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# Basic idea behind the usage rules

- Minimize paperwork and time lag from application to start of use
- Quickly provide resources that would cost dozens of millions yens and take months to procure
- Welcome and encourage first-time users to try
- Create a community where experts from various fields of the university can easily meet, interact, and collaborate

# Possibility of charges

- The gift credits are finite (USD 10M for 5 years) ⇒ we can't say "you can use as much as you want for free"
- Give everybody an opportunity to use it during the 5 year period ⇒ the simplistic first-come-first-serve rule is unacceptable
- The challenge is how to fairly allocate USD 10M to users, *without knowing in advance how many will use it and how much*
- A common approach is to let users write a research proposal and run a review committee, but it tends to
  - make the entry bar higher
  - and result in unused (or wasted) resources

# The basic rule

- At the beginning of each month, decide the amount of gift credits all users can totally use for free ("free tier")
- At the end of each month, divide the free tier *fairly* to subscriptions
- If the total usage of all subscriptions ≤ the free tier
   ⇒ no subscriptions are charged for the month



# The basic rule

- Otherwise, comp up to a threshold
- Subscriptions that spend more than that are "excessive"
  - The excess may not immediately become your bill (more on that later)



### How to determine the free tier?

- Set the "target balance" of the credits that decreases in a constant pace
  - i.e., USD 10M in 5 years (60 months) ≈ USD 167K/month



# How to divide the free tier *fairly*?

- Roughly,
  - there are 10 subscriptions  $\Rightarrow$  each one gets 1/10 of the free tier,
  - except that those who use less than that get up to the amount they actually use (i.e., no roll over)
- In addition, we take into account the number of people (N) registered in the subscription
  - give credits proportionally to the "weights" determined as follows
  - weight of *N*-member subscription =  $\frac{N}{1 + \log_{10} N}$
  - slightly less than "*N* times for *N* members"

#### Illustration of how to divide the free tier



#### subscriptions (weight = width) UTokyo Azure Info Session

# Exceeded usages and charges

- Usage beyond the allocated free credits = "excess"
- The excess amount will be carried over to the next month during a semester (= from that month to the next September or March)
  - excess usage may be offset by the free tier of subsequent month(s)
- The excess usage still remaining at the end of September or March becomes the actual charge on you



# Planning your usage

- In particular, many of you will wonder "How much can I use without being charged?"
- Information you need:
  - How much is the free tier (of the whole university) this month?
  - How many subscriptions (weights, to be more precise) exist this month?
  - How much does it cost to use services you use (price list)?

### Free tier of the month

- $\Rightarrow$  "UTokyo Azure Subscription Management" (on-campus access required) page
  - Remaining Free Tier for UTokyo Azure in XXXX/XX



# "The guaranteed free tier" of subscription

- Let's say for example that on May 1st...
  - free tier of the month (of the whole university) = USD 60,000, and
  - there are 30 subscriptions (whose weights are all the same for simplicity)
- $\Rightarrow$  At this point, you can deduce that each subscription can use, for free, at least 60,000/30 = USD 2,000 in May
- Note that this can be known at the *beginning* of a month ⇒ we call it "the guaranteed free credit" of that subscription of that month



# How much is the guaranteed free tier of my subscription this month?

- => <u>"UTokyo Azure Subscription Management"</u> (on-campus access required) page
  - Guaranteed free tier and usage of your subscription
    - notified at the beginning of each month
  - Significance of guaranteed free tier : if your usage of the month is less than this, you won't be charged for that month, *no matter how much others use*

		2013213337118018				
aranteed free tier for	this subscription o	n 2025/03: \$7895.6				
mber of UTokyo Accounts h ight factor for this subscrip ight of this subscription: 2. of 2025/03/26 14:40	otion: 1.0	scription: 4				
Period	2025/03	2025/02	2025/01	2024/12	2024/11	2024/10
	2025/03 \$7895.6	2025/02 \$8152.7	2025/01 \$8046.9	2024/12 \$10895.5	2024/11	2024/10
			•	•	2024/11	2024/10
Guaranteed free tier Usage	\$7895.6 \$1911.1	\$8152.7 \$2433.3	\$8046.9 \$2479.1	\$10895.5 \$1626.4	2024/11	2024/10

# Alert emails

- If the usage of a subscription exceeds a certain threshold (\*), an alert email will be sent to its owner
  - Subject : "Notification from UTokyo Azure: Subscription XYZ usage alert"
  - \*: 50%, 75%, 90%, 100% of the guaranteed free tier

#### Important: automatic suspension

- By default, when a subscription uses 90% of the guaranteed free tier, *it will be automatically canceled (deleted) and all data will disappear* 
  - so that you won't be charged in the default setting
- Unless you are OK with losing your work and data, please do the following (→ Part 3)
  - Register a budget to pay for it (payment method)
  - Disable the automatic suspention toggle

# Want to use more than "guaranteed"?

- "The guaranteed free tier" is a conservative estimate, like:
  - *if you share a cake with five brothers and sisters, you can surely get 1/5*
- In practice, the remainder of underused subscriptions makes other subscriptions free, like:
  - 3 out of 5 didn't eat the cake until the expiration date  $\rightarrow$  2 can eat all



### To use more than guaranteed, ...

- <u>On the "UTokyo Azure Subscription Management"</u> (On-campus access required) page, watch the remaining free tier of the month (of the whole university)
- Note that if everyone thinks the same, it may cost you (ouch!)
  - Don't forget to turn off the auto suspension (register billing info)



# Tools to keep costs down

- You can calculate the approximate price with Azure's <u>pricing</u> <u>calculator</u>
  - Basis for using any service
- Some services in Azure (such as AI services) have safety valves that terminate after a period of inactivity