

**First GOVERNMENT
CLOUD SERVICE
Provider**



National Data Center (NDC) **S E R V I C E** **P O R T F O L I O**

Nation's first certified Tier-III standard government data center since 2010

Managed by Experts & CERTIFIED Engineers | DR facility in Sheikh Hasina Software Technology Park, Jashore | 24x7x365 Support

OVERVIEW

Bangladesh Computer Council (BCC) is a statutory body of the government of Bangladesh under Information and Communication Technology Division. One of the core functional area of BCC is to provide IT infrastructure facility and related services to government organizations. As a part of this mandate, in 2010, BCC has established Tier-III standard Data Center. Since its inception, the capacity and services of data center is growing to meet the current and upcoming demand generating from different digital initiatives of the government.



National Data Center (NDC) is not only the IT infrastructure facility of the government but also becoming the data hub. As with the time and with the advancement of the technology, NDC is continuously improving its infrastructure and services so that the government organization can have their modern and advanced technological requirement fulfilled. In 2019, NDC has achieved a major milestone by unveiling the first on-premises government cloud service in the country.

As with the introduction of diversified technologies in the data center infrastructure, it is difficult for organizations to choose, manage and operate data center infrastructure for their application systems. NDC is dedicated to provide data center services seamlessly with greater simplicity and reliability, so that organization can really focus on their core business rather than investing their resources into IT infrastructure management.



KEY FEATURES

- 200+ rack capacity in Primary Site
- DR facility in Sheikh Hasina STP, Jashore
- Uptime Institute Tier-3: Design Certified
- TIA 942 Tier-3 Compliant
- ISO 27001 Certified
- ISO 20000 Compliant
- 20+ PB Storage Capacity
- 500+ government organizations as customer
- Connected with 3 IP transit provider of Bangladesh
- Connected with 5 local NIX service provider for faster user experience
- Large amount of public IPv4 addresses
- IPv6 ready network infrastructure
- Multi-layered defense mechanism
- Resilient security infrastructure

- | First to bring super computer to provide services
- | First data center service provider for Government
- | First Tier-3 Certified Data Center within Government
- | First 27001:2013 certified data center in Bangladesh
- | First Government Cloud Service Provider

MISSION



As the National Data Center, we provide state-of-the-art IT services and infrastructure to create better opportunities for Bangladesh through digitalization



140,000 +

Request Fulfilled



94.79 %

SLA Target Achievement



99.982 %

Uptime Analyzed



2500 +

Customer Services

1000+

Service Receiver

President's Office	Prime Minister's Office	
Cabinet Division	Finance Division	
MoPA	Ministry of Land	MoA
Bangladesh Election Commission	NBR	
Supreme Court	CPTU	
Office of the Registrar General, Birth and		
Death Registration |

& many more...





COMPUTING SERVICES

| General Purpose ECS | Accelerated ECS |
| Memory Intensive ECS |

- NDC provides Elastic Cloud Server (ECS) service of different plans with well-balanced CPU and Memory combination.
- NDC offers 3 types of computing service: (a) General Purpose ECS, (b) Memory Intensive ECS, and (c) Accelerated ECS.
- Organization can choose from wide range of open source and proprietary operating system for their ECS.
- Offered ECS are suitable for most of the application platform, database systems, Artificial Intelligence, image processing, Natural Language Processing, Machine Learning, etc.



AUTO SCALING SERVICES

Automatic Scaling Service

- Auto Scaling Service is a service that automatically adjusts number of ECS instances depending on demand and configured policies.
- Automatic scaling of ECS is triggered when the configured threshold is reached.
- The threshold can be set for both CPU and Memory utilization.
- Auto Scaling Service is only usable when cloud Elastic Load Balancer is enabled.



STORAGE SERVICES

| Elastic Block Storage (EBS) |
| Object Storage Services (OBS) |
| File System Storage (FSS) |

- The eGovCloud platform has different types of cloud storage services suitable to accommodate different types of data.
- NDC offers 3 types of storage service: (a) Elastic Block Storage, (b) Object Storage, and (c) File System Storage.
- Block storage has support for both mixed and high performance disk to provide optimized I/O for the different application requirements.



CLOUD NETWORK SERVICES

- The eGovCloud platform is a multi-tenant cloud solution ensuring necessary network segmentation.
- Different kinds of network services are available under each tenant e.g. VPC Network, Elastic IP, NAT Gateway, Elastic Load Balancer etc.
- Both public IP (routable in the internet) and private IP (routable within NDC network) is available as Elastic IP.



CLOUD BACKUP SERVICES

- The eGovCloud platform has backup services for taking both data level backup, disk level backup and snapshot backup. The backup policy (e.g. full/incremental, frequency, retention etc.) can be set by customer from cloud self-service console according to their requirement.
 - a. Cloud Server Backup Service (CSBS)
 - b. Volume Backup Service (VBS)
 - c. File System Backup with Enterprise Backup Solution



KUBERNETES BASED CONTAINER SERVICE

- The eGovCloud platform provides Kubernetes based container service for organizations for deploying containerized applications in simpler and faster manner.
- NDC provides dedicated container cluster to the organizations with required resources for workload.



PLATFORM AS A SERVICE (PAAS)

Tools/Application Platform Service

- Organization can avail and launch complex applications infrastructure readily available by just a single click from the marketplace.
- Most of the popular applications infrastructure like LAMP, Wordpress, Nginx, Apache, Redis, RabbitMQ, MySQL, MariaDB, MongoDB, ElasticSearch, CouchDB, MSSQL, PostgreSQL, Cassandra, OpenLDAP, Hadoop, Solr, Nagios, Icinga, Jenkins, Kafka, Graylog etc. are available in the Application Marketplace.
- More and more applications and complex application stacks will be available in the future for simplifying the operational tasks of cloud customer.



PLATFORM AS A SERVICE (PAAS)

Openshift on BCC eGovCloud Platform

- NDC provides Redhat Openshift Platform as a Service for organizations who want built-in CI/CD and DevOps capabilities from the platform.
- This platform is suitable for cloud native applications developed based on micro-services architecture.
- The platform is also recommended for the organizations planning to modernize their application systems.



SECURITY SERVICES

- The eGovCloud Platform provides essential security services for protecting customer data hosted in the cloud infrastructure.
- It includes Virtual Firewall (vFW) for protection of north-south traffic, Security Group (SG) to protect east-west traffic and Security Compliance Services for cloud resources of the organization.
- Additional security services like Sensor, WAF, Anti-DDoS, VAPT etc. with external security solutions can be requested by organizations on demand basis.



SOFTWARE AS A SERVICE (SAAS)

- NDC is providing Software as a Service (SaaS) for reducing time, cost and operational overhead of the organization.
- SaaS is provided under subscription based model.
- Currently BCC provides NID Card OCR Service, Bangla OCR Service, Face Matching Service, Bangla Sentiment Analysis Service, e-Recruitment Service.
- NDC is continuously bringing more unconventional and unparalleled application services under the SaaS to meet common requirement of government organizations.



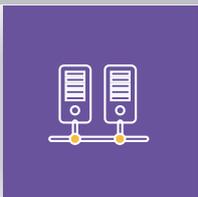
BUSINESS CONTINUITY SERVICE

- NDC has introduced the Cloud Disaster Recovery (CSDR) service from its Disaster Recovery (DR) site at Jashore.
- To enable this service, organization must use DR availability zones along with DC availability zone to protect their application and data.



The ISO/IEC 27001:2013 security management standard outlines best practices for security management as well as extensive security controls that adhere to the ISO/IEC 27002 best practice guidelines. This certification based on the development and implementation of a information security strategy, which includes the Information Security Management System (ISMS). The certification also describes how the National Data Center (NDC) continuously manages security in a holistic and extensive manner.

REQUEST BASED SERVICES



COLOCATION SERVICE

- NDC Provides colocation service to Organizations ensuring state of the art infrastructure facility.
- NDC provides two types of Colocation Service:
 - a) Rack space allocation
 - b) Rack unit allocation services
- Colocation Service is provided in a limited scale basis as Cloud Services are recommended for use to reduce cost and maintenance overhead.



VIRTUAL PRIVATE SERVER (VPS)

- NDC provides Virtual Private Server (VPS) in pre-defined packages.
- VPS is an on-demand service where VPS's are created by NDC when request is placed.
- VPS service are suitable for those clients whose workload requirement is low and fixed.



PHYSICAL SERVER SERVICE

- NDC is providing Physical Server Service to customer according to the demand and availability.
- Physical Server Service resource is calculated based on CPU and Memory only.
- For storage customer can choose Block Storage Service along with this service.



MANAGED DATABASE SERVICE

- NDC provides managed database service with robust, highly available and resilient database infrastructure.
- There are both shared and dedicated infrastructure available as service plans under Managed Database Service.
- In case of dedicated and enterprise database, the customer is responsible to bring their own license under Bring Your Own License (BYOL) model.



EMAIL SERVICE

- NDC Provides highly available, uninterrupted and secured email service to Government Organizations according to Government Email Policy 2018.
- Organizations are provided email services with their own domain.
- eGOV Cloud Drive is provided to each email account as complimentary with email service.



BLOCK STORAGE SERVICE

- Organization who is using VPS service or has bare metal server (own/BCC provided) hosted in NDC facility may require additional storage space for their system.
- NDC provides block storage service from its highly reliable storage infrastructure.
- NDC offers mixed (SSD+SAS+NLSAS) type block storage and high performance (SSD only) storage under this service.



OBJECT STORAGE SERVICE

- NDC provides object storage service to keep unstructured data (e.g. image/pdf/media file), IoT data, archival data, etc.
- This service is available along with both cloud and request based services provided by NDC.
- The object storage infrastructure is highly durable and scalable in nature and is also S3 compatible.



SHARED HOSTING SERVICE

- One of the most primitive service of NDC is shared hosting service.
- This service is provided from a shared hosting infrastructure i.e. multiple organization shares same server space for hosting their website or application.
- NDC is providing this service for hosting organization's website & web application both in Linux & Windows Environment according to the requirements of the organization.

REQUEST BASED SERVICES



CLOUD DRIVE SERVICE

- NDC provides cloud drive service to keep backup of day to day official or a copy (file type) data of government employees.
- Government Cloud Drive service is fully managed by NDC and is similar to Dropbox/Google Drive/One Drive etc.
- Under this service each government employee will have 10 GB storage space to keep their important official data.
- Users can configure the client tool to synchronize their data automatically using this service.



PUBLIC IP ALLOCATION SERVICE

- Digital services are growing very fast and most of the services are needed to be available on the internet space.
- As services are required to be available in the internet, requirement of public IPV4 address is very high.
- On the other side, globally the public IPV4 address space is getting exhausted. However, NDC is still providing required number of public IPV4 address with unlimited bandwidth rate.



BACKUP SERVICE

- NDC provides data backup services to the client for their file system data. This service is available with other NDC services and based on request of the organization.
- NDC provides this service through enterprise grade backup solution. However, client can choose backup policy according to their requirement after discussion with NDC.



WEB APPLICATION FIREWALL (WAF) SERVICE

- WAF service is applicable for web sites and web applications hosted in NDC and using the NDC network.
- WAF services includes protection of web sites and web applications from OWASP top 10 attack and other common web attacks.
- There are pre-defined security policies for WAF services. In consultation with NDC, customers may also select an exclusive security policy.



PRIVATE ACCESS SERVICE

- NDC private access service is for the client who need direct physical connection to NDC from their sites to consume services hosted in NDC or vice-versa.
- This service is only applicable for the customer of NDC or any other entities authorized by NDC customer.



DNS SERVICE

- NDC is providing the DNS Service for hosting the organizations domains and sub-domains.
- Customers will be able to manage their domain records by themselves using the DNS Management console.



NTP SERVICE

- BCC is authorized publisher of Standard Internet Time of Bangladesh as authorized by Bangladesh Standards and Testing Institute (BSTI).
- NDC uses GPS based NTP server from both DC and DR site to publish Bangladesh Standard Internet Time (BDT).
- The NTP service is a public service and open for all to freely use to synchronize their clock with NTP client.



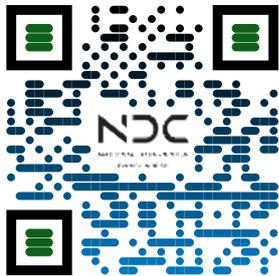
DESIGN AND DEPLOYMENT CONSULTANCY

- For complex application systems NDC provides design and deployment consultancy along with implementation and support services.
- This service is applicable for the customers who are availing NDC Cloud and/or Request Based Services.

FUTURE P L A N

The vision of NDC is to adopt “Cloud First” and “Cloud for Everything” model for government organizations towards building Smart Government, one of the four pillars of Smart Bangladesh. To meet the growing demand of data center services, NDC has planned to scale-up its capacity by enhancing DC & DR sites, by adding more IT resources and by introducing more modernized cloud services & solutions for adoption of emerging technologies like AI, IoT, Blockchain, Big Data, etc. NDC is committed to build necessary security infrastructure as per national and international standards while adopting new technologies and adding more services.

For more details of NDC
Services please visit



NDC
NATIONAL DATA CENTER
BANGLADESH

Contact Us



88-02-55006840



datacenter@bcc.gov.bd
<https://ndc.bcc.gov.bd>



Bangladesh Computer Council
E-14/EX, ICT Tower, Agargaon
Dhaka-1207