

1 Managed Non-Relational Database Service Description

1.1 Overview of Service

This service provides configuration, monitoring and management of a Non-Relational Database in the cloud, or in the Client's on-premises or colocation data center.

1.2 Client Responsibilities

Client is responsible for:

- (a) The Client must delegate authority to NTT's Engineers to contact the vendor directly and maintain an active service contract from the OEM
- (b) Any management of licenses if required

1.3 Service Specific Operations

- (a) Service Requests

As part of the Service, the fulfillment of the following types of requests are included:

Task	Description
Management of security (users, groups, etc.)	Creation, change and deletion of users, groups and roles in the database; this includes changes to group membership and permission assignment to databases with different roles
Management of replica set	Creation and recreation of the replication configuration to recover from loss of sync or any other issue
Import and Export of data using native tools	Import and export data to and from the DB Server using native tools; the files generated will be made available via FTP or any alternate method; these actions can also be scheduled

All of the above tasks will be performed according to the Change Management process defined for the Client by the Agreement.

- (b) Ongoing Maintenance tasks

The following ongoing tasks will be performed in an effort to maintain solution stability, ensure optimal performance and to prevent the occurrence of Incidents:

Task	Frequency	Description
Logs Rotation	Weekly	Compression and deletion/backup of the logs associated to the database
Oplog maintenance	Ad hoc	Backing up and deletion of oplogs

1.4 Supported Technologies

The following versions are supported:

- (a) MongoDB 2.x and 3.x on RHEL 7 and above 64-bit
- (b) MongoDB 2.x and 3.x on Ubuntu 14.x and above 64-bit
- (c) MongoDB 2.x and 3.x on Windows 2012 and above 64-bit

While MongoDB is supported on the Windows OS versions listed above, the NTT highly recommends the use of a Linux based operating system for better security, performance, and operability.

The following configurations are supported

- (d) MongoDB Server standalone: A single server
- (e) MongoDB Replica Sets: Two or more MongoDB servers configured for asynchronous replication of data with Config Servers
- (f) MongoDB Replica Sets and Sharding: Two or more MongoDB servers configured for asynchronous replication of data with the Config Servers and Routing Processes

1.5 Supported Environments

The following environments are supported:

- (a) Client premises
- (b) Colocation data center
- (c) Cloud

1.6 Out of Scope

The following limitations apply:

- (a) Disk size dedicated to datafiles should be three times the size of the data in order to save backup data (which needs at least twice the space provided for datafiles) into a local or remote filesystem
- (b) Only stable MongoDB versions are supported in production environments; and
- (c) If MongoDB Enterprise is installed the Client must purchase the license and support from the vendor.

1.7 Tasks Included in the Standard Transition

As part of the Service, the following tasks are included in the setup fee:

- (a) Installation and configuration of the necessary Linux packages or Windows components
- (b) Configuration of the required operating system parameters, kernel/libraries (Linux) or registry settings (Windows)
- (c) Installation of the database engine software
- (d) Creation of database instances
- (e) Database configuration (logging, working sets, replicas)
- (f) Configuration of the users, databases, permissions required
- (g) Configuration of maintenance jobs (indexing, log file rotation, alerting)
- (h) Replication Set configurations (if using Replica Sets)
- (i) Enable Sharding (if using Sharding)
- (j) Data Import/Export using native DB Tools
- (k) Q&A activities for high availability and Sharding
- (l) Specific Tasks Associated with Taking Over the Management of a Non-Relational Database

In addition to the tasks described in *Application Management-Common Functions*, the engineers will perform the following for an existing Client Solution.

- (i) Reconfiguration of the storage policy
- (ii) Reconfiguration of the replication/Sharding policy
- (iii) Tuning of the service (load testing or performance testing not included)

1.8 Tasks Not Included in the Standard Transition

The following tasks are not included in the standard transition:

- (a) Development activities such as the creation of scripts or code development are not included.