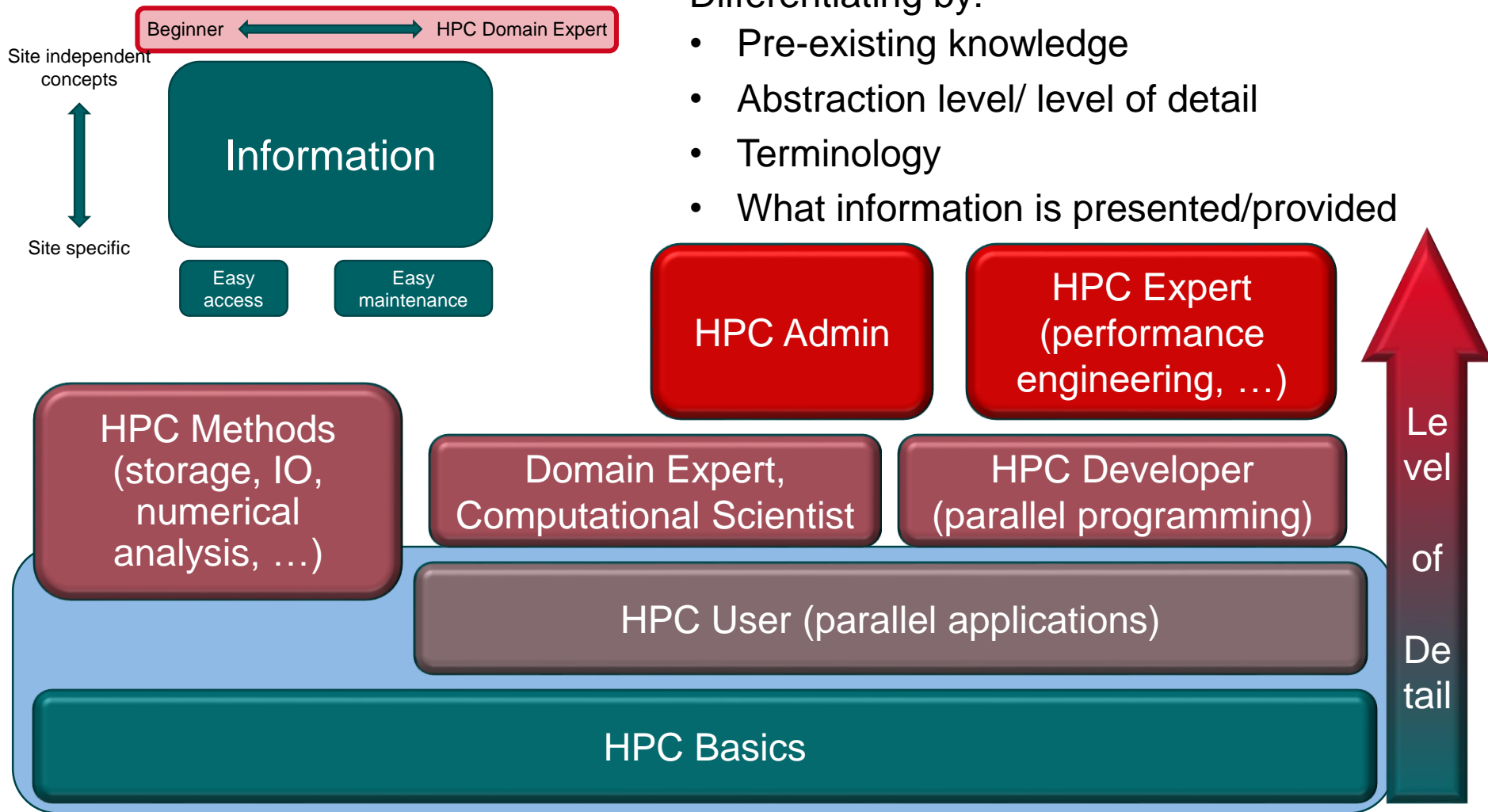
General: [How-to-Contribute](#)

Basics/HPC-User: [make](#), [cmake](#), [Ssh\\_keys](#), [compiler](#), [Modules](#), [Vim](#), [screen/tmux](#), [ssh](#), [python/pip](#), [scp](#), [rsync](#), [git](#), [shell](#), [chmod](#), [tar](#), [sh-file](#), [NUMA](#)

HPC-Dev: [Load\\_Balancing](#), [Performance Engineering](#), [correctness checking](#)

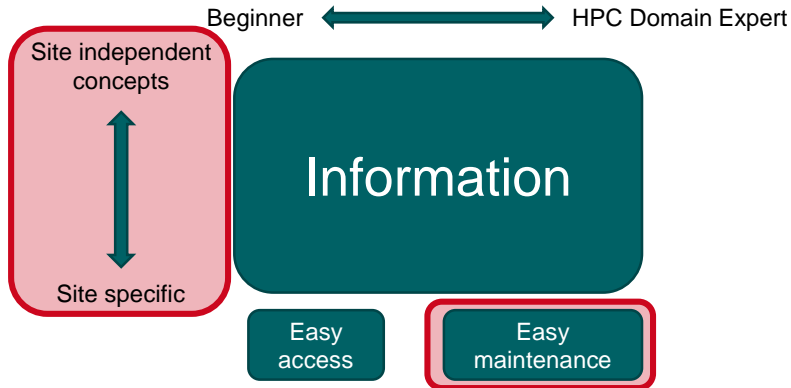
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# Site-independent HPC Knowledge Base: Target groups



# Site-independent HPC Knowledge Base: Site specific information

Log in



HPCWIKI

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  - Open
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### Access

To get access to a supercomputer, please have a look at the possibilities of the facility you are associated with:

IT Center - RWTH Aachen	<a href="#">RWTH Compute Cluster Access</a> <a href="#">Project Submission</a>
RRZE - FAU Erlangen	<a href="#">RRZE Serverdienste</a>
ZIH - TU Dresden	<a href="#">ZIH Access</a>

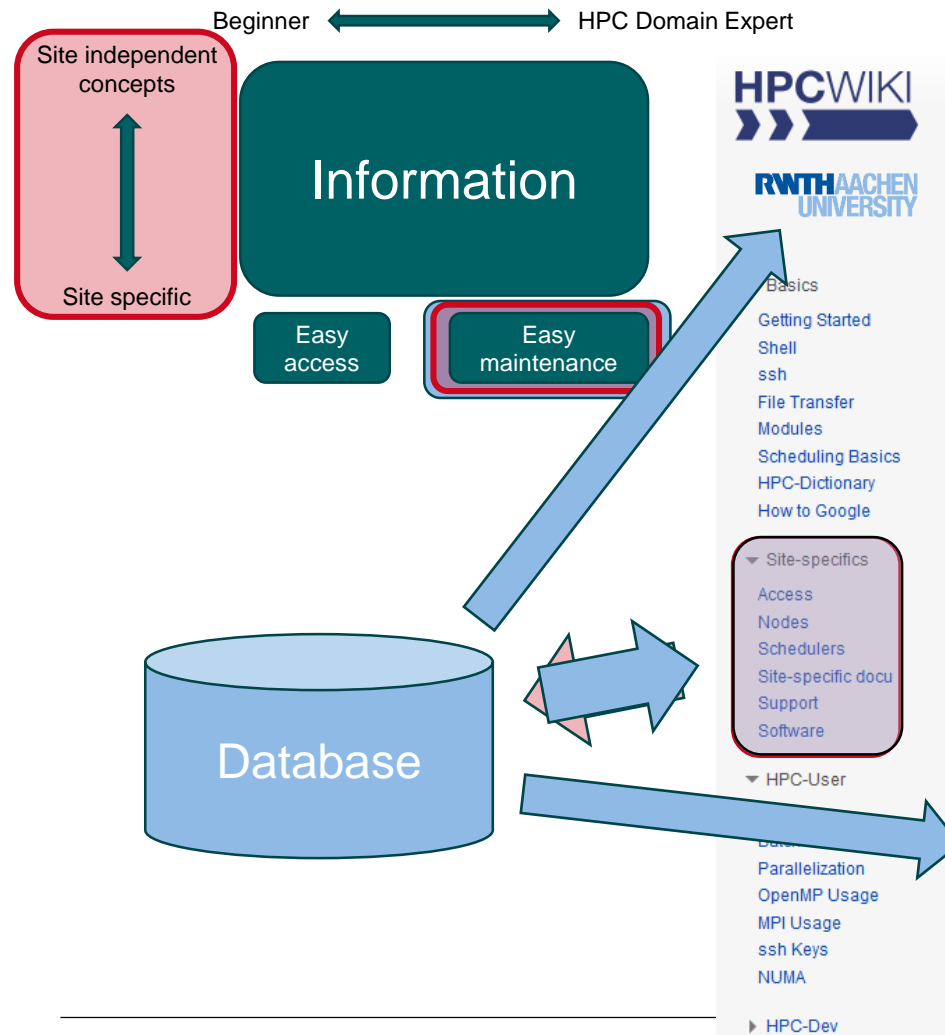
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HPC-Dev: [Load\\_Balancing](#), [Performance Engineering](#), [correctness checking](#)

# Site-independent HPC Knowledge Base: Vision of blended content



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```
login.hpc.itc.rwth-aachen.de
```

(a computer reserved for people just like you that want to connect to the supercomputer). Sometimes you may need to 'pretend to be inside the network' by using a [Virtual Private Network \(VPN\)](#).

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# Site-independent HPC Knowledge Base



HPC Expert

easy  
enhance

<https://hpc-wiki.info>

Mediawiki:

- Ease of use
- Read access for everyone
- Authentication per Shibboleth (eduG...

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## HPC Wiki

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Dev: Load\_Balancing, Performance Engineering, correctness checking

- Wiki up and running
- Defining Target Groups
- Basics & Beginners section
- Coordination Talks with GA
- Shibboleth authentication
- DSGVO and data protection
- CC-BY-SA 4.0 License

- Promotion & Acceptance
- Even more Content

- Database integration?
- Move to permanent home

Thank you for your attention!