

Scientific Computing on AWS

Lecture 1: AWS Basics

Tomoyuki Mano

Okinawa Institute of Science and Technology

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Who am I?

- Tomoyuki Mano
- Postdoc at Computational Neuroethology Unit (Sam Reiter)
- PhD from Univ. Tokyo in Information Science
- Previous research: Bio/single-molecule imaging (physics), mouse brain imaging (neuroscience), image analysis and cloud (computer science)
- Current research: 3D imaging and analysis of cephalopod brains (i.e. squid and octopus) ([1](#), [2](#), [3](#))
- Love camping, cooking and anime
- Contact me at tomoyuki.mano1@oist.jp

- The main lecture material is at <https://tomomano.github.io/learn-aws-by-coding/en/> (sorry, I still haven't finished it all)
- The source code for the exercises is at <https://github.com/tomomano/learn-aws-by-coding>
- Supporting lecture slides are posted at <https://github.com/tomomano/oist-aws-2021>

<https://groups.oist.jp/grad/mini-course-2>

Date	Time	Topic
Wednesday, September 22	15:00-17:00	AWS Basics (setup & installation, EC2)
Friday, September 24	15:00-17:00	Running Deep Learning Applications in AWS
Wednesday, September 29	15:00-17:00	Running Parallel Batch Jobs (Docker & ECS)
Friday, October 1	15:00-17:00	Serverless Computing

- We will work on hands-on tutorial in all lectures, using real AWS cloud
- Let's make this interactive! Interrupt me anytime when you have questions.

I published a book (in Japanese)!



The book is based on the AWS lecture I taught at Univ. Tokyo in 2020 and 2021.

Available at Amazon store :)

- AWS Educate program generously gave us \$500 credit to use on AWS
- The credit was deposited on my personal AWS account. I created a child account for each student (see next slide). For the course exercises, please use this account, not your personal AWS account.
- We are sharing the \$500 credit with the entire class. Please do not overuse it, otherwise we run out of the credit! If I observe an individual using too much AWS credit, I will need to terminate that account.
- Accounts issued for you are valid until the end of this course (10/01).

- I sent each student an invitation to AWS
- With this invitation, your account will be created under the "organization". Essentially, all the billing will go to the organization, not to you!
- **Once the invitation is sent to you, go to the login window, type your OIST email as account name, and click "reset password".**
- If you already have an AWS account created with OIST email, you can continue using that account. However, all cloud cost will be billed to the organization, not to you. If your account does anything other than the course exercise, please let me know an alternative email to create a new account.

Environment setup

Read the appendix of the lecture material (https://tomomano.github.io/learn-aws-by-coding/en/#sec:appendix_settingup) and set up environment in your local machine. In particular, do the following today:

- Install AWS CLI
- Install AWS CDK
- Issue AWS access key and configure command line