

Getting Started on Jetstream2*

Conference Tutorial

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As research and education advance, so does their need for advanced computational resources. While some universities are fortunate to be able to provide these resources in abundance, many do not have free availability to such cyberinfrastructure for their research, much less for their instruction. Through Advanced Cyberinfrastructure Coordination Ecosystem: Services & Support (ACCESS), advanced computing resources such as Jetstream2 are shared with educators for free. This sharing of resources provides access to educators who normally would not have access to such platforms.

Jetstream2[1] is an NSF-funded, user-friendly cloud computing environment for researchers and educators running on OpenStack and featuring Exosphere as the primary user interface. Jetstream2 is built on the successes of Jetstream1, continuing the main features of that system and extending to a broader range of hardware and services, including GPUs, large memory nodes, virtual clustering, and other features. It is designed to provide both infrastructure for gateways and other “always on” services, as well as to give researchers and educators access to interactive computing and data analysis resources on demand. One of the goals of providing such a resource without cost is to give colleges and universities access to these resources not only for research but also for instruction, thereby democratizing cloud computing for educators.

Tutorial Audience and Details

This tutorial targets an audience of educators and researchers. Attendees will get an overview of Jetstream2, the ACCESS ecosystem, and how to get on Jetstream2, with a walk through of how to access and launch VMs on Jetstream2

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via the Exosphere interface. It will provide various examples and use cases of Jetstream2 for instruction, along with other helpful tips and tricks.

Tutorial Session Requirements

- A computer with internet access.
- An ACCESS account. Can be created for free at:
<https://identity.access-ci.org/new-user>
- After you create an ACCESS account, fill in the google form at:
<https://forms.gle/dNwn7sj9CBfLyGev5>
to let us know your ACCESS username, so we can add you to a special training allocation and you can follow along with the tutorial.

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Biography

Zachary Gruber is part of the Research Cloud Services team in the Research Technologies division of Indiana University (IU) that supports Jetstream2. He received his bachelor's degree in Computer Science from IU's Luddy School of Informatics, Computing, and Engineering.

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References

- [1] David Y. Hancock et al. “Jetstream2: Accelerating Cloud Computing via Jetstream”. In: *Practice and Experience in Advanced Research Computing*. PEARC ’21. Boston, MA: Association for Computing Machinery, 2021. doi: 10.1145/3437359.3465565.