# CYDOZU.COM Security & Operating Environment

# **Operation Environment**

### Service Level Objective (SLO)

We have set the objectives to the right in order to provide satisfactory Service on cybozu.com to our clients.

\*These objectives do not apply to mail servers and V-Cube meeting on cybozu.com

- Operation rate: 99.99% (not including project maintenance)
- Response time : within 4 seconds
- Time from registration to system initiation : 3 minutes or less
- Malfunction recovery time : within 10 min

(service does not stop with simple malfunctions)

Access log storage time : 1 year online

### Management system (acquiring ISMS)

Cybozu, Inc. has acquired ISO 27001 certification for the following certified registration range of the information security system.

\*Certified registration range: Engineering, composing, and maintenance of cloud service operation base developed inhouse.



ISO 27001 certification register date November 10th, 2011 / 150 27001 certified registration number IS 577142

#### IS 577142 / ISO 27001

### Security

#### • Data encryption

Vulnerability countermeasures

#### Measures against vulnerabilities

We regularly have third-party organizations carry out vulnerability tests.

### Availability and reliability

#### • Service hours

24 hours a day, 365 days a year (excluding regular maintenance) Regular maintenance on cybozu.com is conducted every second Monday of the month from 1 am to 7 am (Time zone: Japan). Please note that we cannot provide our services during these hours.

#### • Project termination

We will issue a notice on the top page appearing after login.

#### Redundancy

Redundancy is in place for all servers, networks, storage, and data

cybozu.com operation rate achievements

https://www.cybozu.com/jp/service/slo/availability.html

#### **CYDOZU.COM** Security & Operating Environment

# **Operating Environment**

#### **Data Management**

#### Data center location

Cybozu.com maintains a connection with the East Japan Data Center, and stores backup data with the West Japan Data Center as well.

#### Backups

Backups of client data are made every day without fail.

#### Data deletion

Data is deleted 30 days from the day following contract termination. Backup data will be completely deleted approximately 2 weeks from data deletion.

#### Admin management

Based on the management policy determined by our information security policy, the administrators capable of accessing data are limited.

#### Management of client data

Any data uploaded by the client themselves within our services will be managed by the client. Except for a few select areas Cybozu retains no right to the data.

### **Response in case of malfunction**

Constant attention is paid to the fault notification system, and emerging faults are dealt with via the operations manual

#### **Version updates**

Version updates are conducted for all clients simultaneously.

#### Support

#### Support hours

Mon. to Fri. 9 am to 12 am/1 pm to 5:30 pm (time zone: Japan, excluding holidays)

\*We provide a malfunction reception counter in the  $\beta$  version for night and weekend hours.

#### Support methods

Phone, e-mail

\*Differs based on contract service. See service instructions for details.

### 7 Important Measures Required to Use Cloud Services Safely





We have set the login screen so that unauthorized third parties cannot access the service.

### Countermeasures against unauthorized login

If a third party has accessed the login screen, you can change the settings so that they cannot login without authorization.

Measures against vulnerabilities

We have created a system to prevent attacks that target security flaws, such as vulnerabilities of computers and OSs.



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### Measures against data erasure

We protect clients' data as a top priority with numerous countermeasures.

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#### Measures against disaster

In the event of a disaster or power outage, the service will continue to be available without stopping your work.

# 6 Fa

### Fault detection/Recovery measures

In the event that any faults occur in the hardware, we have developed an environment and system which allows us to recover as soon as possible.

# Measures against human errors

We manage the service under a system where human errors such as carelessness and program setting mistakes are more difficult to make.



### Enhancing security with multiple user verification processes

#### **Basic authentication**

Free

In addition to the regular login screen, you can also add further access limitations. When you set a Basic authentication, only those who have a Basic authentication login name and password can access the cybozu.com login screen.

#### **IP** address restrictions

Free

You can restrict IP addresses that can access the services and shut out unauthorized accesses.

# Secure access through client certificates



This optional service verifies the connection source through client certificates. When using the secure access option, if using an unregistered IP address, only devices with a client certificate installed are granted access. Available at an affordable price of a monthly fee of 250 yen per user, you can register as many people as necessary that will use mobile access.

#### Unique subdomain

Free

By issuing exclusive subdomains, companies can access the services via different login URLs.

# Changes in each security setting are immediately reflected

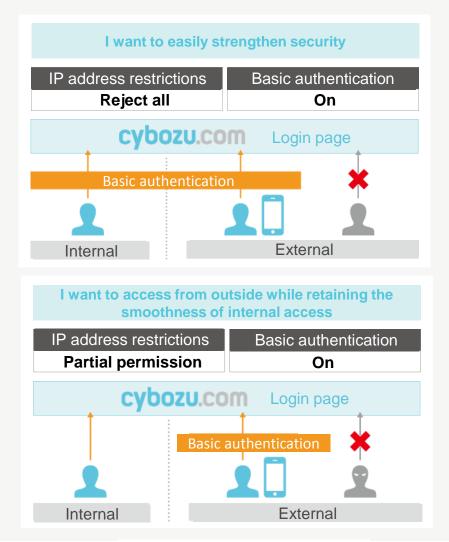
Changes to Basic authentication, IP address restrictions, issuances of certifications, and subdomain names can be made in the settings screen, and will be reflected immediately.

| Domains testdom            | nain.cybozu.com 🔻  |  |  |
|----------------------------|--|--|--|
| Domain Name                | Security & Administrator   |  |  |
| IP Address<br>Restrictions | Allow all (Not recommended for security)   |  |  |
| Restrictions               | Allow access from all IP addresses.  |  |  |
|                            | Basic authentication and client certificate authentication are not affected.       |  |  |
|                            | Deny all   |  |  |
|                            | Deny access from all IP addresses.   |  |  |
|                            | Basic authentication or client certificate authentication is required.             |  |  |
|                            | Allow specific IP addresses  |  |  |
|                            | Allow access from specific IP addresses. Specify one or more IP address ranges in  |  |  |
|                            | CIDR notation. Access from IP addresses outside of the specified IP address ranges |  |  |
|                            | requires Basic authentication or client certificate authentication.                |  |  |
|                            | Up to 1000 IP addresses can be entered.  |  |  |

Cancel

**CYDOZU.COM** Security & Operating Environment

# Four patterns of security settings



#### I want to restrict accessibility only to the company IP address restrictions Basic authentication **Partial permission** Off cybozu.com Login page Internal External Paid I want to use the services more securely from outs option the company and on mobile devices IP address restrictions Secure Access **Partial permission** Permitted per user cybozu.com Login page Internal External



### Enhancing security with multiple user verification processes

#### Various password policy settings

Various password policies can be applied according to company security.

#### Number of characters in a password

User/administrator can set a password from 3 to 15 characters.

#### Password complexity

You can specify alphabet and number combinations.

#### Re-using passwords

You can set to refuse having the password be the same as the login name and the limit number of password reuses (1 to 15 times).

#### Password validity period

You can choose the validity period of the password from 30 days, 60 days, 90 days, 180 days, 1 year, and indefinitely.

#### **Account lockout function**

You can lock accounts if passwords have been entered incorrectly multiple times.

 Set the number of mistakes until accounts are locked out

You can set the number of mistakes permitted until accounts are locked out from 3 to 10 times, or choose not to lock out accounts.

#### • Set the time until lockout is released

You can set the time until lockout is released from 3 minutes, 15 minutes, 30 minutes, 60 minutes, or to not release lockout. If you select to not release lockout, only the administrator can release the lockout.

#### Automatic login restriction function

#### • Enable/disable login name autocomplete

You can set either to enable or disable login name autocomplete. If you have not set an IP address restriction, we suggest you turn this function off.

#### Set up automatic login

You can set the period of valid login status. If you enable this function, you can choose either 1 day, 1 week, or 1 month.



### Enhancing security with multiple user verification processes

#### Audit log

You can browse and download the audit log of operations such as login and file downloads. Additionally, the audit log can send a notification e-mail to the designated email address according to importance (level).

| D    | ate Co          | nnection source | User | Service | Module         | Action | Result  |
|------|-----------------|-----------------|------|---------|----------------|--------|---------|
| 2015 | -03-05 14:49:05 | XX.XXX.XXX.XXX  | sato | Garoon  | Basic system   | login  | SUCCESS |
| 2015 | -03-05 14:37:45 | XX.XXX.XXX.XXX  | sato | Garoon  | Basic system   | login  | SUCCESS |
| 2015 | -03-05 14:37:41 | XX.XXX.XXX.XXX  | sato | Garoon  | Messages       |        | FAILED  |
| 2015 | -03-05 14:37:41 | XX.XXX.XXX.XXX  | sato | Garoon  | Basic system   | login  | SUCCESS |
| 2015 | -03-05 14:32:09 | XX.XXX.XXX.XXX  | sato | Garoon  | To-Do List     | modify | SUCCESS |
| 2015 | -03-05 14:41:22 | XX.XXX.XXX.XXX  | sato | Garoon  | Bulletin Board | create | SUCCESS |

#### Function to prevent information leakage by malicious sites

#### **Protection from clickjacking**

We provide protection from "clickjacking," where malicious sites call upon a service which carries out unintentional actions. Login screen image setting function

You can set your own login screen image to prevent your login information from being leaked by phishing (fake) sites.

# Measures against Cybozu product vulnerabilities

#### Measures against Cybozu product vulnerabilities

All Cybozu products undergo a vulnerability verification test by the quality assurance team before being released to consumers. In-house verifications, in which we know all the internal specs of our products, forms the basis for all our vulnerability measures. Moreover, in order to further increase reliability, we cooperate with external investigative organizations for auditing, as well as experts in finding vulnerabilities.

#### Measures against vulnerabilities in computer OS and software from other companies

Cybozu constantly collects information regarding the vulnerability of OS and software from other companies, and takes countermeasures when necessary. In recent years, there have been an increase in "zero-day vulnerability" cases, where when a vulnerability is discovered in a software, and attacks begin before the developer can provide fixes.

#### Cybozu internal management structure

 Information Security Management System (ISMS)

Cybozu, Inc. has acquired ISO 27001 certification for the following certified registration range of the information security system.

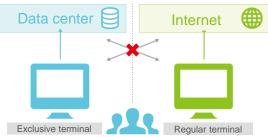
[Scope of certification registration]

Design, construction and maintenance of operational infrastructure of a cloud service developed in-house.

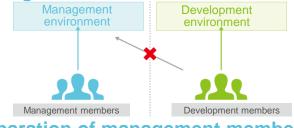
ISO 27001 certification register date November 10th, 2011 ISO 27001 certified registration number IS 577142



#### Exclusive terminals are used to connect with the data center



 Separation of development environment and management environment



 Separation of management member office space









# **Backup Systems to Protect our Clients' Data**

All data entrusted to us by our clients will be safely stored in a total of 4 storage servers spread across East and West Japan. At Cybozu, we call this backup system "Square."

### Hard Disk Redundancy (RAID 6)

The storage servers managing client data is composed of 12 hard disks per server. 10 of these hard disks utilize a redundancy method called RAID 6, meaning that even if 2 out of the 10 simultaneously break down, there is no danger of data loss. The remaining 2 hard disks are always kept at bay as hot spares, ready to automatically be replaced when any of the other hard disks malfunction.

### Mirroring (RAID 1)

Every time a client updates their data the changes will be written into the storage server. We also have engineered our system so that the changed data will be simultaneously replicated into the other storage server. This works as countermeasures against emergency cases such as 3 or more hard disks breaking down in storage servers, ensuring the safety of all data and continued service ever under such situations.

### 14-day Backup Data with Backup Server

The East Japan Data Center contains not only the storage server mainly used by clients and the replication storage server for redundancy but also a storage server especially for backup. This storage server receives data from each of the other servers once per day, always storing the most recent 14-days worth of data. Thanks to this backup storage server, even if all the data in other storage servers are deleted, we can restore the data to its state on the prior day. We are testing restoration capabilities daily, making sure we can restore data properly on a daily basis.

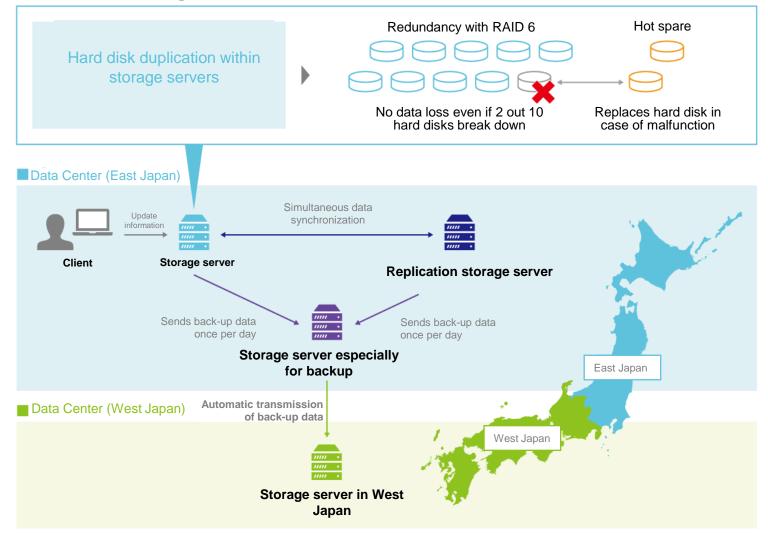
### Remote Back-Up with West Japan Data Center

In preparation of a large-scale disaster affecting the East Japan Data Center, all backup data stored in the backup storage server is automatically transferred to the West Japan data center. This means all data will be stored in 2 data centers located far away from each other, working as an effective BCP countermeasure against disasters.





### **Backup Systems to Protect our Clients' Data**







# Decreasing Risk in Disaster with A Highly Reliable Data Center

# Data Centers Fulfilling FISC Facility Safety Standards

The data centers managing cybozu.com servers fulfill the strict requirements of the FISC Facility Safety Standards. The data centers also scale tier 4 on most of the categories in the Data Center Facility Standard regulated by the Japan Data Center Association, proving the as safe and secure establishments. \*FISC (The Center for Financial Industry Information Systems)

#### **High-Rank Message Encryption**

For lines connecting to the data center, we review encryption methods on a daily basis in order to maintain a high-ranking score on the Qualys SSL Labs evaluation system.

\* \*An evaluation system provided by the SSL research center Qualys SSL Labs of Qualys, USA.

# Duplication of Power Sources, Lines, and Networks

By duplicating the power sources, lines, and networks, we minimize any possible effects of a disaster.

#### **Physical Destruction of the Hard Disk**

We physically destroy any hard disks we no longer need for cybozu.com, in order to secure data and prevent any possible data leaks.



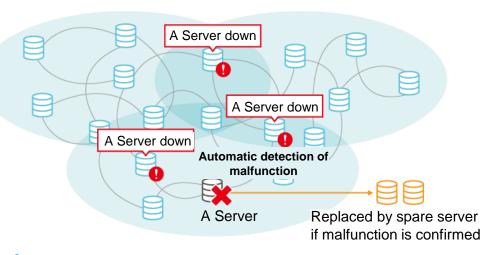
# Detection and prevention of any possible malfunctions

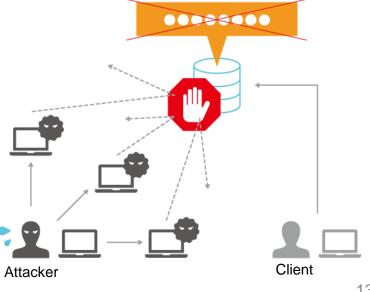
### Automatic Malfunction Detection/ Recovery System

In order to counter possible malfunctions in virtual servers in which service programs and web servers operate, cybozu.com has a autonomous-decentralized agent system. At Cybozu, we call the system "Tsukuyomi." Servers monitor each other in order to swiftly detect malfunctions, and in an emergency the servers consult with each other to decide whether a problem is a malfunction or not. If it is indeed confirmed to be a malfunction, the automatic recovery process instantly replaces the server with the spare server, normally completing the whole procedure within 5 minutes. If multiple servers malfunction simultaneously due to network problems, the process is switched over to a mode designed to prevent additional failures.

#### DoS, DDoS attack prevention

If a specific sub-domain (URL) is under concentrated access during a limited amount time, the sub-domain will be automatically shut down in order to contain the negative effects so that there will be no further damage to other environments. We also have automatic life and death monitoring systems and automatic intrusion detection/prevention systems.



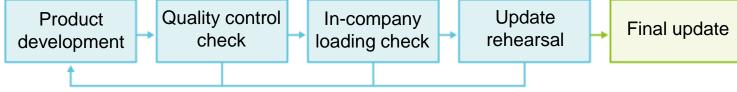




# Human Error-Preventing Management Systems

#### **Preparation System for Service Updates**

Multiple tests will be carried out before updating services. We only apply updates that have cleared all the tests to client service.



#### Separation of Remote Backup Data

We separate the systems of management environment and remote backup environment so that they cannot be simultaneously controlled. Even if a data deletion program is automatically activated, the remote backup data will be unscathed.

### Automation to decrease the amount of human operation

cybozu.com automates as many procedures as possible to decrease manual operation. For example, creation of client environment and adding/cancelling services are all automatically carried out by our system.

# Strict Compliance with Manuals and Automatic Log Recording

Manuals are provided for all manual operation, and strict compliance with them is a must. All operations are automatically logged as well, enabling us to check if all rules are fulfilled.

# Independent Operation Restricted Even in Emergencies

As an exceptional case, manual operation without a manual is permitted in an emergency situation. However in any case including the above, manual operation must be carried out not independently but with 2 or more approving technicians.

| Security cybozu.com Data-center |   |  |  |  |  |  |
|---------------------------------|---|--|--|--|--|--|
| Category                        | Countermeasure                            | Contents   |  |  |  |  |
| Confidentiality                 | Physical countermeasures                  | <ul> <li>FISC safety measures compliant with equipment standards (operated at a data center equivalent to tier 3-4)</li> <li>Spaces with restricted entry feature physical boundaries with security card control and finger vein recognition/security cameras</li> </ul>   |  |  |  |  |
|                                 | Network<br>countermeasures                | <ul> <li>Vulnerability assessed in-house/vulnerability inspections by third party organizations/vulnerability incentive system</li> <li>Quality SSL Labs A+(top-class rating) / Encryption of private line between facilities / Firewalls</li> <li>Constant monitoring of the system / Automatic detection of failure, construction of the recoverable " autonomous distributed agent system" Live monitoring once every 30 seconds Failure monitoring once every second Performance monitoring once every second</li> </ul> |  |  |  |  |
|                                 | Information<br>leakage<br>countermeasures | <ul> <li>Encryption of all transfer data (aes-xts-plain64+512 bit key)</li> <li>Physical boundaries established with operations department/network isolation of critical operations terminals</li> <li>Inspections by external specialists</li> </ul>  |  |  |  |  |
| Integrity                       | Data protection                           | <ul> <li>Backups acquired every day without stopping</li> <li>Managed by a storage server group in the east Japan DC, with three units per one server, as well as a replication server in the west Japan DC</li> <li>Backups of the past 14 days via an exclusive server for backups</li> <li>Acquired backup data is subject to restoration experiments on a daily basis</li> <li>Software and software settings backed up on a daily basis</li> </ul>  |  |  |  |  |
| Availability                    | Physical countermeasures                  | <ul> <li>Power is supplied even during blackouts or power failures</li> <li>Fire detection, reporting system, and extinguisher equipment available</li> </ul>  |  |  |  |  |
|                                 | Network<br>countermeasures                | <ul> <li>Redundancy of all servers, networks, storage, and data implemented</li> <li>Mirroring (real-time replication)</li> </ul>  |  |  |  |  |
| Operational maintenance         | Compliance                                | Acquisition of ISO 27001 certification   |  |  |  |  |

### cybozu.com Service Level Objective (SLO)

| Availability and reliability    | Operation rate                           | Aiming to 99.99%  |
|---------------------------------|--|---|
|                                 | Malfunction recovery time                | within 10 min   |
|                                 | Failure notification time                | Real-time releases through automatic detection (https://status.cybozu.com/status/)<br>In cases where automatic detection is not possible, a notification will be sent out on the day if a failure occurs during business hours<br>(9:00-18:00). If a failure occurs outside of business hours, a notification will be sent out during business hours on the next business<br>day. |
|                                 | Service hours                            | 24 hours a day, 365 days a year (excluding regular maintenance)   |
|                                 | Project termination                      | We will issue a notice on the top page appearing after login.   |
|                                 | Periodic maintenance                     | Implemented every second Sunday of the month from 1:00 A.M. to 7:00 A.M.  |
|                                 | Redundancy                               | Redundancy is in place for all servers, networks, storage, and data   |
|                                 | Performance monitoring                   | The usage of services is monitored. Planning and implementation of enhancement and expansion is based on usage trends   |
| Response in case of malfunction | Operation system                         | Constant attention is paid to the fault notification system, and emerging faults are dealt with via the operations manual   |
|                                 | Contact system                           | If a fault occurs and service stoppage is detected, a notification will appear in the notifications column at the top page after users login to cybozu.com, as well as on the news site (https://cs.cybozu.co.jp/trouble/)  |
| Security                        | Data encryption                          | All transmission data is encrypted.   |
|                                 | Vulnerability countermeasures            | We regularly have third-party organizations carry out vulnerability tests.  |
| Data Management                 | Data center location                     | Cybozu.com maintains a connection with the East Japan Data Center, and stores backup data with the West Japan Data Center as well.  |
|                                 | Backups                                  | Backups of client data are made every day without fail.   |
|                                 | Data deletion                            | Data is deleted 30 days from the day following contract termination.<br>Backup data will be completely deleted approximately 2 weeks from data deletion.  |
|                                 | Admin management                         | Based on the management policy determined by our information security policy, the administrators capable of accessing data are limited.   |
|                                 | System configuration                     | Multi-tenant configuration  |
| Version UP                      |  | Version updates are conducted for all clients simultaneously.   |
| Support                         | Support hours                            | Mon. to Fri. 9 am to 12 am/1 pm to 5:30 pm (time zone: Japan, excluding holidays) *We provide a malfunction reception counter in the $\beta$ version for night and weekend hours.   |
|                                 | Support                                  | Phone, e-mail   |
|                                 | Night and holiday failure support window | Weekdays: 17:30-9:00 the following day / weekends and holidays: all day / contact method: telephone 16  |

#### Information on cybozu.com

- cybozu. com operation status (In Japanese) <u>https://www.cybozu.com/jp/service/slo/availability.html</u>
- Product Security (In Japanese) <u>https://www.cybozu.com/jp/productsecurity/</u>
- Security Check Sheet (In Japanese) <u>https://www.cybozu.com/jp/support/data/cybozucom\_securitysheet.pdf</u>
- Security Information (In Japanese) <u>https://cs.cybozu.co.jp/information/5/</u>
- Bugs Disclosure <u>https://support.cybozu.com/en-us/</u>
- Vulnerabilities information handling Policy (In Japanese) <u>http://www.slideshare.net/slideshow/embed\_code/30074325</u>
- Product Security (In Japanese) <u>https://www.cybozu.com/jp/terms/security.html</u>

#### Security & Operating Environment Created on February 15<sup>th</sup>, 2016

Created by Cybozu, Inc. Sales Department

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