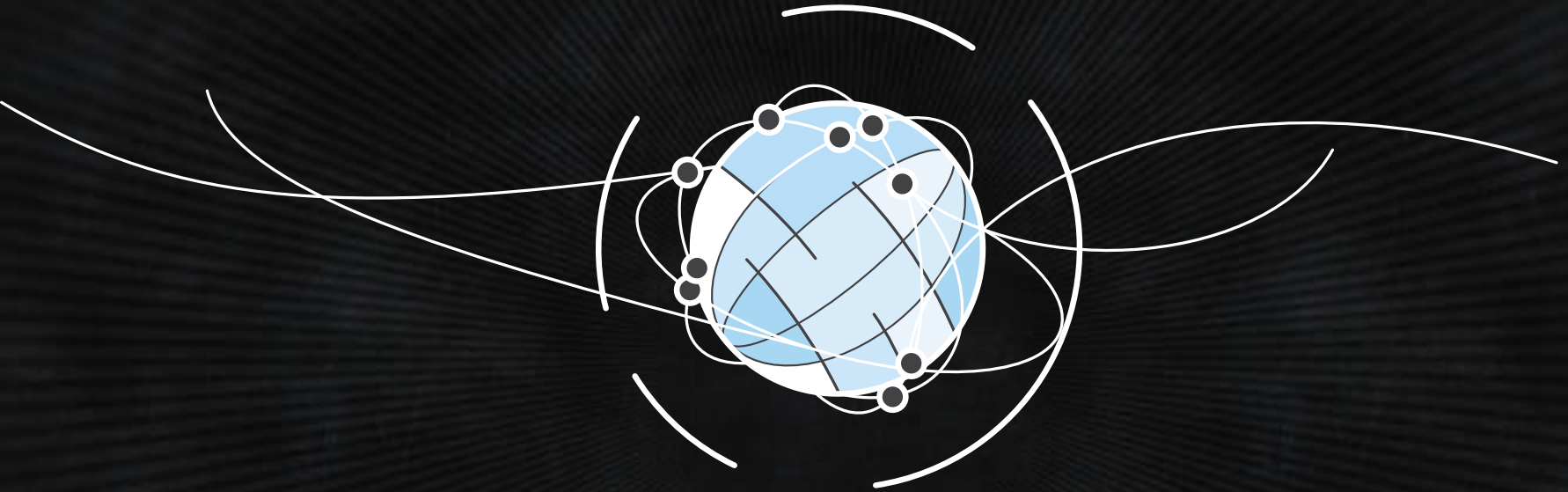

Accelerating Science and Education with Amazon Web Services

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25 May 2016

謝辞

- この度は弊社に講演の機会を賜りましたこと心より御礼申し上げます。また、SINET5の開通につきまして、心よりお慶び申し上げます。弊社は2013年4月にSINET4とPeering接続を開始し、2014年7月にはSINET Cloudサービスと連携させて頂きました。また、2015年には学認クラウド実証実験に参加、今年の2月にSINET5への移行を完了頂きました。弊社は今後も学術基盤ネットワークであるSINET5を通じて今まで以上に学術機関の皆様に貢献できるよう精進してまいります。
- 最後になりますが、SINETのますますのご発展をお祈り申し上げるとともに、学術界の皆様のさらなる成功を祈念させていただきます。

- Amazon Web Services wishes to congratulate the National Institute of Informatics on your successful launch of SINET5. We did a peering connection with SINET4 in 2013 and direct connection with in 2014. we also collaborated GAKUNIN CLOUD last year and move to SINET5 connection in Feb 2016.
- This new connection will take allow Japanese universities and research institute take advantage of the high bandwidth to drive new breakthroughs in their research agendas.
- In the same way, Amazon Web Services is also excited to partner with NII and all universities/research institutes through the launch of AWS Data Egress Waiver Program for Japanese researchers which will help lower the cost of their research when they use AWS. AWS is also looking to fund 3 projects that will leverage cloud computing technologies through our Cloud Credits for Research Program. Finally, AWS will support the teaching and learning of cloud computing technologies through the AWS Educate program. Universities and institutes can sign up for the program for free and AWS cloud credits will be provided to faculty/lecturers and students for practical hands on experience in using AWS.

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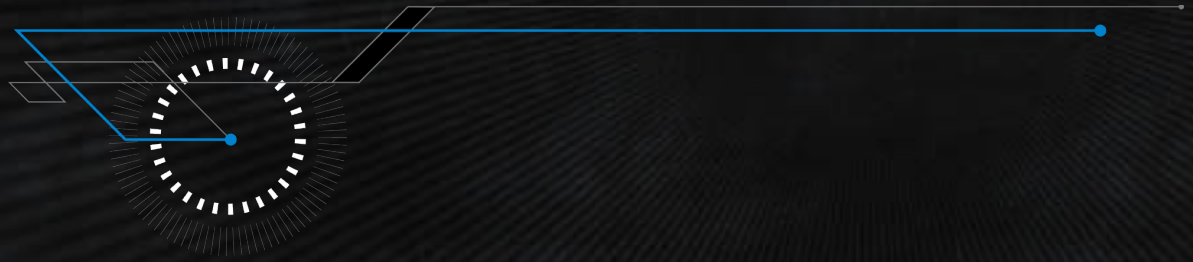
Scientific Computing & Data Egress Waiver



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Scientific Computing

AWS supports the science and research computing markets, globally.

Why?

Science is one of the greatest areas of computation and also happens to be the one that can most benefit from that democratization in cost and global accessibility and where we think Amazon can make a **huge, really disruptive, impact** on the world by participating - which is, at the most basic level, **what we are about** as a company.

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Data egress is :

data transferred out from AWS, over the Internet, to the consumer

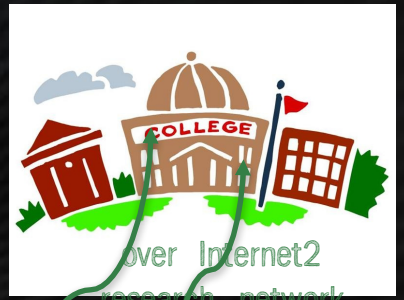
Data Transfer Pricing

The pricing below is based on data transferred "in" to and "out" of Amazon S3.

Region: EU (Frankfurt)

	Pricing
Data Transfer IN To Amazon S3	
All data transfer in	$0.000 per GB
Data Transfer OUT From Amazon S3 To	
Amazon EC2 in the same region	$0.000 per GB
Another AWS Region	$0.020 per GB
Amazon CloudFront	$0.000 per GB
Data Transfer OUT From Amazon S3 To Internet	
First 1 GB / month	$0.000 per GB
Up to 10 TB / month	$0.090 per GB
Next 40 TB / month	$0.085 per GB
Next 100 TB / month	$0.070 per GB
Next 350 TB / month	$0.050 per GB
Next 524 TB / month	Contact Us

Data Egress Waiver applies



----- Data egress

----- Not data egress

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Global Data Egress Waiver at a Glance

Why

- Researchers strongly need predictable budgets

Who

- Available to degree-granting / research institutions
- Permanent program unlike previous pilots
- North America, Europe, APAC, Japan & GovCloud regions
  (but not including Latin America, Middle East, China, India, and Africa)

What

- Waives data egress charges from qualified accounts
- Capped at waiving no more than 15% of the customer's bill
- Excludes MOOCs or other egress-as-a-service situations.
- Must use a Research Network we peer with (e.g. Internet2)

How

- Contract addendum required
- Customers can also procure through reseller (e.g. DLT)

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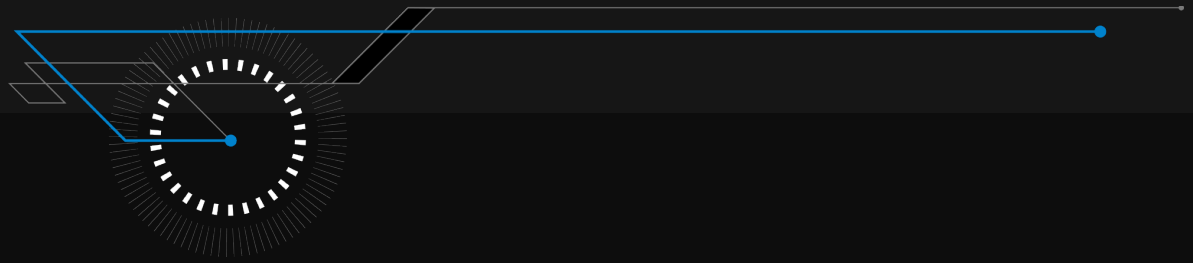
AWS Cloud Credit for Research



AWS Cloud Credits for Research

AWS has been providing credits toward AWS services to researchers at universities and nonprofit institutions since 2009.

We support researchers who seek to:

Build reusable tools to facilitate their future research and the research of their community.

Perform proof of concept or benchmark tests evaluating the efficacy of moving research workloads or open data sets to the cloud.

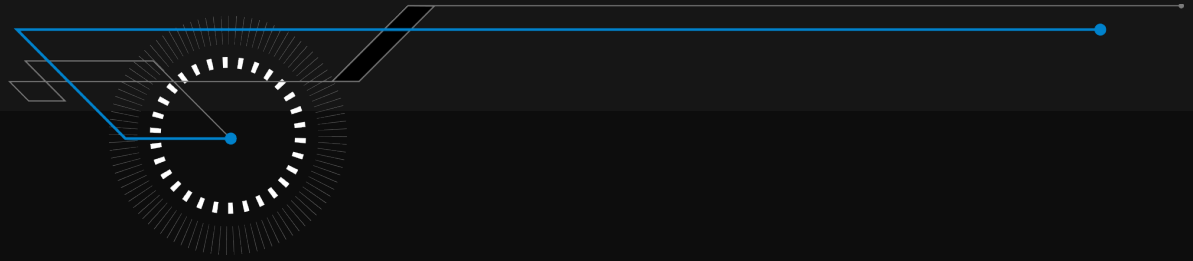
US National Institutes for Health uses AWS to host microbiome analysis web service

- NIH used AWS credits to develop Nephele, a platform to facilitate identification of all the microorganisms in a biological sample
- Nephele uses AWS Lambda to spin up EC2 instances and custom genome analysis tools along with user-submitted sequence data
- Nephele enables scientists across the world to upload DNA microbiome sequence data and obtain a list of corresponding microorganisms

> AWS was the most mature of the cloud platforms evaluated and it had the most number of research users. **Amazon also offered funding to some of the Nephele collaborators through its research grant program**, which helped get some development efforts off the ground
>
> - GenomeWeb article, February 2016

Creating Cloud Competent Students

AWS Educate



aws educate

AWS Educate Value Proposition

Grants for free usage of AWS services

Labs and training on cloud topics and AWS products

Open course content by leading professors and AWS

Communities that share best practices virtually and in person

+ JOB

- ✓ Positively impact students around the world
- ✓ Curriculum change
- ✓ Student app development and entrepreneurship
- ✓ Accelerate career opportunities and corporate hiring pipeline

Summary

- Global Data Egress Waiver Program – Contact aws-jp-pubsec-external@amazon.co.jp on how to join the program
- Call for Proposal - Submit Proposal to aws-jp-pubsec-external@amazon.co.jp
- Join AWS Educate at https://aws.amazon.com/education/awseducate/