



Version 5.2 New Enhancement

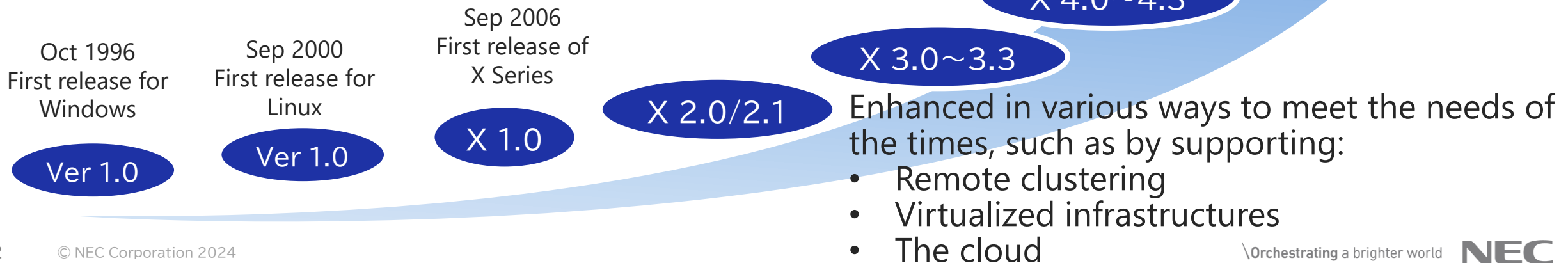
July 2024

NEC

Technology Service and Software Department
(EXPRESSCLUSTER)

EXPRESSCLUSTER Roadmap

Providing various platforms with high availability in accordance with the times



Enhancement points of EXPRESSCLUSTER X 5.2

Enhancements for the cloud

- Supported Amazon Linux 2023 (x86_64, ARM64)
- Added a DNS resource for OCI environments
- Other enhancements

Usability enhancements

- Enhanced IaC-related features
- Other enhancements

Newly supported platforms & applications

- Red Hat Enterprise Linux 9.4, 8.10
- AlmaLinux OS 9.4, 8.10
- Oracle Linux 9.4, 8.10
- Supported PostgreSQL 16.3 for PostgreSQL monitor resources

Enhancements for the cloud

Supported Amazon Linux 2023 (x86_64, ARM64)

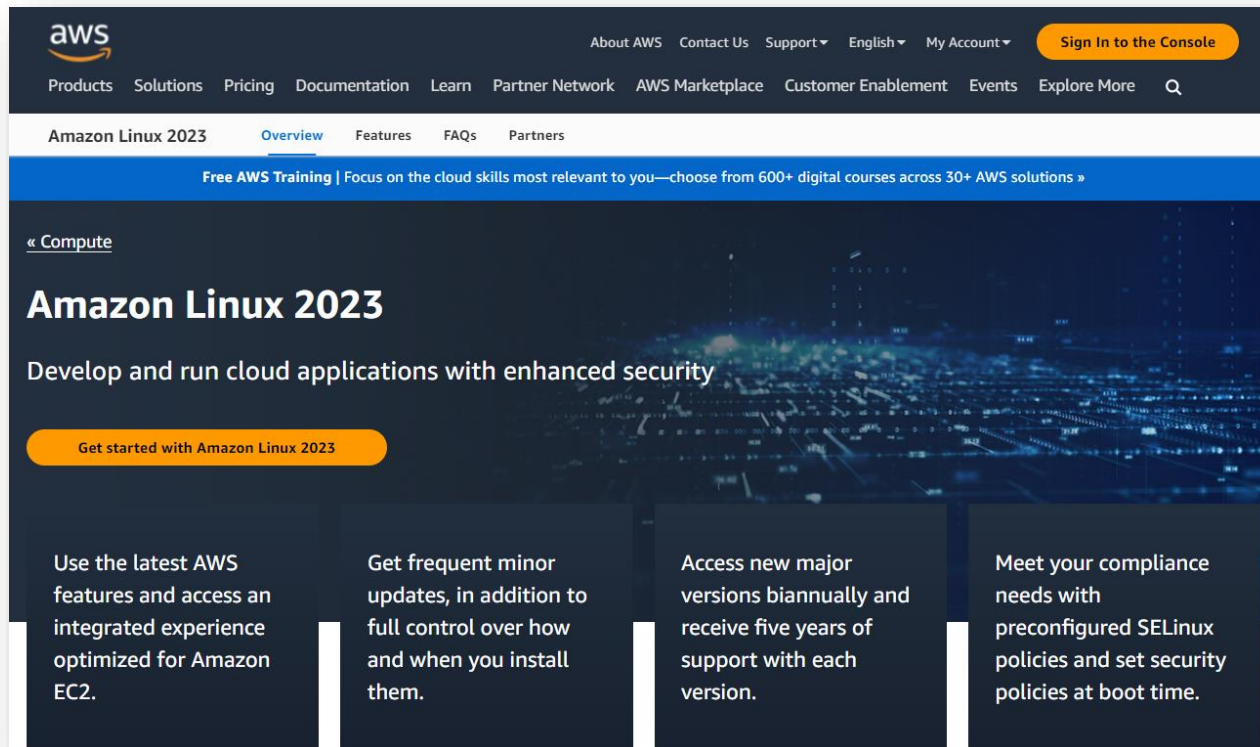
Added a DNS resource for OCI environments

Other enhancements

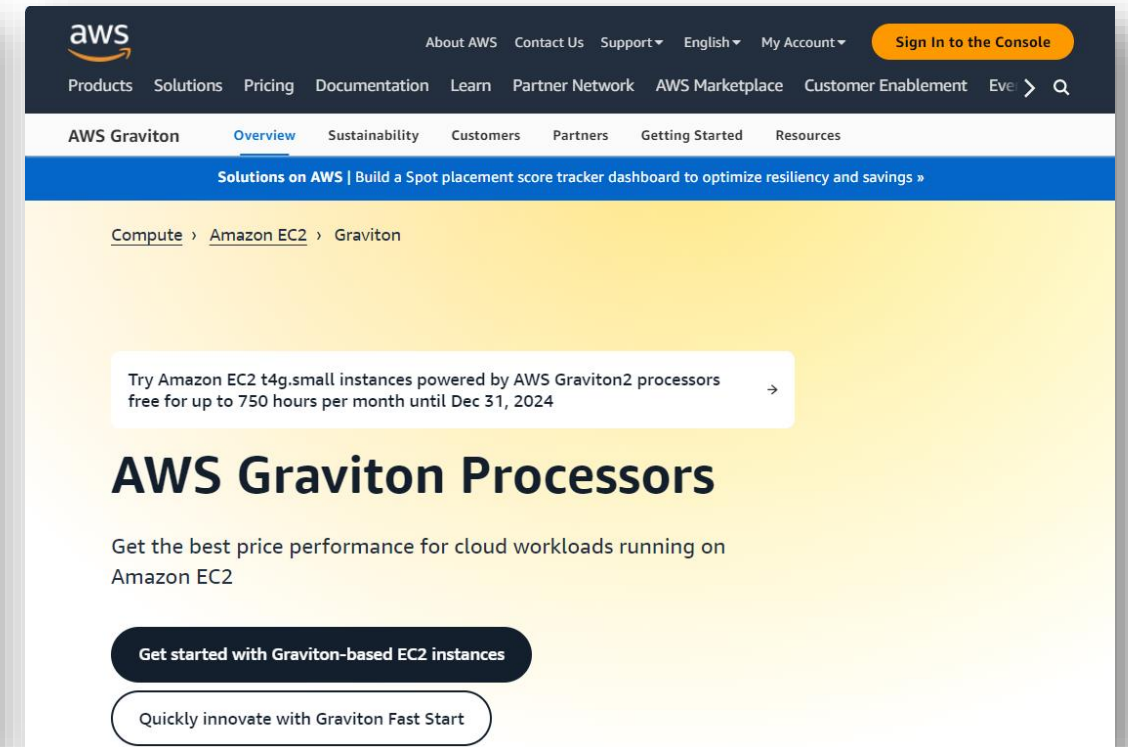
Supported Amazon Linux 2023 (x86_64, ARM64)

Instances can now work with AWS Graviton (ARM64) processors as well as x86_64 ones.

- ◆ Like x86_64-based EC2 instances, but more **power-saving/low-cost** than them, ARM64-based instances provide high availability on EXPRESSCLUSTER.



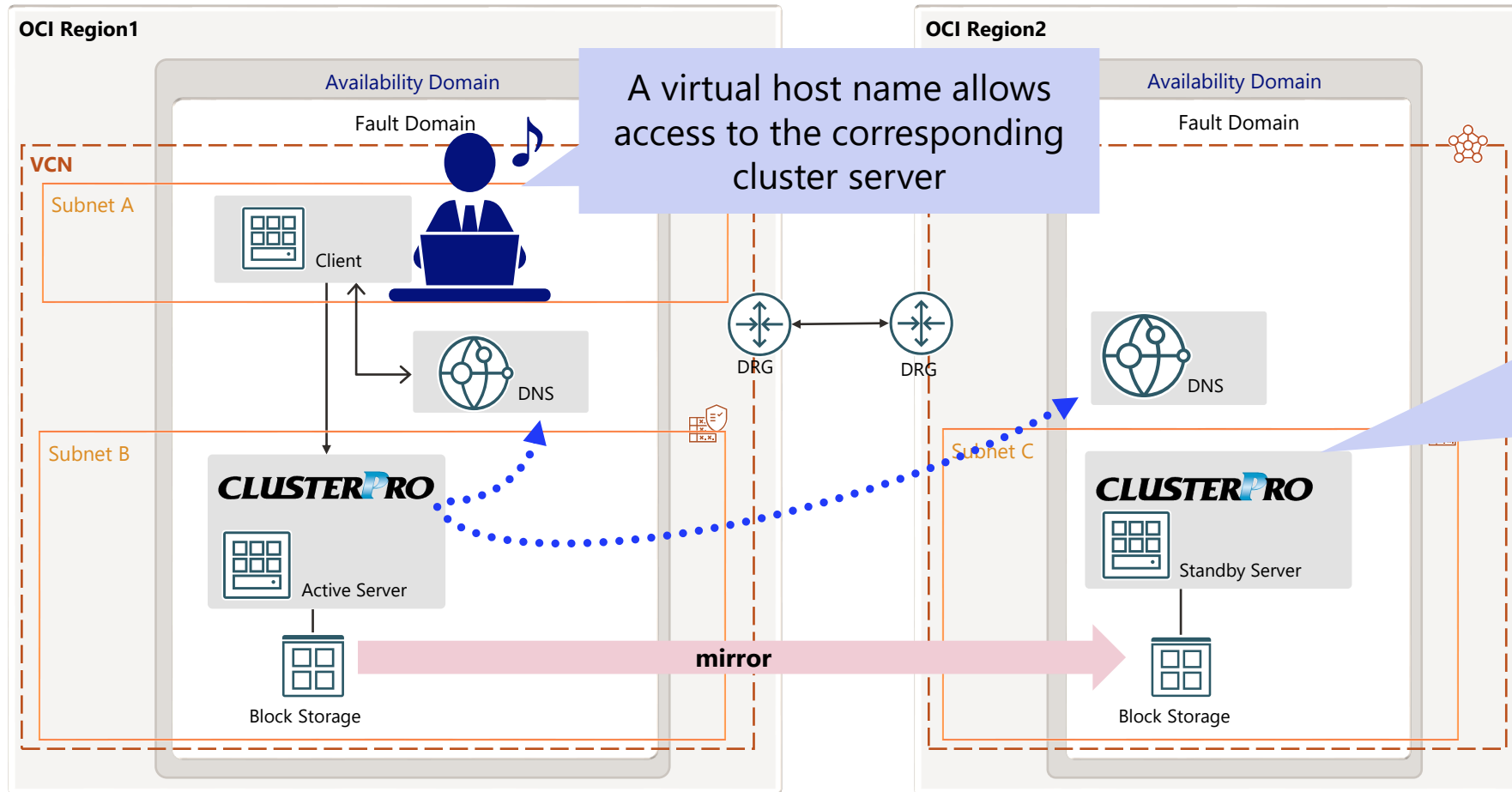
The screenshot shows the AWS website page for Amazon Linux 2023. The header includes the AWS logo, navigation links (Products, Solutions, Pricing, Documentation, Learn, Partner Network, AWS Marketplace, Customer Enablement, Events, Explore More), and a 'Sign In to the Console' button. The main content area features a blue banner with the text 'Free AWS Training | Focus on the cloud skills most relevant to you—choose from 600+ digital courses across 30+ AWS solutions'. Below this, the page title is 'Amazon Linux 2023' with a sub-headline 'Develop and run cloud applications with enhanced security'. A prominent orange button says 'Get started with Amazon Linux 2023'. The bottom section contains four columns of text highlighting key features: 'Use the latest AWS features and access an integrated experience optimized for Amazon EC2.', 'Get frequent minor updates, in addition to full control over how and when you install them.', 'Access new major versions biannually and receive five years of support with each version.', and 'Meet your compliance needs with preconfigured SELinux policies and set security policies at boot time.'



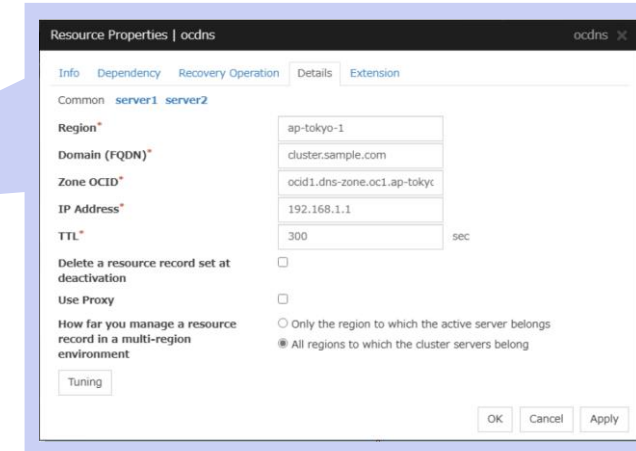
The screenshot shows the AWS website page for AWS Graviton processors. The header is similar to the previous page. The main content area features a yellow banner with the text 'Solutions on AWS | Build a Spot placement score tracker dashboard to optimize resiliency and savings'. Below this, the page title is 'AWS Graviton Processors' with a sub-headline 'Get the best price performance for cloud workloads running on Amazon EC2'. A prominent dark blue button says 'Get started with Graviton-based EC2 instances'. Below this, a white button says 'Quickly innovate with Graviton Fast Start'. A callout box highlights 'Try Amazon EC2 t4g.small instances powered by AWS Graviton2 processors free for up to 750 hours per month until Dec 31, 2024'.

Added a DNS resource for OCI environments

Now available is a switching method based on the OCI (Oracle Cloud Infrastructure) DNS service.



Just by entering required data with the GUI!



Other enhancements

- ◆ Excluded Python from the system requirements for AWS-related resources.
- ◆ Added, for the forced-stop action of the Azure forced-stop resource, an option to immediately stop without resource deallocation.
- ◆ Allowed specifying a URI as a target for an HTTP network partition resolution resource.

Example	X 5.1 or lower	X 5.2 or higher
http://sample.com	✓	✓
http://sample.com/index.html	N/A	✓

- ◆ Provided more error messages about cloud-related functions.
 - Supported giving a notice in an alert log, in an environment where an AWS forced-stop resource is set, that protection against stopping an EC2 instance is enabled. This is because the enabled protection causes the forced stop to fail.
 - Supported easier troubleshooting by providing more error messages about failed processes due to no permission.

Usability enhancements

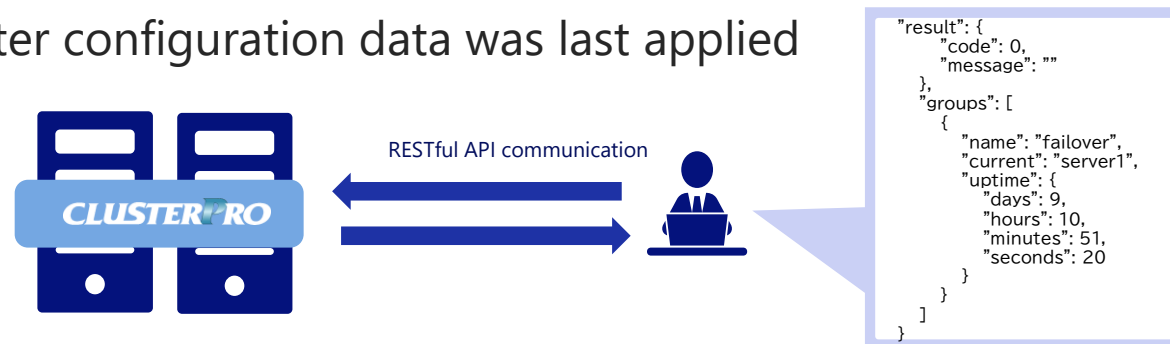
Enhanced IaC-related features

Other enhancements

Enhanced IaC-related features

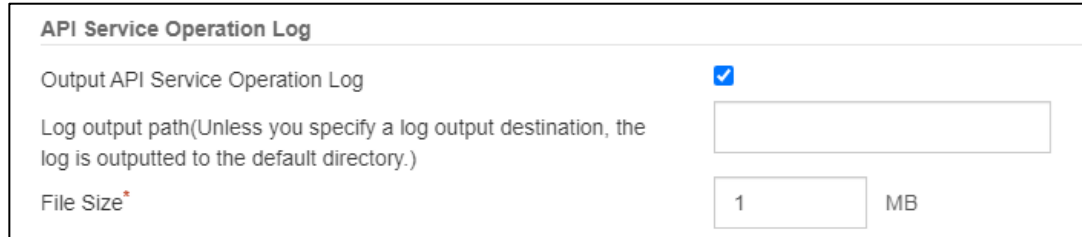
IaC-based operation automation now gets easier with improved commands and RESTful API functions.

- ◆ Allowed checking the status of a mirror/hybrid disk resource with a value returned by the `clpmdstat/clphdstat` command
 - This makes writing batch/shell script files easier for different processes depending on the resource condition.
- ◆ Provided more metrics information obtainable through RESTful API communication
 - Group's continuous operation time
 - Date and time when cluster configuration data was last applied



Other enhancements

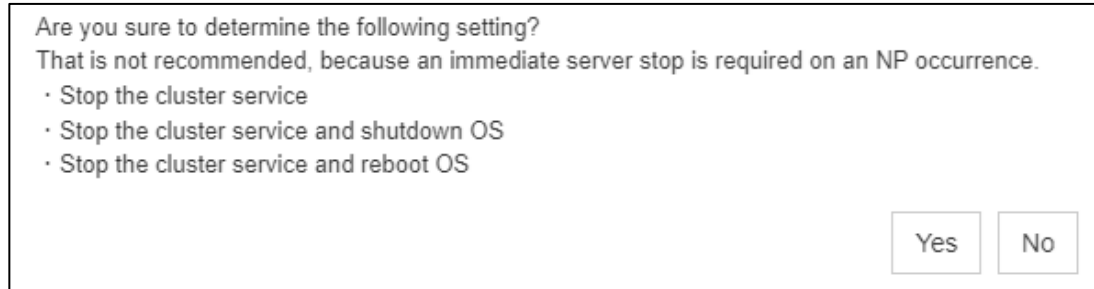
- ◆ Added POP3S as an authentication method of POP3 monitor resources.
- ◆ Reduced the process time for cluster configuration data to be checked.
- ◆ Allowed outputting the RESTful API operation log to the server.



The screenshot shows a configuration window titled "API Service Operation Log". It contains three main settings:

- Output API Service Operation Log:** A checkbox that is checked.
- Log output path:** A text input field with a placeholder text: "Log output path(Unless you specify a log output destination, the log is outputted to the default directory.)".
- File Size:** A text input field containing the number "1" followed by "MB".

- ◆ Supported making a warning pop-up with [Action at NP Occurrence] changed to a non-recommended setting in the config mode of Cluster WebUI.



The screenshot shows a warning dialog box with the following text:

Are you sure to determine the following setting?
That is not recommended, because an immediate server stop is required on an NP occurrence.

- Stop the cluster service
- Stop the cluster service and shutdown OS
- Stop the cluster service and reboot OS

At the bottom right, there are two buttons: "Yes" and "No".

- ◆ Allowed specifying a user name with double-byte characters in [User Name] of [Permissions] for a CIFS resource.
- ◆ Added time data to the name of a cluster configuration data file (.zip) to be saved with Export of Cluster WebUI.

Newly supported platforms and applications

Newly supported platforms & applications

◆ OSs

ARM64 architecture

- Amazon Linux 2023
- Red Hat Enterprise Linux 9.4, 8.10

x86_64 architecture

- Amazon Linux 2023
- Red Hat Enterprise Linux 9.4, 8.10
- Oracle Linux 9.4, 8.10
- AlmaLinux OS 9.4, 8.10
- EUS kernels of Red Hat Enterprise Linux

Distribution	Kernel version
Red Hat Enterprise Linux 9.2	5.14.0-284.40.1.el9_2.x86_64
Red Hat Enterprise Linux 8.8	4.18.0-477.36.1.el8_8.x86_64

◆ PostgreSQL monitor resources

- PostgreSQL 16.3

◆ MySQL monitor resources

- MySQL 8.0.36
- MariaDB 11.2.3

◆ WebOTX monitor resources

- WebOTX V11.1

◆ JVM monitor resources

- WebOTX V11.1

◆ Tuxedo monitor resources

- Oracle Tuxedo 22c (22.1.0)

Notes

Notes

◆ Versions of Microsoft .NET Framework

■ Microsoft .NET Framework 4.6.2 or higher is required for using any of the following features:

- System monitor resource
- Process resource monitor resource
- Collecting system resource statistics ([Cluster WebUI] -> [Cluster Properties] -> [Statistics] tab -> [System Resource Statistics])

Thank You



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