Our Mission

UA High Performance Computing (HPC) is an interdisciplinary research center focused on facilitating research and discoveries that advance science and technology. We deploy and operate advanced computing and data resources for the research activities of students, faculty, and staff at the University of Arizona. We also provide consulting, technical documentation, and training to support our users.

This site is divided into sections that describe the High Performance Computing (HPC) resources that are available, how to use them, and the rules for use.
<table>
<thead>
<tr>
<th>Contents</th>
<th>Quick Links</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>User Guide</strong>— This section has the basic knowledge that will introduce you to the resources and provides information on account registration, system access, how to run jobs, and how to request help.</td>
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<tr>
<td><strong>Resources</strong>— Detailed information on compute, storage, software, grant, data center, and external (XSEDE, CyVerse, etc.) resources.</td>
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<tr>
<td><strong>Policies</strong>— Policies related to topics that include acceptable use, access, acknowledgements, buy-in, instruction, maintenance, and special projects.</td>
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<tr>
<td><strong>Results</strong>— A list of research publications that utilized UArizona’s HPC system resources.</td>
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<tr>
<td><strong>FAQ</strong>— A collection of frequently asked questions and their solutions.</td>
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<tr>
<td><strong>User Portal</strong>— Manage and create groups, request rental storage, manage delegates, delete your account, and submit special project requests.</td>
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<tr>
<td><strong>Open OnDemand</strong>— Graphical interface for accessing HPC and applications.</td>
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<tr>
<td><strong>Getting Help</strong>— Request help from our team.</td>
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</tbody>
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**Highlighted Research**

**Faster Speeds Need Faster Computation - Hypersonic Travel**

[Image of hypersonic vehicle flow field]

Professors Christoph Hadler, Hermann Fasel, and their team are exploring the use of our GPUs to optimize Navier-Stokes codes for simulating the flow field around hypersonic vehicles traveling at six times the speed of sound (Mach 6), or more.

In this image, instantaneous flow structures obtained from a DNS for a blunt cone at Mach 6 are visualized using Q-isosurfaces colored with instantaneous temperature disturbance values. The isocontours indicate the regions where the boundary layer is turbulent.
### Quick News

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<tr>
<td><strong>We only keep a reasonably current version of Singularity. Prior versions have been removed. Only the latest one is considered secure.</strong> Singularity is installed on all of the system’s compute nodes and can be accessed without using a module. Singularity will be renamed <strong>Apptainer</strong> as the project is brought into the Linux Foundation. An alias will be created so you can continue to invoke “singularity”.</td>
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<tr>
<td><strong>Anaconda</strong> is very popular and is available as a module. It expands the capability of Jupyter with Jupyter Labs; includes RStudio, and the Conda ecosystem. To access GUI interfaces available through Conda (e.g., JupyterLab), we recommend using an Open OnDemand Desktop session. <strong>See these instructions.</strong> As a note, Anaconda likes to own your entire environment. Review those instructions to see what problems that can cause and how to address them.</td>
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<tr>
<td><strong>Have you tried Puma yet?</strong> Our latest supercomputer is larger, faster and has bigger teeth than Ocelote (ok, maybe not the last bit). <strong>Puma Quick Start</strong> Since we upgraded Ocelote it has the same software suite as Puma. It is generally not as busy as Puma. So if your work does not need the capabilities of Puma, consider using Ocelote instead. This applies to GPU’s also, if the P100s will work for you. Now that we are into the second year of use, we have determined that we can increase the standard allocation. <strong>From the end of April 2022 the standard allocation of cpu hours is increased from 70,000 to 100,000.</strong></td>
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<tr>
<td><strong>2022 WIDS Virtual Workshops</strong> Wednesday, August 31st from 8:00am to 12:00pm PST <strong>Register here:</strong> <a href="https://www.widsconference.org/wids-workshops-august-31.html">https://www.widsconference.org/wids-workshops-august-31.html</a></td>
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Calendars

System Calendar

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<tr>
<th>Date</th>
<th>Event</th>
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<tbody>
<tr>
<td>26 Oct 2022</td>
<td>Maintenance downtime is scheduled from 6AM to 6PM on October 26 for ALL HPC services</td>
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<tr>
<td>20 Jul 2022</td>
<td>Maintenance downtime is scheduled from 6AM to 6PM on July 20 for ALL HPC services</td>
</tr>
<tr>
<td>27 Apr 2022</td>
<td>Maintenance downtime is scheduled from 6AM to 6PM on April 27 for ALL HPC services</td>
</tr>
<tr>
<td>26 Jan 2022</td>
<td>Maintenance downtime is scheduled from 6AM to 6PM on January 26 for ALL HPC services</td>
</tr>
<tr>
<td>28 Jul 2021</td>
<td>Maintenance downtime is scheduled from 6AM to 6PM on July 28 for ALL HPC services</td>
</tr>
<tr>
<td>12 Jul 2021 - 01 Aug 2021</td>
<td>El Gato will be taken down for scheduled maintenance from July 12th through August 1st. Following maintenance, it will use SLURM as its scheduling software and have the same software image and modules as Ocelote and Puma.</td>
</tr>
<tr>
<td>01 Jun 2021 - 30 Jun 2021</td>
<td>Ocelote will be taken down for scheduled maintenance from June 1st through June 30th. During that time, its OS will be updated to CentOS 7 and its scheduler will be migrated to SLURM.</td>
</tr>
<tr>
<td>27 Jan 2021 - 28 Jan 2021</td>
<td>Maintenance downtime is scheduled from 6AM on January 27th through 6PM on January 28th for ALL HPC services</td>
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Training Calendar

Intro to HPC

Introduction to HPC

Click here for more detailed information

Upcoming Workshops

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<thead>
<tr>
<th>Date</th>
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Past Workshops

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<tbody>
<tr>
<td>20 Sep 2022</td>
<td>9:00 - 10:00am</td>
<td>Main Library B254</td>
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<tr>
<td>07 Sep 2022</td>
<td>9:00 - 10:00am</td>
<td>Main Library, Data Studio CATalyst</td>
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<tr>
<td>03 Mar 2022</td>
<td>9:00 - 10:00am</td>
<td>Room 130A UITS Building</td>
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<tr>
<td>01 Dec 2021</td>
<td>9:00 - 10:00am</td>
<td>Room 130A UITS Building</td>
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<tr>
<td>10 Nov 2021</td>
<td>9:00 - 10:00am</td>
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Intro to Machine Learning
### Introduction to Machine Learning

Click here for more detailed information

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<td>08 Sep 2022</td>
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### Intro to Parallel Computing

#### Introduction to Parallel Computing

Click here for more detailed information

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### Intro to Containers

#### Introduction to Containers

Click here for more detailed information

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### Data Management Workshops
Data Management Workshops

Click here for more detailed information

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<tbody>
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<td>28 Sep 2022</td>
<td>1:00 - 2:00pm</td>
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<td>23 Feb 2022</td>
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<td>Online</td>
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<tr>
<td>28 Sep 2022</td>
<td>2:00 - 3:00pm</td>
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<tr>
<td>24 Feb 2022</td>
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