GDS

Global Data Service Joint Stock Company

Premium Data Center

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Preface

Tightening regulations and growing volumes of data are driving institutions to invest significant sums in expensive IT and data center capacity. This emphasizes the importance and growing realization among the business community that Data center is becoming more and more sought after. Wherever they can, therefore, CEOs need to do more with less, accommodating more applications and data, without compromising the elasticity of the business.

Thang Long Data center is the first Data center GDS established in Hanoi with high standard quality (Tier-3 TIA-942 and TCVN9250:2012). Our Green Design Data center with the most reliable facilities, robust security systems, and stable network connectivity promises to contribute the significant enhancement and efficiency to your company IT environment in Vietnam.

Supporting your business platform and assisting you to display your IT systems potential to the full are our missions. Let us take care of your IT system to have more free hands to focus on your core business!

Capex to Opex

To optimize capital investment, companies usually tend to direct their investment toward revenue-generating activities. This is why many companies prefer to lease real estate rather than purchase- they do not want to tie up precious capital in dead assets.

It is the fact that owning a Data center requires capital expenditure, while using an external hosting or cloud service that offers pay-as-you-go service falls into ongoing operating expenditures. Renting all facilities instead of procurement, the company can reduce initial investment. Furthermore, outsourcing Data center capabilities also means cutting costs in terms of staff and maintenance. The managed service provider shall provide teams of engineers who maintain the facilities 24h x 7 days, monitor the hardware and carry out necessary maintenance tasks. These "intelligent hands" perform a vital role. Not only do they ensure the systems function at optimum levels but they also allow CEOs to keep their own teams focused on the services and systems the institution manages for itself, with no concentration of resources.

The rapid pace of technological change, and the prospect of ever tighter regulations, mean that businesses' Data center requirements are unlikely to evaporate any time soon. By selectively outsourcing key functions to a managed service provider, CEOs can make far more effective use of the facilities that their organizations already own, whilst growing their Data center footprint sustainably and cost-effectively.

Then it may be prudent to outsource to a specialist and focus on the main area of their business: their customers. The fact that analyst Ovum has recently said that the top ten UK outsourcers saw their total contract value of deals swell by 31 per cent on an annual comparison is surely evidence to the growing opinion among CEOs that outsourcing to specialist managed services provider is more efficient in terms of cost and capabilities.

GDS Green Data Center

GDS Data center is established and operated to meet the demand of customers who would like to outsource Data center service to professional providers and concentrate their resource to their core business. With the know-how from Japan, our Data center is designed with environment- friendly and multiple green technologies that keep our advanced Data center PUE 1.45 or lower.

Air-flow management
By total separation of hot and old air, as well as air compartmentalization

Energy Management
Continuous monitoring and evaluation of energy utilization effectiveness

Efficient Cooling
With refrigerant control economizer and inverter cooling, 40% less energy than standard cooling

High Voltage DC (HVDC) Power
Minimize power conversion loss

LED Lighting
Energy-efficient lightning such as LED with occupancy sensor/BMS control, consuming 90% less energy than incandescent lamp.

Green wall
Reduce inside temperature and heat reflection
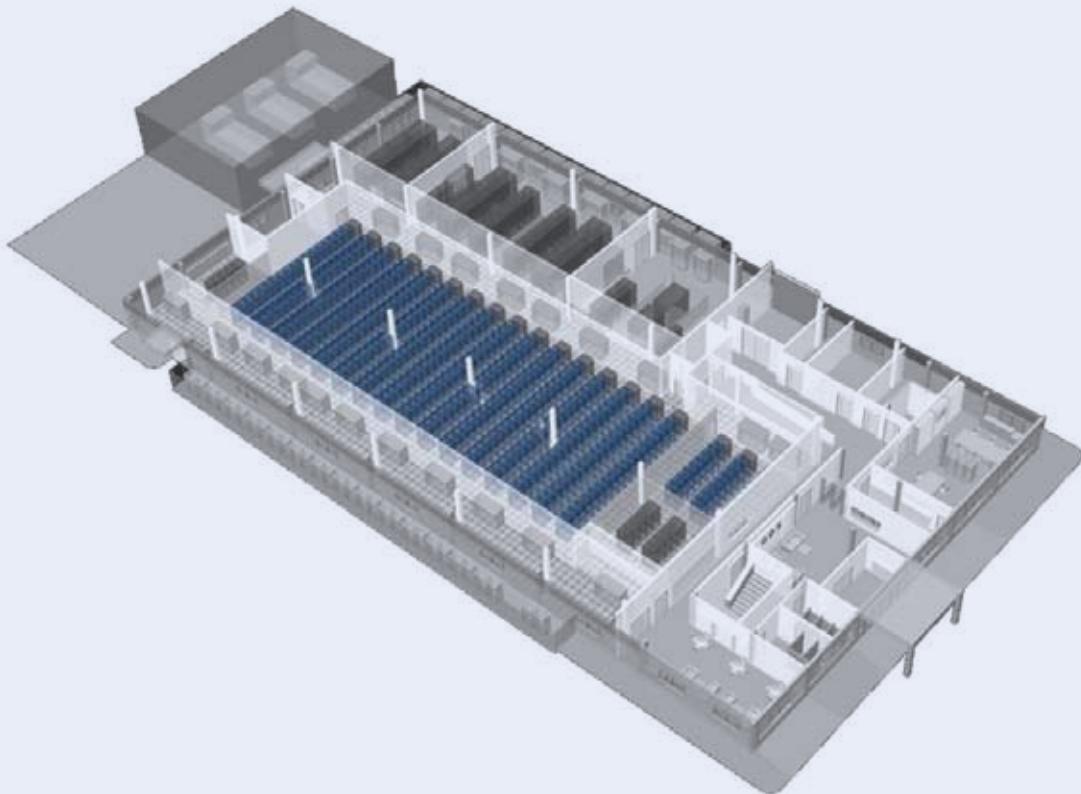
Telecom Service Provider

GDS proudly became the first foreign-capital enterprise to obtain the Telecom Network license from the Ministry of Information and Communication
Beside the advanced Datacenter quality, GDS set up our own dedicated backbone network with 20Gbps speed (expandable to 70Gbps) to directly connect GDS Datacenter to multi-carriers, providing a stable access to the uplink network

GDS Backbone is designed with Ring topology, cable diversity for each Ring and Dual Rings for back-up, allowing GDS to commit 99.999% availability and stable of the whole network connection. Furthermore, the backbone can connect customers directly to major nodes of telecom carriers with various network services to choose.
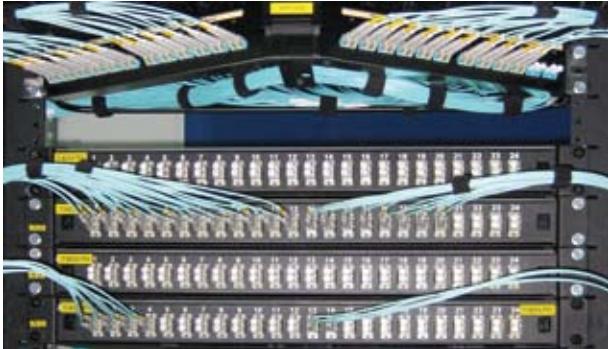

Multi-carriers for Internet:

As an Internet Service Provider (ISP), GDS is connecting with many other ISPs, including Local ISPs (VDC, FPT, etc.) and Oversea ISPs (NTTCom, etc).

GDS Data center also directly connects to Vietnam National Internet Exchange (VNIX) to exchange domestic traffic with all other ISPs in Vietnam.

With multi-carrier connectivity for Internet, GDS can provide very high speed and stable internet service for customers.

Multi-carriers for Network Connectivity:

Locating in GDS Data Center, customers can freely choose network services from multi-carriers (VNPT Hanoi, VTN, VTI, FPT, Viettel CMC, Netnam, etc.) to connect from customer's office to Data center.

GDS can also satisfy the demand of connectivity from Customers' oversea offices to Data center.

International and domestic network services are available over in-house cable because the carriers' nodes are installed inside data center.

Dedicated backbone with Multi-carrier or Carrier-free is one of GDS competitiveness in network connectivity.

Asia-Pacific Network by NTT Com

GDS can expand the Global Internet (GIN)
bandwidth for Vietnam, China, Korea

Legend:

OC3/STM1 & below	
OC12/STM4	
OC48/STM 16	
OC48/STM64	
Global IP Network POP	●
NTT Communications Data Center	■
Partner POP	●
Private Peering Point	▲
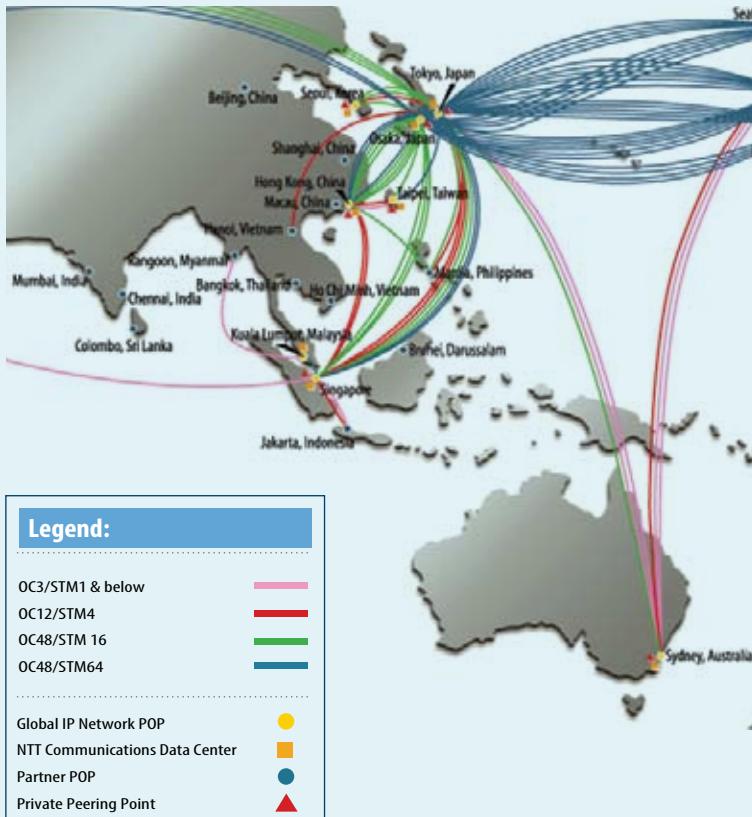
Asia and Oceania 538G

Bandwidth
from GIN backbone
to Asia region

- Vietnam: 15.6G
- Hongkong: 102.4G
- Taiwan: 34.9G
- Korea: 10.0G

NTT Com's Global IP Network

- Highest quality Global Tier 1 IP Backbone
- Fully redundant network backed by industry leading SLA's
- Global IPv6/IPv4 dual stack network
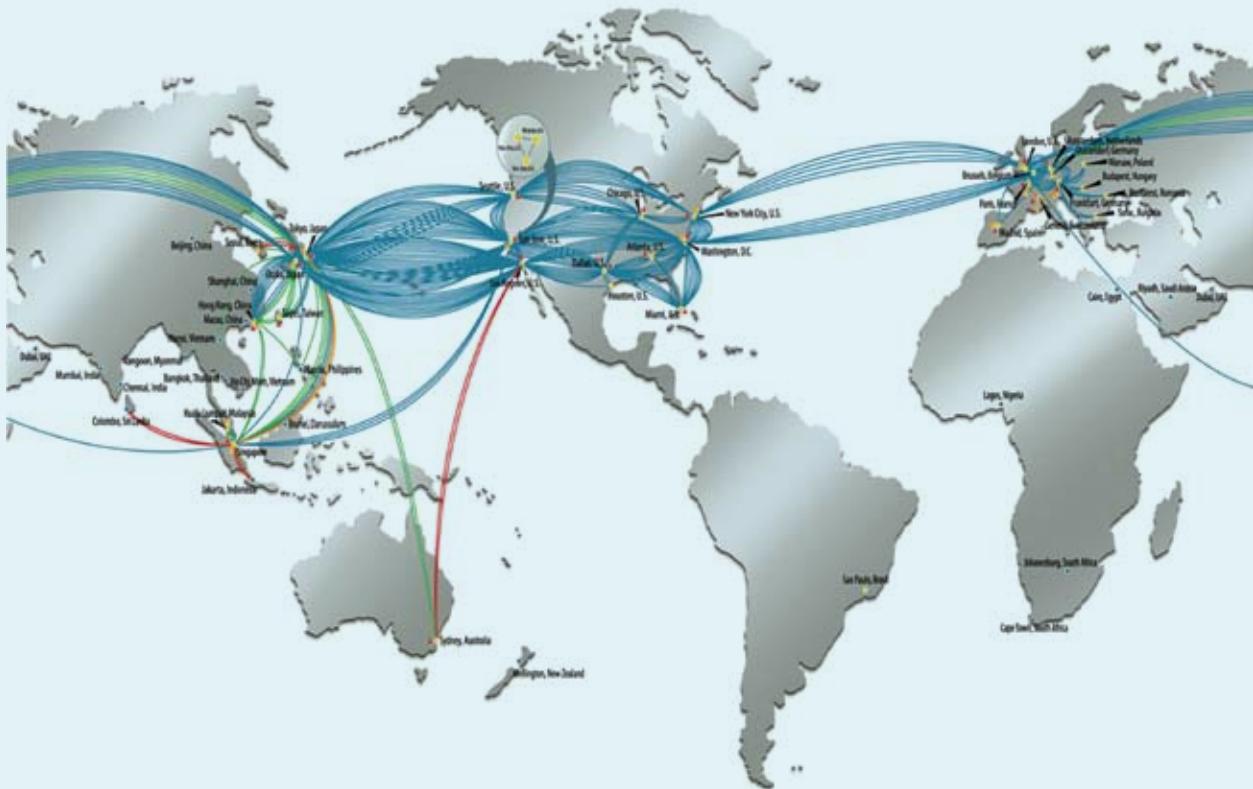
Advantageous
Service

GDS's objective is to deliver system infrastructure as a service, therefore, we will continue to focus on our core business in network, hosting and co-location in addition to the cloud solutions.

Our Cloud Service

In order to provide customers with the most advantageous services, we combine industrial knowledge with technology expertise, based on proven methodologies to create service solutions that bring tangible business values to our customers.

Our main focus is not only closed rack space in Data center, but also facilities, connectivity, servers, storage, and operation as one stop-shop services, which are advanced infrastructure to develop CLOUD service.

PRIVATE Cloud - IaaS*

Customers who wants to SETUP a cloud infrastructure

↓

Co-location

✚

Virtualization service (VS)

✚

Dedicated Hosting

✚

Shared VS

PUBLIC Cloud - SaaS**

Customers who wants to ADOPT a cloud service

↓

E-office software applications

✚

Security management

✚

Monitoring services

✚

Other Potential Enterprise Apps
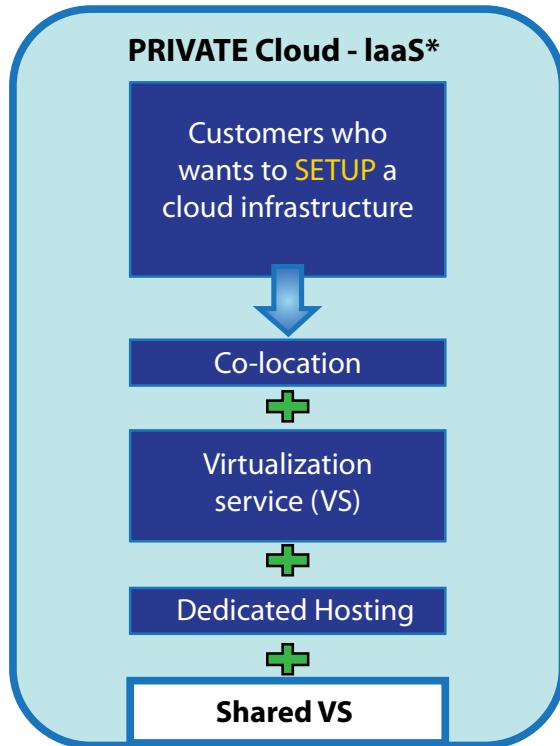
(*)   IaaS: Infrastructure as a Service
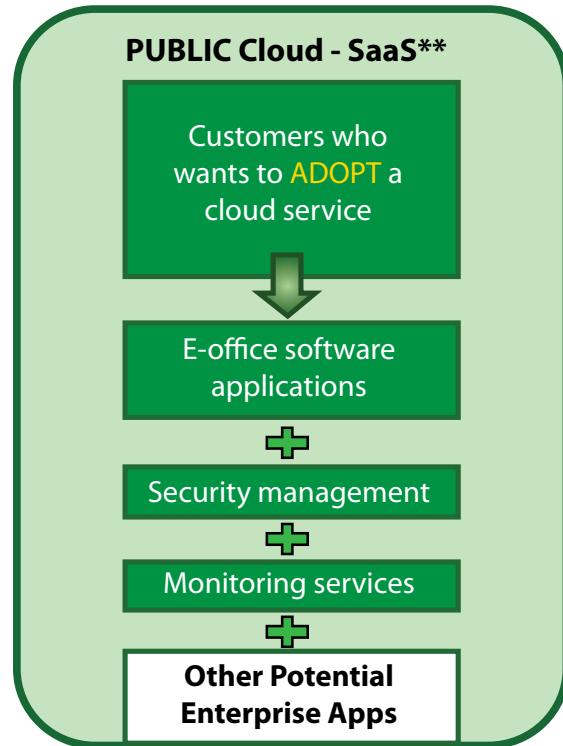
(**) SaaS: Software as a Service

With our cloud service, customers can minimize initial investment cost while maximize network ability and risk prevention in operation.

Benefits of Using Cloud Services

No more cost of ownership

- No need to prepare physical space for your equipment such as server, NW equipment, tape backup device, etc.

- No more cost for power supply and co-location space

- Reducing of fixed asset while maximizing network ability and risk prevention in operation.

Higher availability

- In case of hardware failure, GDS shall provide service by switching the virtual machine into another hardware

- Broken hardware can be replaced without any outage of service

- The system running on aging machine can be replaced on the virtual system

Flexible expansion

- Service can be expanded as your request. No need to concern about delivery period of additional hardware any more

- By changing resource of each virtual environment, user can efficiently utilize resource

- Data center users can start using the service just by connecting in-house wiring

Improvement of operation ability

- Can reduce operation work by reducing the number of hardware resource and virtualization

- Easy backup and restoration on the virtual environment

- Easy maintenance on network system
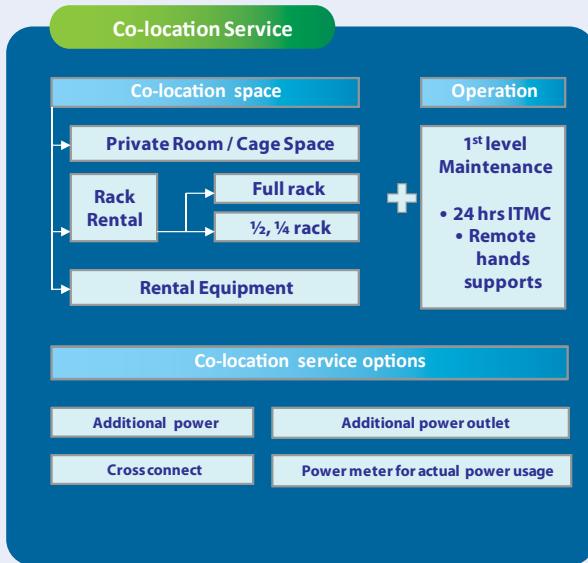
Co-location Service:
Our Co-location service keeps customers' servers in dedicated full racks, ½ or ¼ rack with high security, privacy, and basic operation support. A standard rack includes 4KVA power and expandable subjected to customer's demand.

Dedicated Cage Co-location
Can be designed and set-up when customers require super security area or high power capacity.

Connectivity Service:

With Multi-carriers for Internet connection, GDS can provide very high speed and stable internet connection for customer. With operation 24h x 7days, GDS do real-time monitoring traffic of all uplink and do upgrade bandwidth when traffic usage over 85%.

As 100% Telco Carrier Natural and awarded Telecom license, GDS proudly provide one-stop shop connectivity services from most of network providers in Vietnam so customers can choose various options to connect their office to our Data center.

Value Added Services

O&M	HW	VPS	Managed Solution				SI
Operation and maintenance	Server / Router /SW / FW	Virtual Private Server	Network Management	Security (Firewall/IDS)	Server OS & DB	Storage & Recovery	System Integration

O&M Option

- Server Operation and maintenance
- Network Operation and maintenance
- Monitoring & Reporting
- Tape Insertion
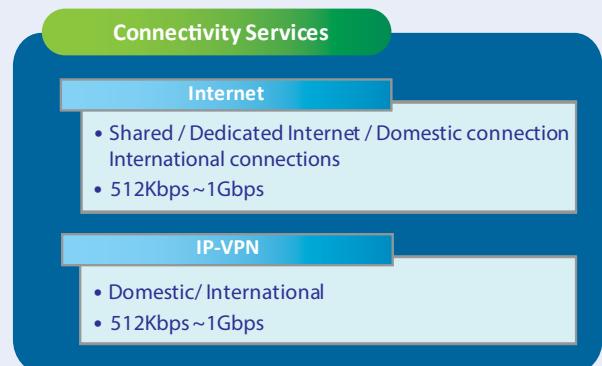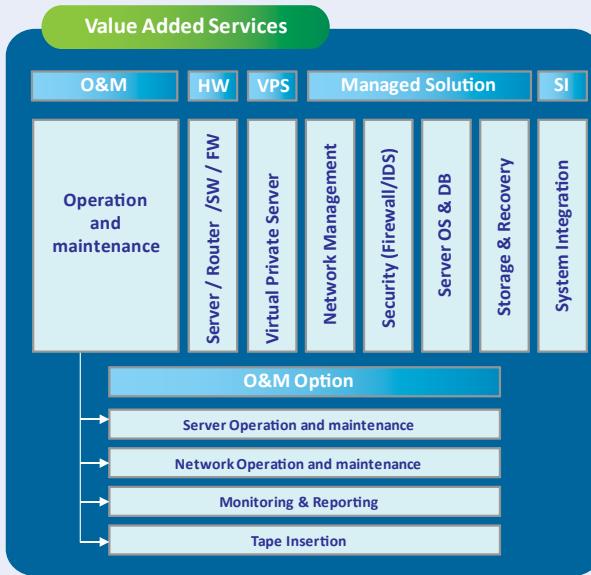
Managed Service: System Management, Network Management, Desktop Management, Database Management, Shared Services and Managed Services are tools that get integrated with our Operating Systems and Applications. Our trained and certified personnel and our partnership with the industry leaders such as CA, IBM and HP give us the edge, with excellent reference sites for vouch safety.

Operation Service: Skilled GDS operating staffs work on a 24h x 7 days basis to monitor system status and take care of customers' equipments. Operation procedures are compliant with the operation manual of NTT Communications Data centers. Outsourcing the operation of your servers to GDS Data center increases the speed and efficiency of its operations with lowers costs. In addition, it allows you to concentrate on your core business.

Mail & Web Hosting Service

Our Hosting service provides the capacity to store Website, Email of the customer in high specification server with high and stable internet connection.

Hosting server system, either shared or dedicated hosting, is under strict security including a fully redundant Firewall, Anti Virus, Anti Spam and provides an outstanding and reliable service to customers.

Mail & Web Hosting Service

- Shared/Dedicated Hosting
- Domain registration and maintenance
- Firewall, Anti-virus, Anti-spam

- 40Mb ~ 200GB capacity
- Flexible account number by customer

Service Level Agreement (SLA)

Locating your IT system in GDS Data center, the availability of the network connectivity and IT operation shall be assured with 100% for almost network components and facilities.

100% Availability of Electricity Power Supply:

In spite of frequent commercial power outage or voltage drop in the local area, our Tier-3 facilities (backup generator, UPS system, batteries) are always running normally. We can keep stable condition of electricity power supply for 24h x 7 days of the year.

100% Availability of Climate Control:

Air condition system is always controlled at the temperature of 22oC±2oC degree and humidity at 50%±10% throughout the year.

99.999% Availability of Connectivity and Co-location Services:

GDS has an optical fiber backbone network in the Hanoi City Area

(1) Internet connectivity services: 100%
(2) GDS backbone network: 99.999%
(3) GDS Data Center: 100% availability
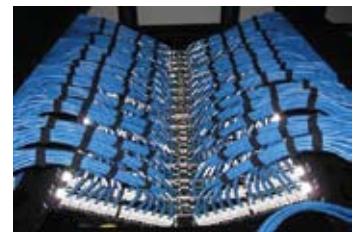
Data Center Specification

Location	Area	• Hanoi, Vietnam
	Access	• 15 km from town area of Hanoi
Building	Construction	• Data center building with rise 1 storey
		• Loading capacity of Rack: over 2,200 kg/m2
	Loading	• Loading dock
Power	Power Receiving	• Loop path
	UPS	• Dual UPS system with N+1 redundant configuration
		• UPS battery backup time at rated load: Approx. 15 minutes
	Generator	• Diesel Generator with N+1 redundant configuration
		• Operating hours without refueling is more than 72 hours
	Power Provision	• Dual power feeds: 3KVA – 12KVA to each rack (available up)
Air Conditioning	System	• Air condition system with N+1 redundant configuration
		• Management of temperature (22±2℃)/humidity (50±10%)
	Blow-out type	• Down-blow below raised floor
		• Ceiling cavity caries return air
Fire detection		• Smoke Detectors (VESDA)
		• Nitrogen gas fire suppression system
Security	Camera	• Monitoring cameras
	Guard	• 24x7 Security guard residence
	Building Access	• ID card, IC card and Biometric Identification are required
	Room Access	• Biometric ID is required
Connectivity		• Multiple Carriers (all Vietnam major carriers available)
		• Local Access Line (current 20Gbps; up to 70Gbps)
		• Internet (current 2.3Gbps; up to 10Gbps)

Standard Rack	Type
	Size (WxDxH)
		Full Rack
		  • 700mm x 1000mm x 2200mm (45U)
		  • 220V x 20A x N(standard)
		Half Rack
		  • 700mm x 1000mm x 1100mm (22U)
		  • 220V x 20A x N (standard)
		Quarter Rack
		  • 700mm x 1000mm x 440mm (10U)
		  • 220V x 20A x N (standard)

Service		DC/Cloud computing: IaaS, PaaS
		  • Rental Server, FW, Router, SW, Storage with active spare
		  • Mail/ Web hosting, Domain Registration
		  • ISP Service (AS38735)
		  • Internet/ IP-VPN/ International/Domestic
		  • SI/NI

Others		24 hours facility monitoring by Data center operation staff

GDS certificates

DAS CERTIFICATION

Information Security Management System
Certificate of Approval

This is to certify that the ISMS of

GLOBAL DATA SERVICE JOINT STOCK COMPANY

Lot P5, Thang Long industrial park, Dong Anh district, Hanoi, Vietnam

Has been assessed and found to meet the requirements of

ISO/IEC 27001:2005

This certificate is valid for the following scope of operations and Statement of Applicability – Dated: 30th September 2011

Providing the service of datacenter co-location

This certificate is the property of DAS Certification and is valid from 20th January 2012 until 19th January 2015 and remains valid subject to satisfactory annual Surveillance audits. Recertification audit is before 30th November 2014. Certified since 20th January 2012

Authorised by: Stan Wright
Chief Executive

Date of Certificate Issue: 20th January 2012 Certificate Valid until:
19th January 2015 Certificate Number: 67355/VN/I
DAS Certification Date of Issue: 05th February 2013

Registration House,
22b Church Street
Rushden, Northamptonshire,
NN10 9YT, UK
Tel: 01933 381859
Email: info@dascertification.co.uk
Web: www.dascertification.co.uk
Company number: 03184520

BỘ THÔNG TIN VÀ TRUYỀN THÔNG
CỤC VIỄN THÔNG

CỘNG HÒA XÃ HỘI CHỦ NGHĨA VIỆT NAM
Độc lập - Tự do - Hạnh phúc

Số: 564/GP-CVT

Hà Nội, ngày 26 tháng 11 năm 2012

GIẤY PHÉP

CUNG CẤP DỊCH VỤ VIỄN THÔNG
(Có giá trị đến hết ngày 20 tháng 4 năm 2019)
Cấp lần đầu ngày 20 tháng 4 năm 2009
Cấp, đổi ngày 26 tháng 11 năm 2012

CỤC TRƯỞNG CỤC VIỄN THÔNG

Căn cứ Luật Viễn thông số 41/2009/QH12 ngày 23 tháng 11 năm 2009;

Căn cứ Nghị định số 25/2011/NĐ-CP ngày 6 tháng 4 năm 2011 của Chính phủ quy định chi tiết và hướng dẫn thi hành một số điều của Luật Viễn thông;

Căn cứ Nghị định số 97/2008/NĐ-CP ngày 28 tháng 8 năm 2008 của Chính phủ về quản lý, cung cấp, sử dụng dịch vụ Internet và thông tin điện tử trên Internet;

Căn cứ Quyết định số 35/2011/QĐ-TTg ngày 27 tháng 6 năm 2011 của Thủ tướng Chính phủ quy định chức năng, nhiệm vụ, quyền hạn và cơ cấu tổ chức của Cục Viễn thông trực thuộc Bộ Thông tin và Truyền thông;

Căn cứ Thông tư số 05/2008/TT-BTTTT ngày 12 tháng 11 năm 2008 của Bộ trưởng Bộ Thông tin và Truyền thông hướng dẫn một số điều của Nghị định số 97/2008/NĐ-CP ngày 28 tháng 8 năm 2008 của Chính phủ về quản lý, cung cấp, sử dụng dịch vụ Internet và thông tin điện tử trên Internet đối với dịch vụ Internet;

Căn cứ Thông tư số 05/2012/TT-BTTTT ngày 18 tháng 5 năm 2012 của Bộ trưởng Bộ Thông tin và Truyền thông phân loại dịch vụ viễn thông;

Xét đơn kèm hồ sơ đề nghị cấp phép cung cấp dịch vụ viễn thông số 222/2012/CV-GDS ngày 04 tháng 10 năm 2012; Công văn số 221/2012/CV-GDS ngày 04 tháng 10 năm 2012 về việc đề nghị cấp đổi giấy phép cung cấp dịch vụ viễn thông đã được cấp kèm báo cáo triển khai cung cấp dịch vụ Internet kèm đề án cung cấp dịch vụ viễn thông chỉnh sửa, bổ sung và Báo cáo triển khai giấy phép cung cấp dịch vụ viễn thông số 500/GP-BTTTT ngày 20/4/2009 của Công ty Cổ phần Dịch vụ Số liệu Toàn cầu (GDS);

Theo đề nghị của Trưởng phòng Cấp phép và Thị trường,

NAY CHO PHÉP

Điều 1. Doanh nghiệp: CÔNG TY CỔ PHẦN DỊCH VỤ SỐ LIỆU TOÀN CẦU
Tên giao dịch: CÔNG TY CỔ PHẦN DỊCH VỤ SỐ LIỆU TOÀN CẦU

1

Awarded ISO/IEC27001:2005 Certificate on January 20th 2012 and annually checked.

International standard for operation and providing the service of datacenter co-location.

Obtain Telecom Network License on November 26th 2012

Certified to provide wide range of domestic and international network services in Vietnam including access line,
IP-VPN, Internet, Tele-conference, Video-conference and VAS service.

Company Profile

Global Data Service Joint Stock Company (GDS) is a joint venture between Japanese NTT Communications (NTT Com) and Vietnam Posts and Telecommunications Group (VNPT). Our strength is VNPT's stable and wide telecom infrastructure combined with know-how of NTT Com in operating more than 138 Data centers all over the world.

Shareholders

- **Vietnam Posts and Telecommunications Group (VNPT)**
- **NTT Communications (NTT Com)**
- **Others**

Company Events

November 2007- Mr. Lam Hoang Vinh (Deputy General Director of VNPT) and Mr.Hiromi Wasai-(President of NTTCom) signs Co-operation Agreement on company establishment

October 2009 - Mr. Nguyen Minh Hong, Vice-Minister of Ministry of Information and Communications congratulated on GDS Opening
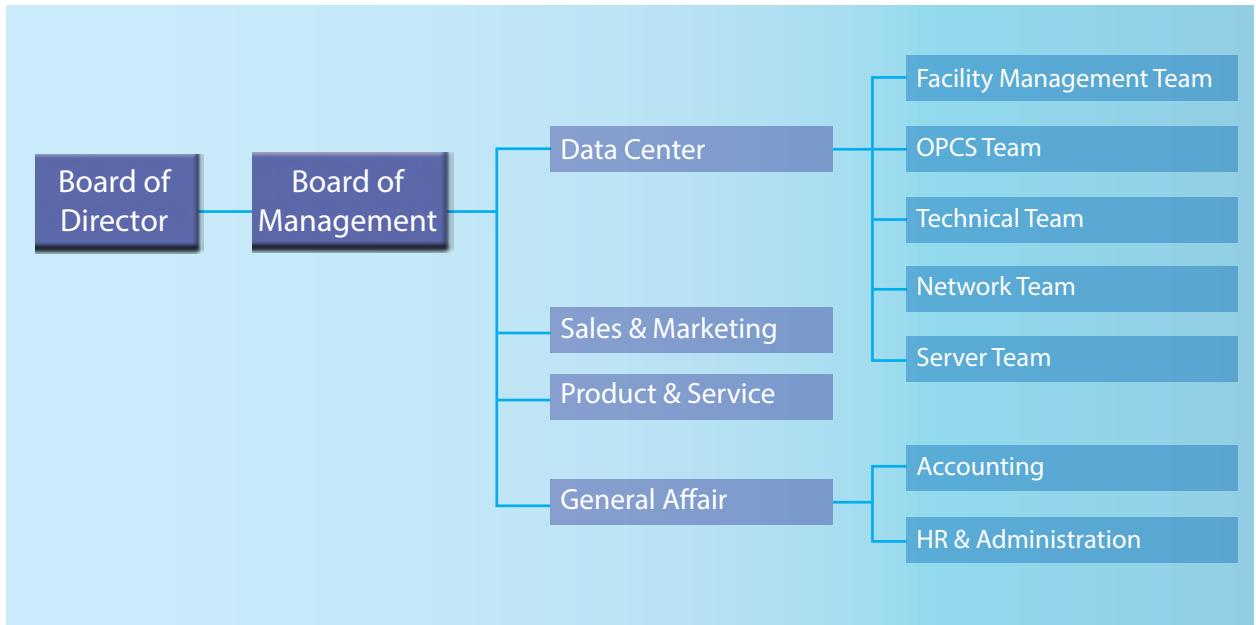

May 2011- Mr. Yasuaki Tanizaki- Japanese Ambassador visits Thang Long Data center

September 2011 - Mr, Nguyen Thien Nhan, Deputy Prime Minister visits Thang Long Data center

Company Organization Chart

Board of Director — Board of Management

Data Center
- Facility Management Team
- OPCS Team
- Technical Team
- Network Team
- Server Team

Sales & Marketing

Product & Service

General Affair
- Accounting
- HR & Administration

GDS Customer voice

"After 3 years using GDS service, I'm impressed at their international standard Data center. The level of service we get from GDS staff is good and that ensures our servers are running optimally, 24h x 7 days. We found that GDS can provide us all we need and believe that they can satisfy our further service development." **said Carlton Pringle, CEO of Navigos Group Vietnam** *(www.vietnamworks.com).*

"There were many choices but we were convinced by the high quality of GDS' services and their professional work style. We are delighted that the government of Vietnam now has awarded GDS a license for network services. This wide range of reliable, high-quality ICT services will enable multinational companies to grow their businesses more efficiently in Vietnam." **said Park Jong Buhm, CEO of NHN Vietnam.**

Contact Us

Please contact us now for an ideal system configurations and future expansion plans in accordance with your requests. We also can support migration of your existing systems to our Data center.

GDS Sales Contact (Vietnamese, English, Japanese)
+84-4-3562-6996 (TEL)
+84-4-3562-6998 (FAX)

sales@gds.vn (E-mail)
www.gds.vn (Website)