NTT Communications
Go the Distance.

OSAKA 5 DATA CENTER

Disaster-resistant Data Center in the heart of the business district

Nexcenter

High performance specs

Building

Construction completed	November, 2015
Floor area	12,500 sq.m (approx. 134,500 sq.ft.)
Server room space	3,500 sq.m (approx. 1,670 racks)
Office room space	430 sq.m (approx. 4,600 sq.ft.)
Main building	11 stories
Structure	Steal construction Seismic isolation structure
Floor load	1,500 kg/ sq.m (300 lb./ sq.ft.)
Raised floor	Floor height: 300mm
Loading Bay	One 4 t truck H = approx. 3.8 m
Freight elevator	W 3,250 mm x D 1,900 mm x H 2,800 mm Capacity: up to 5,000 kg
Parking space	Available
Ground level	O.P. +2.0 m *1
Building/ room access	Facility access: 24 hrs/ day Pre registration required via Web Entry System Speedy smart entry after photo ID confirmation, card key and rack keys are provided Operators are available 24 hrs/ day
Certification	ISO 9001 , ISO 14001, ISO 20000, ISO 22301, ISO 27001, PCI DSS, Privacy mark, SSAE 16/ ISAE 3402

*1 Osaka Peil

Facilities

Power reception		Dual path system (from 2 electric power substations)
		Power reception voltage: 77,000 V
		Inspection: every 3 yrs (No need to interrupt system operation)
Generators		Gas turbine engines
		Operation without refueling: 48 hrs
		Startup tests conducted every 3 months
UPS		N+1 Parallel redundant configuration
Battery support time		5 mins
Power supply type		Single phase 100 V and 200 V Three phase 200 V HVDC(to be launched)
Air-conditioning		Water-cooling 24 hrs/ day N+1configuration Cooling wall system Water-side economizer
Fire detection and suppression		Nitrogen gas fire suppression system Early Warning Smoke Detection System
Security		IC card ＋ Biometric authentication Monitoring cameras Lockable rack with individual cylinder key
Network		Multi-carriers complied Directly connected to disaster resistant cable tunnel Nexcenter Connect™

Business Portal

Customer portal that enables customers to view their usage and status of major services provided by NTT Com and change various configurations on demand in a timely manner.
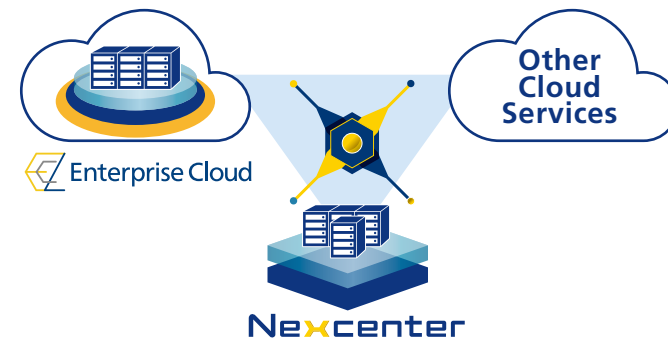
Main functions

- Entry request
- View information on facilities currently in use
- View building access logs
- View remote hands operation records
- Download information files

SD-Exchange

Connecting colocation and various cloud services globally. This solution optimizes the best system design in secured and high performance environment. You can also manage the network settings and changes from our portal flexibly.

Enterprise Cloud

Other Cloud Services

Nexcenter

Extensive Service Menu

Service Categories
In addition to basic services, we offer a variety of optional services and customized services.

Colocation Services	Basic Services	19 inch cabinet racks	Compliant with EIA standards
		Power supply	Stable power supply 24/ 7 with UPS and Generators
		Security	Rack keys, Monitoring cameras
		Room access management	Biometric authentication or IC card key required for room access
		Air-conditioning	24 hours a day
		Remote hands (Basic troubleshooting)	Visual checking, Power cyclying, Reset button cyclying
	Optional Services	Enhanced power supply	Choose from AC single phase 100 V 10 A, 20 A or 30 A/ AC single phase 200 V 15 A, 20 A or 30 A
		Redundant power configuration	Choose redundant breaker or redundant power distribution unit
		Stand-by power supply	Choose from AC single phase 100 V 20 A or 30 A/ AC single phase 200 V 15 A, 20 A or 30 A
		Other power options	Earth, additional power outlets in racks, changes to power outlets
		Rack options	Additional shelves and blank panels, change of rack keys, racks supplied by customers
		Connectivity	Optic fiber cable; UTP cable; Metal cable
		Remote hands	Customer's system construction, operation of equipment, trouble recovery and system management support in the data center
		Escort service	
	Customized Services	Private cage	
		Other features as requested	
Managed Services	Server Operation Services	Customer's system monitoring and maintenance in the data center	
	Security Operation Services	The global integrated security service provides total security outsourcing	

NTT Communications Corporation

Website http://www.ntt.com

FSC MIX Paper from responsible sources FSC® C014687
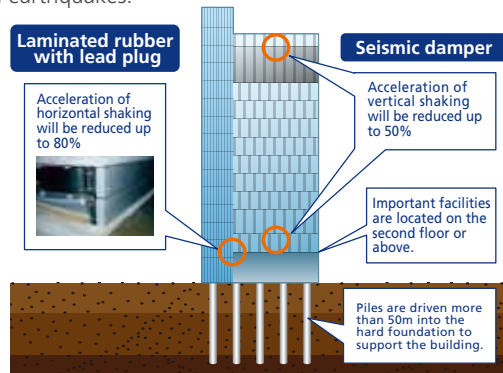
VEGETABLE OIL INK

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Disaster Prevention

Disaster-resistant Data Center

■ Anti-flooding measures

In the unlikely event that water were to reach the data center, equipment would continue to operate safely because the electric power equipment, communication facilities, server rooms and other important facilities are located on the second floor or above, over 7m above ground level.
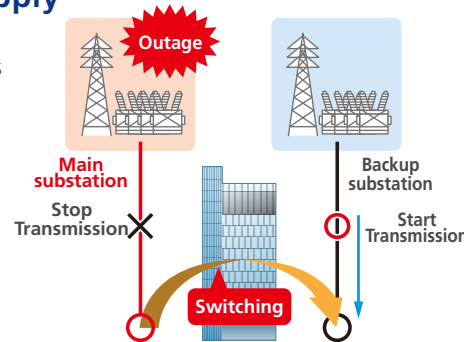
■ Anti-earthquake measures

Piles are driven more than 50m into the hard foundation to support the building.
The building's seismic-isolation devices, which lessen the impact of strong shaking by the earthquake, are installed on the post beneath the second floor.
In addition, seismic dampers are installed to suppress the vertical shaking by epicentral earthquakes.

Laminated rubber with lead plug
Acceleration of horizontal shaking will be reduced up to 80%

Seismic damper
Acceleration of vertical shaking will be reduced up to 50%

Important facilities are located on the second floor or above.

Piles are driven more than 50m into the hard foundation to support the building.

■ Electric power supply

Electricity is sourced from separate power substations for extra-highly reliable power supply.

Outage
Main substation
Backup substation
Stop Transmission
Start Transmission
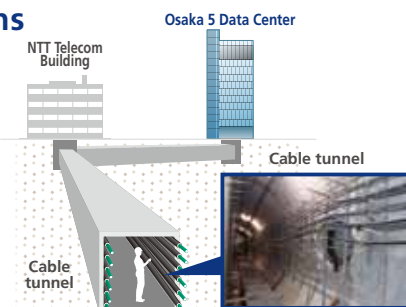Switching

Network

Ideal Network Environment

■ Network connection

The Osaka 5 Data Center is connected directly to the NTT Com's major data center in western Japan, which accommodates Internet exchange (IX), via optical fiber run through cable tunnels.

In addition to NTT Com's high-speed, high-volume Internet backbone and network services, including the Arcstar Universal One virtual private network, customers can use the data center to build seamless ICT environments combining cloud services with data centers worldwide.
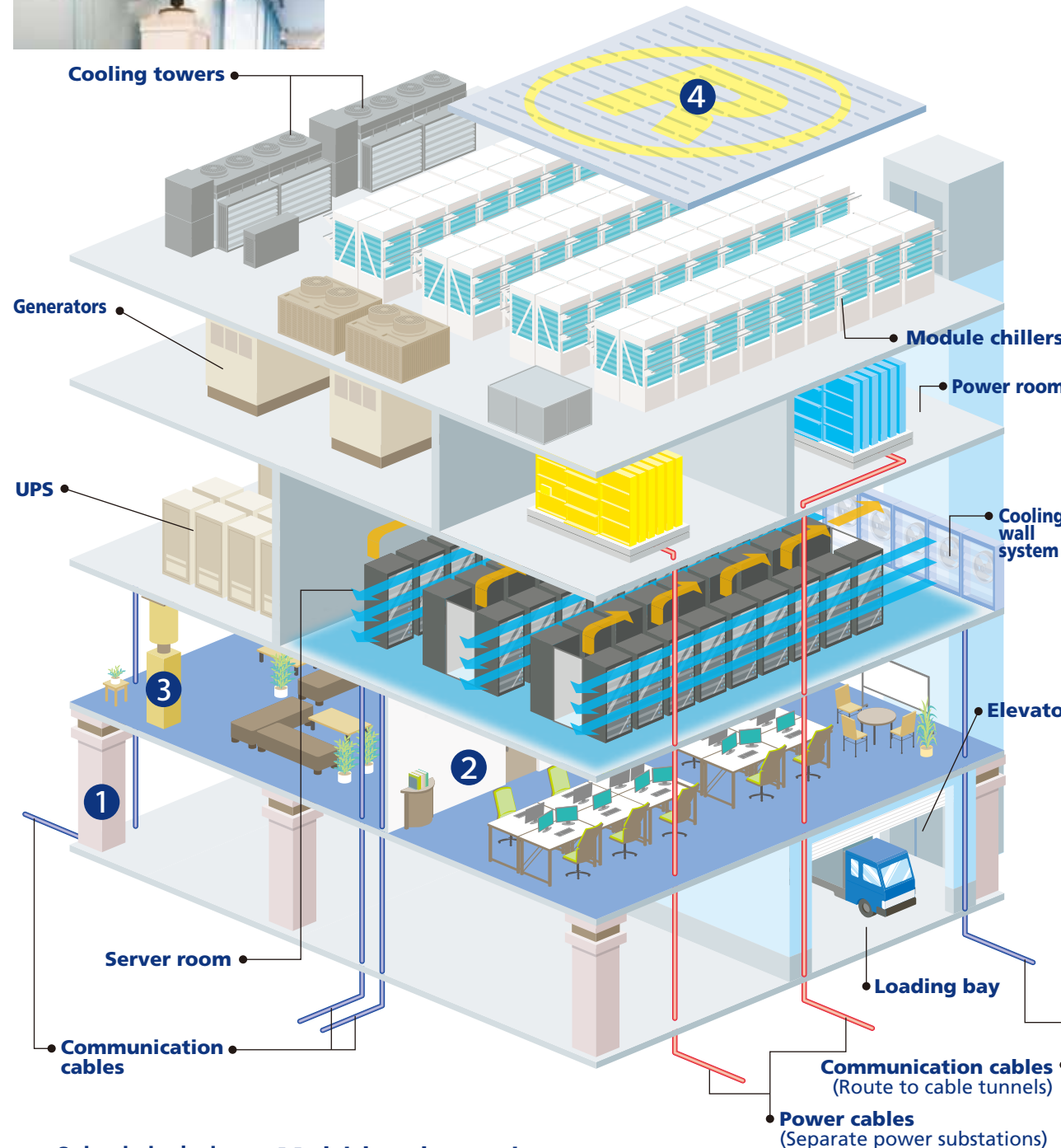
■ Stable Communications

Communications routes are laid from four directions, include connected directly to secure earthquake-proof cable tunnel, with no damage from past major earthquakes.

Osaka 5 Data Center
NTT Telecom Building
Cable tunnel
Cable tunnel

❸ Seismic damper

Cooling towers
Generators
UPS
Server room
Communication cables

❹ Rooftop heliport

Module chillers
Power room
Cooling wall system
Elevator
Loading bay
Communication cables (Route to cable tunnels)
Power cables (Separate power substations)

❶ Seismic-isolation device

Multi-level security

- Prior registration using a Web entry system
- Personal authentication using a finger vein authentication device
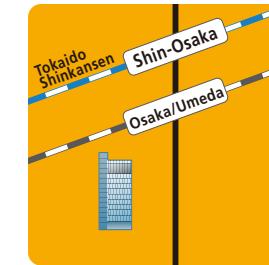
◎Entrance Lobby   ◎Monitoring camera   ◎Security gate   ◎Finger vein authentication device

Location

Convenient location

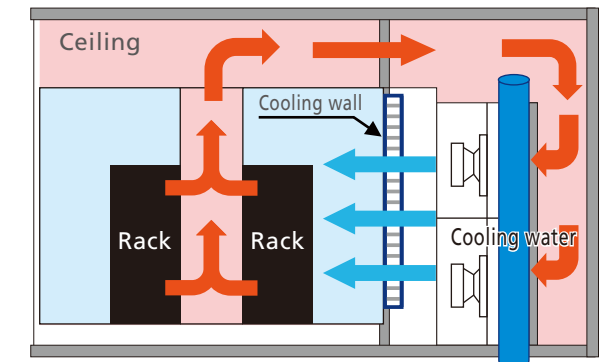Located in Osaka metropolitan area, and accessible from multiple stations to the building.

Tokaido Shinkansen Shin-Osaka
Osaka/Umeda

Shin-Osaka Sta.
20 min by train

Nearest Sta.
4 min on foot

Green ICT

Advanced energy saving technologies

■ Cooling wall system

Compact and high-efficient Water-cooling system, in addition NTT Com has pioneered the adoption of efficient cooling wall which blows cold air in the server room.

Ceiling
Cooling wall
Rack Rack
Cooling water

■ Water-side economizer

By using cold outdoor air, power consumption of air conditioning will be reduced.

❷ Other facilities

- Office space is available for customer's system monitoring, maintenance center or BCP office.
- Comfortable lounge for your break and meeting
- Designated staging area is available for setting your equipment to your racks

Wireless LAN service

◎Rental office space   ◎Customer Lounge

Nexcenter

Nexcenter™ is NTT Communications' brand name for the next generation data center services, offering world-class quality, outstanding cost efficiency and full-support ICT menu.