



Centrum spoločných
činností SAV, v. v. i.



Výpočtové stredisko SAV

HPC SERVICES

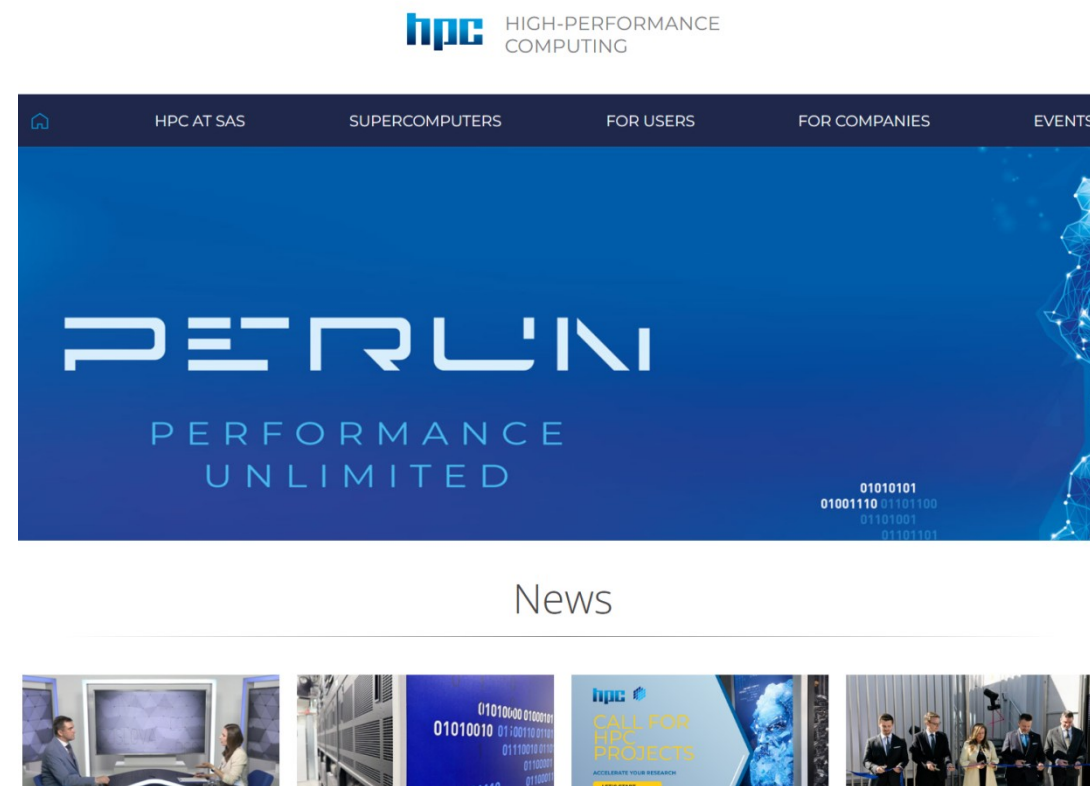
VSSAV, Bratislava, 10/06/2026
(HPC tím)

HPC SERVICES

- <https://hpc.sav.sk/>
- <https://register.hpc.sav.sk>
- <https://support.hpc.sav.sk/>
- <https://userdocs.hpc.sav.sk/>
- <https://ood.devana.nscs.sk/>
- **Containers and more**
- **Project and user statistics**

SAS HPC WEBSITE

- <https://hpc.sav.sk/en/>
 - Basic information
 - News
 - Calls for HPC projects
 - Success stories, events and more



HPC REGISTER (1/5): NEW PROJECTS

■ Testing projects

- 50 000 CPU core hours
- 781 GPU hours

■ Standard, commercial projects

- Devana CPU, GPU
- Perun CPU, high memory CPU (FAT), GPU

Requested Resources *

- Devana CPU
- Devana GPU
- Perun CPU
- Perun high memory CPU
- Perun GPU

Node types (gpu and/or cpu) that are requested

Requested CPU Allocation Devana

1500 core*h

Number of requested core-hours on CPU nodes of Devana supercomputer

Requested GPU Allocation Devana

20000 gpu*h

Number of requested GPU-hours on GPU nodes of Devana supercomputer

Requested CPU Allocation Perun

10000000

Number of requested core-hours on CPU nodes of Perun supercomputer

Requested High Memory CPU Allocation Perun

40000

Number of requested CPU core hours on high memory CPU nodes of Perun supercomputer

Requested GPU Allocation Perun

40000

Number of requested GPU-hours on GPU nodes of Perun supercomputer

HPC REGISTER (2/5): NEW USER REGISTRATION FORM

- No changes for existing users!
- New usernames for new users
 - abcdba00
- New workplaces for new users

First Name *

Your first name

Last Name *

Your last name

Organization

Centrum spoločenských a psychologických vied SAV v. v. i. (id/co: 990_00596795)
Centrum spoločných činností SAV v. v. i. (id/co: 990_00398144)

Organization Missing *
I cannot find my organization in the list of existing organizations.

Organization Description

Organization Name:
Company id:
Address:
Telephone number:
--

Please provide a detailed description of your organization (employer). Include organization name, company id, address, telephone number and any additional information that might help us identify your organization correctly.

Telephone Number *

Your telephone number

Private Information Processing *
I have read the rules concerning private information protection and I agree with their processing.

Acceptable Use Policy *
I have read the [Acceptable Use Policy](#) and agree to adhere to the terms stated within.

Create new account

HPC REGISTER (3/5): KOŠICE INTEGRATION

- Dashboard
- Košice integration
- Username, password, ssh-keys



Košice Integration

I request access to the resources of Perun supercomputer in Košice. I agree with [the sharing of my private data](#) with Technical University of Košice as well as [the terms of use of HPC PERUN](#) in Košice.

HPC REGISTER (4/5): PROJECT OUTPUTS, REPORTS, TEAM MEMBERS

- Project Final Report/Technical Report
- Project Outputs
- Project Team Members

The screenshot displays a web interface for managing project team members. At the top, there is a navigation bar with a hamburger menu icon, the word "DASHBOARD", and the language "Slovenčina". Below the navigation bar, there are "View" and "Edit" tabs. The main content area is divided into two columns. The left column is titled "Other Members of Project Team" and contains a "Show row weights" link. It features two rows, each with a plus sign, a text input field containing "milo (2)", and a "Remove" button. Below these rows is an "Add another item" button. The right column contains a "Published" status, "Last saved 05/04/2026 - 09:59", and "Author januel". Below the main content area, there are two expandable sections: "Final Report" with an "Add new node" button, and "Výstupy projektu" with an "Add new node" button. At the bottom of the interface, there are "Submit" and "Preview" buttons.

HPC REGISTER (5/5): PERUN CLUSTER STATUS

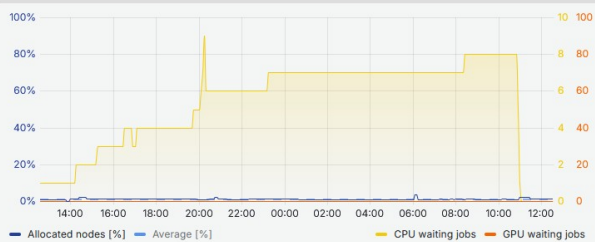
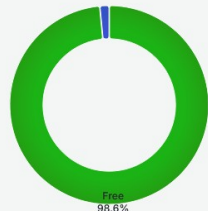
PERUN: CLUSTER STATUS

Detailed info ^{ext}

login01:	AVAILABLE
login02:	AVAILABLE
login03:	AVAILABLE
login04:	AVAILABLE

Active users: 2

/home	0.5%
free disk space:	247.61 TiB
/scratch	1.6%
free disk space:	1018.68 TiB
/project	5.3%
free disk space:	8.84 PiB



You can find more details and the statuses of single nodes [HERE](#).

users view

Perun cluster utilization

login01:	AVAILABLE
login02:	AVAILABLE
login03:	AVAILABLE
login04:	AVAILABLE

Active users: 2

Average cluster allocation: 3.3%

/home	0.5%
free disk space:	247.61 TiB
/scratch	1.6%
free disk space:	1018.68 TiB
/project	5.3%
free disk space:	8.84 PiB



CPU nodes									FAT CPU nodes			GPU nodes															
cn001 Busy	cn002 Idle	cn003 Idle	cn004 Idle	cn005 Idle	cn006 Idle	cn007 Idle	cn008 Idle	cn009 Idle	cn048 Idle	cn047 Idle	cn048 Idle	gn001 Idle	gn002 Idle	gn003 Down	gn004 Idle	gn005 Idle	gn006 Idle	gn007 Idle	gn008 Idle	gn009 Idle	gn010 Idle	gn011 Idle	gn012 Idle	gn013 Idle	gn014 Idle	gn015 Drained	gn016 Idle
cn010 Idle	cn011 Idle	cn012 Idle	cn013 Idle	cn014 Idle	cn015 Idle	cn016 Idle	cn017 Idle	cn018 Idle	cn049 Down	cn050 Down	cn051 Drained	gn017 Idle	gn018 Idle	gn019 Idle	gn020 Idle	gn021 Idle	gn022 Idle	gn023 Idle	gn024 Idle	gn025 Idle	gn026 Down	gn027 Idle	gn028 Idle	gn029 Idle	gn030 Idle	gn031 Idle	gn032 Idle
cn019 Idle	cn020 Idle	cn021 Down	cn022 Down	cn023 Down	cn024 Down	cn025 Down	cn026 Down	cn027 Drained	cn052 Idle	cn053 Down	cn054 Idle	gn033 Idle	gn034 Idle	gn035 Idle	gn036 Idle	gn037 Idle	gn038 Idle	gn039 Idle	gn040 Idle	gn041 Idle	gn042 Idle	gn043 Idle	gn044 Idle	gn045 Idle	gn046 Idle	gn047 Idle	gn048 Idle
cn028 Drained	cn029 Drained	cn030 Drained	cn031 Drained	cn032 Down	cn033 Drained	cn034 Drained	cn035 Down	cn036 Down	cn055 Idle	cn056 Idle	cn057 Idle	gn049 Idle	gn050 Idle	gn051 Idle	gn052 Idle	gn053 Idle	gn054 Idle	gn055 Idle	gn056 Idle	gn057 Idle	gn058 Idle	gn059 Idle	gn060 Idle	gn061 Idle	gn062 Idle	gn063 Idle	gn064 Idle
cn037 Down	cn038 Down	cn039 Down	cn040 Down	cn041 Down	cn042 Down	cn043 Drained	cn044 Drained	cn045 Drained	cn058 Down	cn059 Idle	cn060 Idle	gn065 Idle	gn066 Idle	gn067 Idle	gn068 Idle	gn069 Idle	gn070 Down	gn071 Drained	gn072 Idle	gn073 Idle	gn074 Idle	gn075 Idle	gn076 Idle	gn077 Idle	gn078 Busy		

HPC SUPPORT

■ Tickets


■ Sign In


■ Automatic Emails




Sign In

 [Support Center Home](#)

 [Knowledgebase](#)

 [Open a New Ticket](#)

 [Check Ticket Status](#)

Search our knowledge base

Search

Open a New Ticket

Check Ticket Status

Vitajte v centre podpory HPC.SAV.SK

(SK) S cieľom zefektívniť podporu pre užívateľov a lepšie vyhovieť Vaším požiadavkám Vám zabezpečujeme evidenčný systém podpory. Každá požiadavka je evidovaná na tikete, ktorému je pridelené jedinečné číslo. Číslo tiketu slúži na monitorovanie pokroku a odpovede online. Aby ste mali prehľad, poskytujeme Vám kompletný archív a históriu všetkých Vašich požiadaviek. Ticket je možné vytvoriť v **Slovenskom** aj **Anglickom** jazyku. Prosím, prihláste sa.

Welcome to the support centre HPC.SAV.SK

(EN) In order to streamline support requests and better serve you, we utilize a support ticket system. Every support request is assigned a unique ticket number which you can use to track the progress and responses online. For your reference we provide complete archives and history of all your support requests. You can create a ticket in **Slovak**, or **English** language. Please, sign in.

HPC DOCUMENTATION

- Guides, examples, best practices
- Devana/Perun/shared guides
- Acknowledgements

The screenshot displays the SAS User Documentation website. At the top, there is a navigation bar with the title "SAS User Documentation" and a search icon. Below the navigation bar, there are several sections:

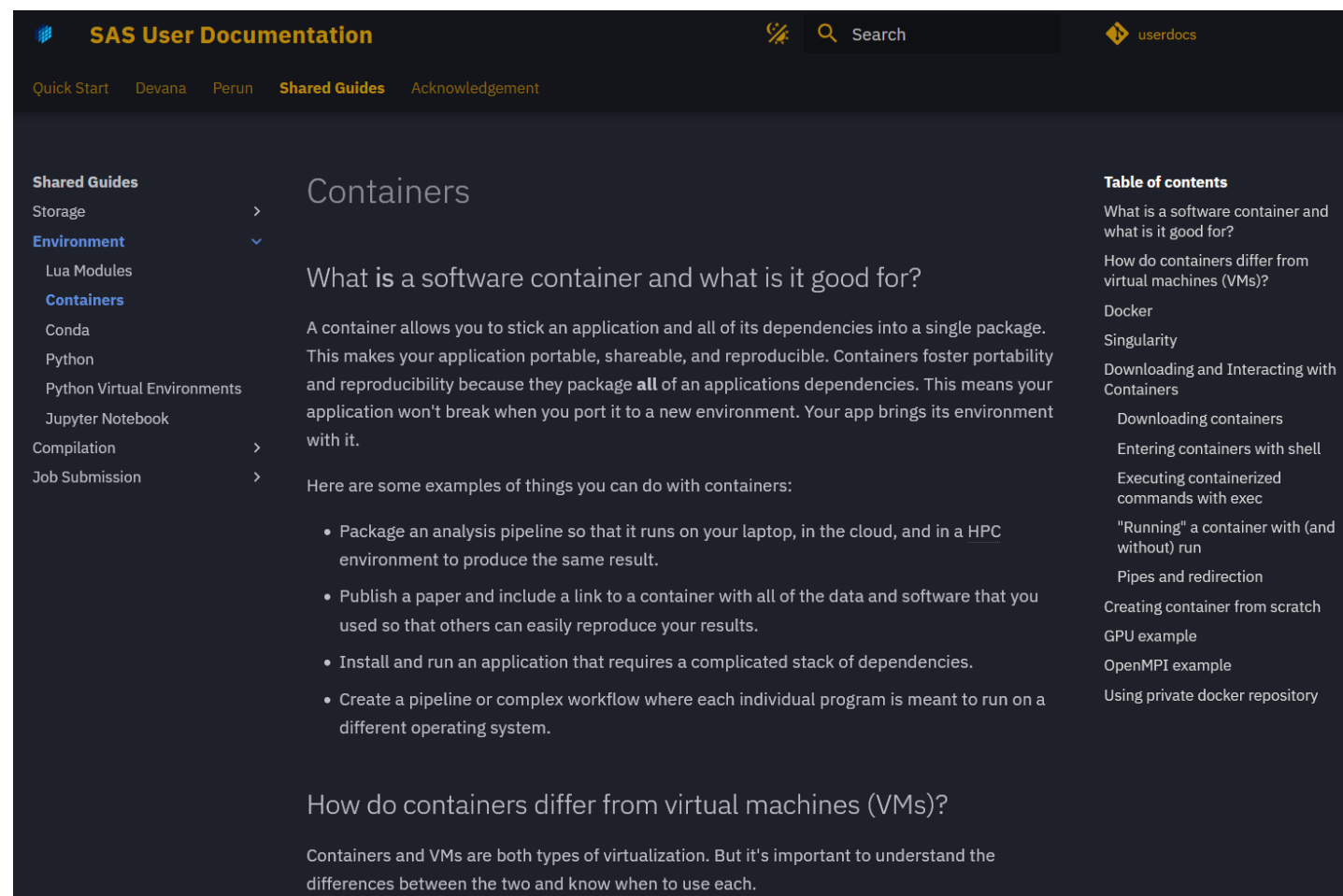
- Quick Start**: A list of links including "Get Access", "Get Project", "SSH Keys", "How To Connect?", "Open OnDemand", "Helpdesk", and "Project Reports".
- Welcome to the SAS HPC Documentation**: A central message stating that the portal is a central hub for supercomputers Devana and Perun, designed to support research in artificial intelligence, bioinformatics, and quantum chemistry. It also mentions the mission of the SAS HPC centre to provide reliable, high-performance computational resources.
- Learn more about:** A list of links: "Devana System Overview", "Perun System Overview", and "Shared Documentation".
- Perun cluster**: A section announcing the deployment of the Perun cluster in Q2 2026, highlighting its improved performance and energy efficiency compared to the Devana cluster.
- Action Required**: A red-bordered box with a lightning bolt icon, stating: "Please review the Perun documentation and follow the Get Access guide to request access."
- Software Stack Update on Devana cluster**: A section announcing a software stack update on the Devana cluster in Q3 2025, noting that the old stack was retired on November 10th, 2025.
- Table of contents**: A list of links: "Perun cluster", "Software Stack Update on Devana cluster", "Stay Updated", "How to Begin?", "How to Use the Documentation?", "Commonly Used Terminology", and "Admnitions".

HPC SAS: OOD, CONTAINERS AND MORE

■ Open OnDemand

■ Containers

■ AI user support (distant future plans)



The screenshot shows the SAS User Documentation website. The page title is "Containers". The left sidebar lists navigation options: Shared Guides, Environment (with sub-items: Lua Modules, Containers, Conda, Python, Python Virtual Environments, Jupyter Notebook), Compilation, and Job Submission. The main content area is titled "Containers" and includes a sub-heading "What is a software container and what is it good for?". The text explains that containers allow applications and dependencies to be packaged together, making them portable and reproducible. It lists four examples of things you can do with containers: 1) Package an analysis pipeline for use on a laptop, in the cloud, or in an HPC environment. 2) Publish a paper with a link to a container to make results reproducible. 3) Install and run an application with a complex dependency stack. 4) Create a pipeline or workflow where individual programs run on different operating systems. A "Table of contents" on the right lists various topics like "What is a software container and what is it good for?", "How do containers differ from virtual machines (VMs)?", "Docker", "Singularity", "Downloading and Interacting with Containers", "Downloading containers", "Entering containers with shell", "Executing containerized commands with exec", "'Running' a container with (and without) run", "Pipes and redirection", "Creating container from scratch", "GPU example", "OpenMPI example", and "Using private docker repository".

SAS User Documentation Search userdocs

Quick Start Devana Perun **Shared Guides** Acknowledgement

Shared Guides

- Storage >
- Environment** ▾
- Lua Modules
- Containers**
- Conda
- Python
- Python Virtual Environments
- Jupyter Notebook
- Compilation >
- Job Submission >

Containers

What is a software container and what is it good for?

A container allows you to stick an application and all of its dependencies into a single package. This makes your application portable, shareable, and reproducible. Containers foster portability and reproducibility because they package **all** of an applications dependencies. This means your application won't break when you port it to a new environment. Your app brings its environment with it.

Here are some examples of things you can do with containers:

- Package an analysis pipeline so that it runs on your laptop, in the cloud, and in a HPC environment to produce the same result.
- Publish a paper and include a link to a container with all of the data and software that you used so that others can easily reproduce your results.
- Install and run an application that requires a complicated stack of dependencies.
- Create a pipeline or complex workflow where each individual program is meant to run on a different operating system.

How do containers differ from virtual machines (VMs)?

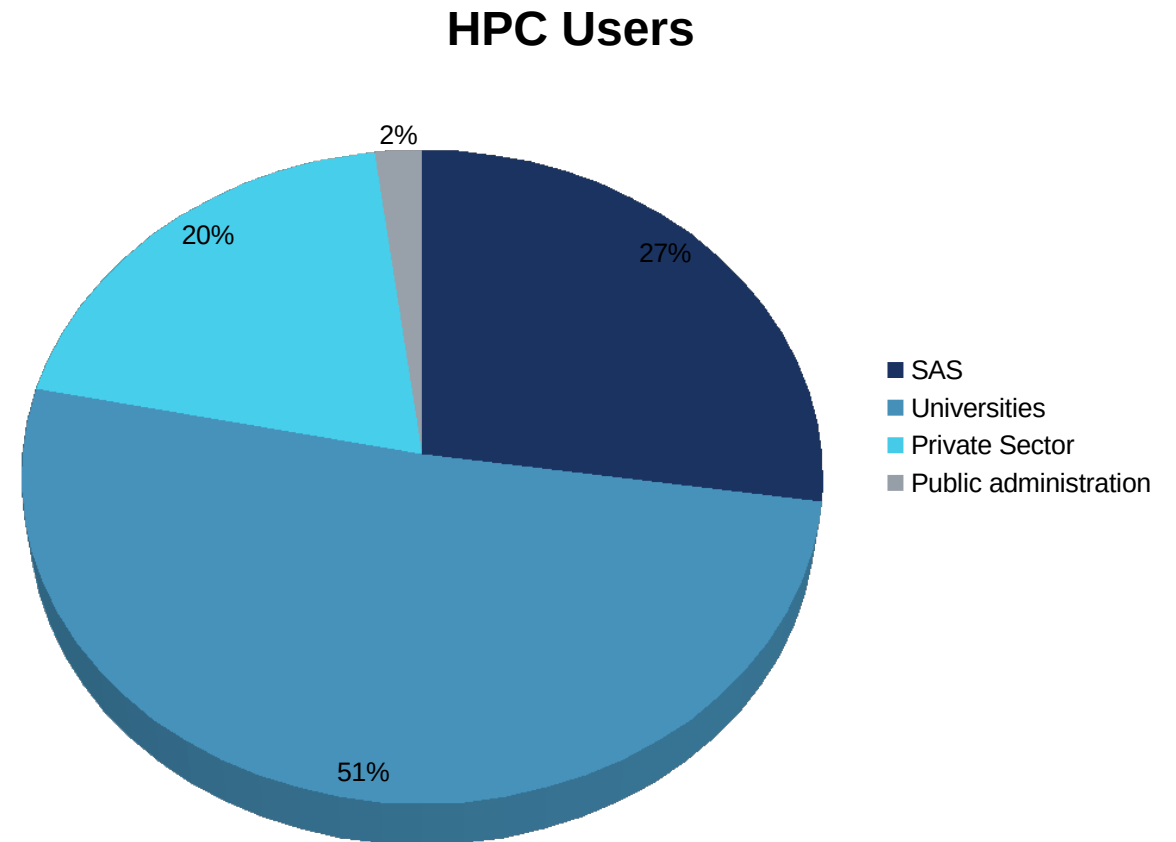
Containers and VMs are both types of virtualization. But it's important to understand the differences between the two and know when to use each.

Table of contents

- What is a software container and what is it good for?
- How do containers differ from virtual machines (VMs)?
- Docker
- Singularity
- Downloading and Interacting with Containers
 - Downloading containers
 - Entering containers with shell
 - Executing containerized commands with exec
 - "Running" a container with (and without) run
 - Pipes and redirection
- Creating container from scratch
 - GPU example
 - OpenMPI example
- Using private docker repository

HPC USER STATISTICS

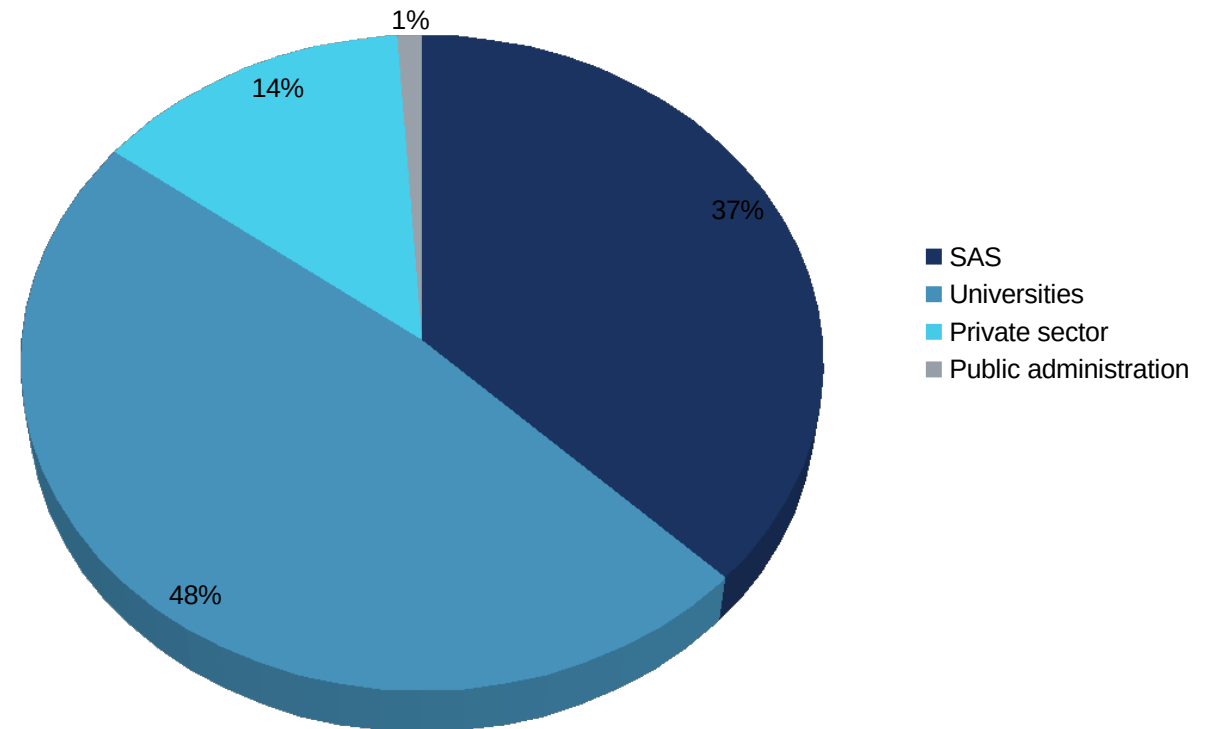
- **Number of users: 542**
- **Number of new users (since Perun): 45**
- **Register ("active" last year): 349**
- **Academic: 424**
- **Private sector: 104**
- **Public administration: 11**
- **SAS: 148**
- **Universities: 276**



HPC PROJECT STATISTICS

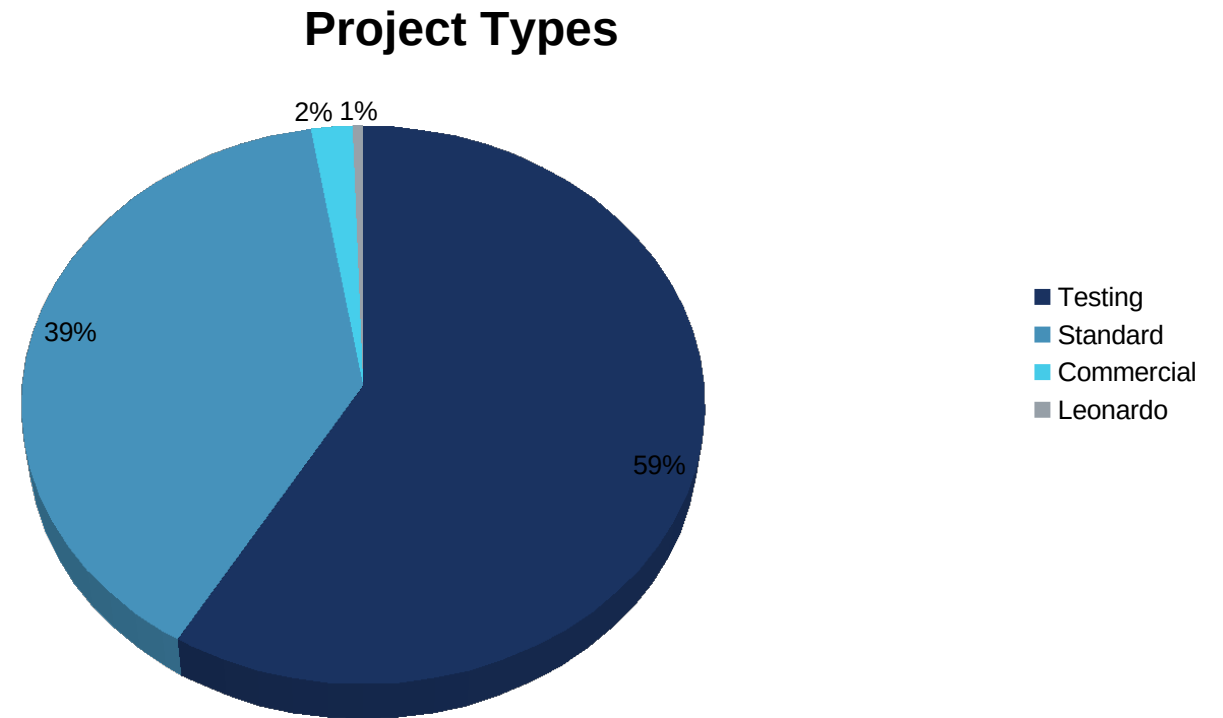
- Number of projects: 379
- Academic: 323
- Private sector: 52
- Public administration: 4
- SAS: 141
- Universities: 182

Number of Projects



HPC PROJECT STATISTICS: PROJECT TYPES

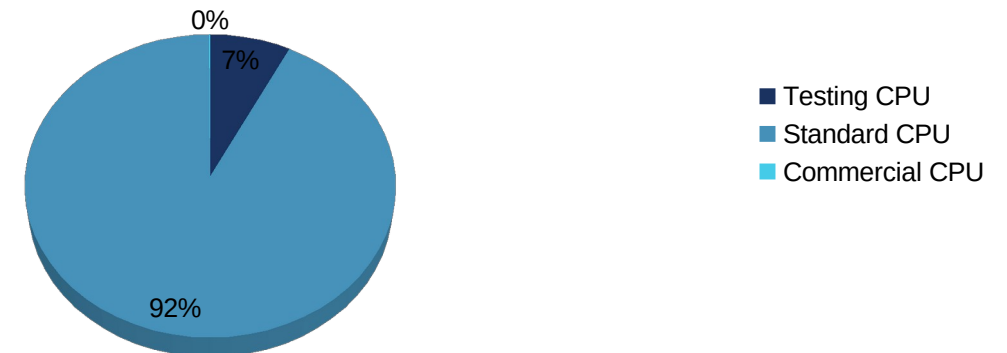
- Testing: 223
- Testing since Perun: 19
- Standard: 148
- Commercial: 8
- Leonardo: 2



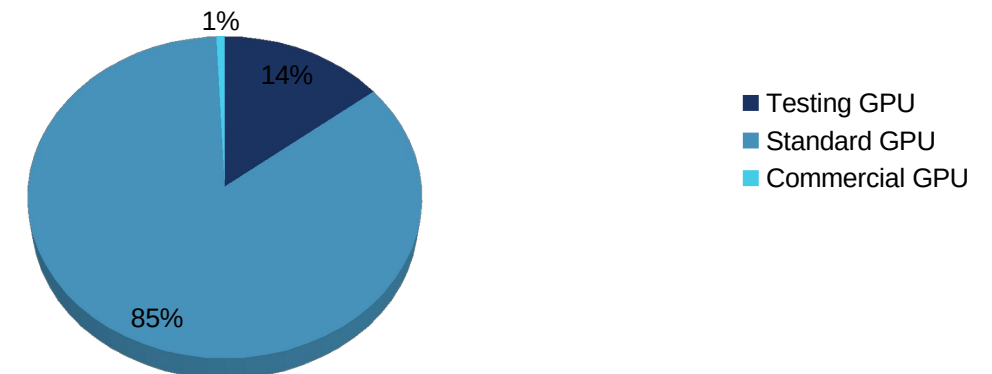
HPC PROJECT STATISTICS: CONSUMED ALLOCATION

- **Testing CPU: 10662064 core hours**
- **Testing GPU: 40582 hours**
- **Standard CPU: 131921878 core hours**
- **Standard GPU: 238669 hours**
- **Commercial CPU: 143089 core hours**
- **Commercial GPU: 2053 hours**

CPU Core Hours Allocation

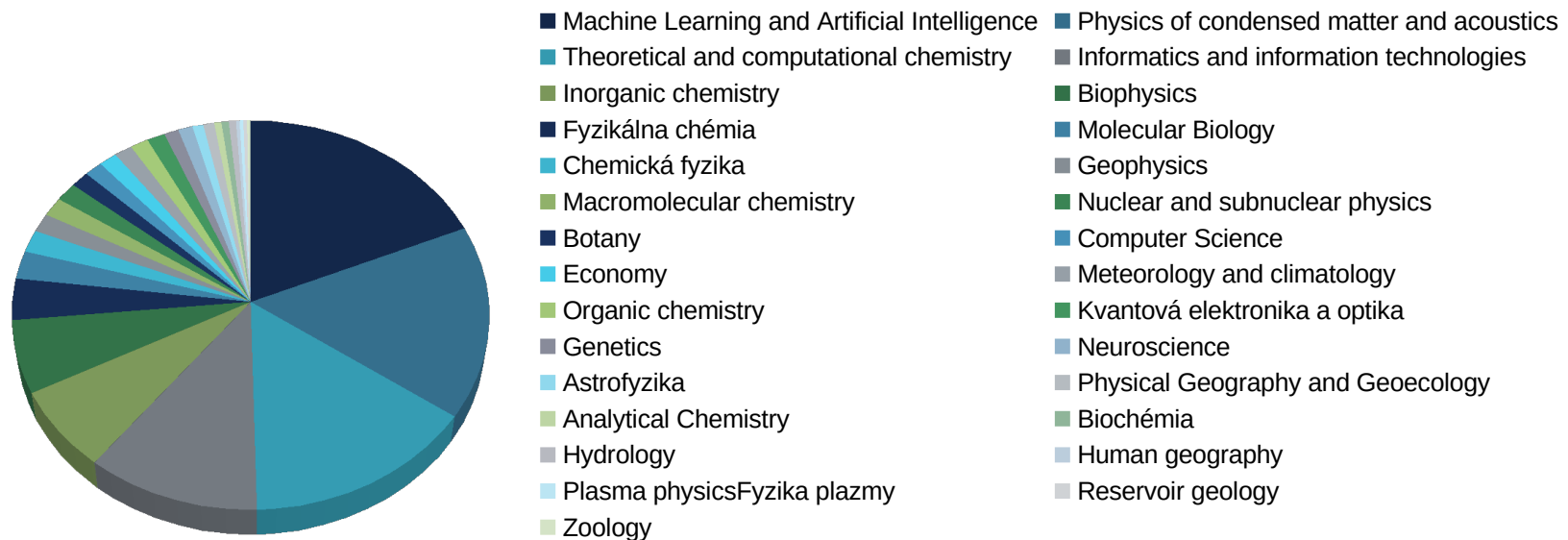


GPU hours Allocation



HPC PROJECT STATISTICS: RESEARCH TOPICS

Projects per Topic



HPC SERVICES

- **Web services**

- Register
- Tickets
- Userdocs
- Open OnDemand

- **Containers and more**

- **Project and user statistics**

Thank you!