

Researchers... *in the cloud*

Faculty, Engineers, Software Developers, Post-docs, Research Engineers, Research Scientists



I work mostly onsite and I am a member of a team working on data-intensive research. My priority is to move my research project forward because I am accountable to the funding body. I organize work, meet with students and other researchers, analyze data, and write reports. I also attend conferences that increase visibility of my research and allow me to meet and collaborate with other universities and labs doing similar studies.

What's motivating me to go to the cloud



“Google Cloud Platform (GCP) is a nice, easy, and flexible solution”



“I can pick up my phone and find out charges for the GCP servers. I could never do that with on-prem machines”



“The ease of compute is the most appealing.”



“Now that the database sits in the cloud, **if you want to test your code against a database, you can initiate from your side and test with cloud-based data.**”

NETFLIX

“I go with Industry standard. If it's good for Netflix, it's good for me!”

What I love about the cloud

“I consider the latest and greatest technology on AWS or GCP, otherwise you'd have to invest in hardware that you'd have to have in your lab and then in a matter of only a year, could be out of date.

My biggest challenges with the cloud

Cost. For some services, the cost is too high and can be quite unpredictable.

Billing. It's not as transparent as I need.

Security. Absence of a BAA with AWS is painful.

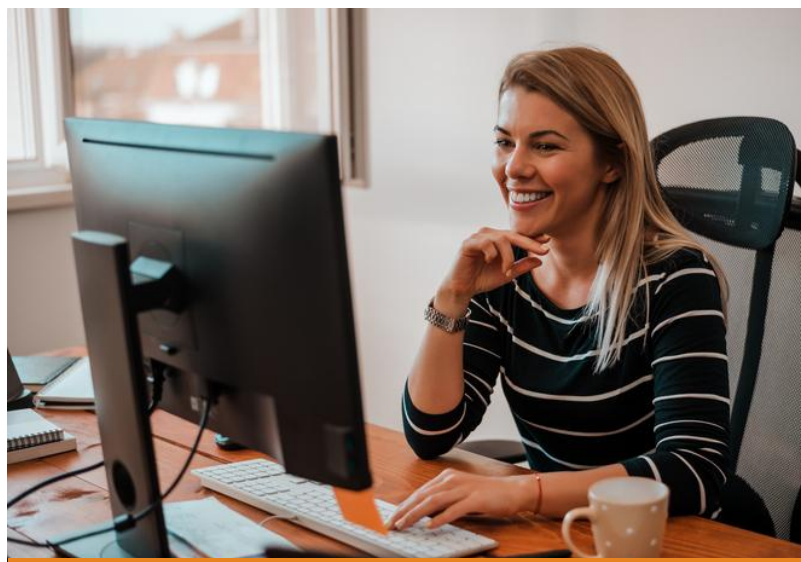
End-to-end support. I need help from setup to configuration

Cloud infrastructure I use for my research



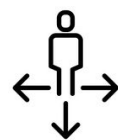
Department Administrators... *in the cloud*

Admins who support faculty researchers or research scientists



As an administrative staff member I am not fully dedicated to any singular project or research effort. While supporting faculty research, I also perform a variety of roles for my department including financials, HR, and facilities. In my role, IT can be a challenge. I don't know what the latest technology solutions are and I don't have the time to investigate them so I rely on my IT support staff to help me. For me, the "hot fire" of the day is my priority.

How UIT can help me support others with cloud



"Continue to **offer different options** (box, google, slack, etc.). Every department is different and having choices is great."



"Continue to **upgrade the security of cloud storage** to allow transfer of files considered high-risk, so that we can stop using Secure: email for this purpose and so we can feel comfortable storing confidential data in the cloud."



"Please **provide a clear list of all services** that are available to use, with links to tutorials. I would like to take training on how to more efficiently use the cloud."



"It would be **helpful to know the benefits and downsides** for the various cloud services. It seems like we're spread out across many services which tends to create more confusion."



"**Provide more assistance** with converting to cloud based programs, including the planning, coordination, conversion and training. Our department and many others don't have IT people in them nor staff who have time to become experts."

What I need

I need to know what are the standards and best practices for using the cloud

I need just a single cloud service provider for file storage

I need research workloads to be more cost-effective in the cloud. High CPU jobs and data transfer fees make the cloud very expensive for big data research

I need clarity on when our department should use CGP, AWS, or Azure.

What could make my life easier?

“ If there are standards and guidelines, publish them. There seems to be generous autonomy for service owners to do what they want with cloud for PROD and Disaster Recovery. Standards should be shared. Also, services should have network diagrams and topologies available, and understand the service levels promised by any vendors.

Survey results

86%

Percentage of admins using cloud tools such as Google Team Drive, Zoom, or Office 365

14%

Percentage of staff who said they are using cloud for Elastic Computing 2, or in a virtual machine capacity

9%

Percentage of staff described their current state of cloud use as having some development and some production services in the cloud

53%

Percentage of users who said that in the next year, some of their group's workload will run in the cloud

Distributed IT Professionals... *supporting cloud use*



Staff who provide IT support to the research community



I am a professional IT staff member who supports my school or business unit with systems and data center services. My priority is the satisfaction of our community, and helping our department meet their academic and research needs. Day-to-day challenges may include keeping up with the latest technology, providing timely response to my clients' IT needs, and ensuring staff are compliant with security standards in their computing.

My cloud experience

“ I have a little experience in a lot of things related to cloud but there are some areas where I could use more experience to better serve my clients. My level of cloud proficiency is probably novice to intermediate.

My biggest challenges regarding cloud

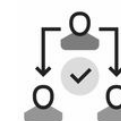
There is no central administrator for Google Drive to adjust access to shared files when the originator is away.

Budgeting. Real time charges are not available until the following day.

Migrations can be very slow

Troubleshooting. It's difficult to understand issues as they occur in the cloud.

What's motivating going to the cloud



“What is nice about the cloud is **you can try something before fully committing to it**. You don't have infrastructure sitting around if you're not using it anymore.”



“Researchers like to use cloud services because **it's easy to deploy, easy to support, and they know it's the future**. It's where everyone is going.”



“Cloud services **allows my department to more seamlessly communicate and collaborate with others** using tools like Slack and Google Drive.



“My clients and partners require dynamic compute facilities. **Cloud services provides what my clients need**.”



“Our department is **moving from Exchange to the Google Suite** which is saving us a lot of money.”



“**My clients are all moving to Google Drive** because it reduces the load on my support staff to spin up new shares and manage those shares. This means we get out of the business of provisioning.”



Help us evaluate cloud services from a solutions architect perspective.



UIT could help us get the best cloud service pricing.



UIT should have a better exchange of information between vendor/UIT and distributed IT (2-way communication)

How UIT could help with cloud services