

# Database Modernization

## Database Automation Pro with Nutanix Database Service

### BENEFITS

- Accelerate adoption of your NDB platform by leveraging experienced consultants
- Get started with NDB and understand how to simplify database operations in your environment
- Identify requirements and considerations to support provisioning, cloning, patching and backup of databases

### OVERVIEW

The Database Automation Pro with Nutanix Database Service (NDB), formerly Era, is focused on designing, deploying and configuring your Nutanix solution with for databases in a production environment. A Nutanix Xpert consultant also collaborates with your team to create a migration plan.

NDB makes Nutanix Enterprise Cloud the ideal platform to run enterprise-grade databases. NDB is a software suite that automates and simplifies database administration, bringing one-click simplicity and invisible operations to database lifecycle management (LCM) such as database provisioning, copy data management, data protection and patch management services. The API-first architecture makes it easy to integrate Database as a Service (DBaaS) into your environment.

The Pro service combines multiple standalone services: Design Workshop, Migration Planning Workshop, Database and NDB Installation, Database Backup Architecture and Copy Data Management, and Database Migration Using Database Native Tools. This service helps you through the journey of moving the solution from concept to production, simplifying database operations.

### SERVICE SCOPE

An experienced Nutanix Architect works with your IT infrastructure and database team to perform the following activities

#### Database Design Workshop

- Discuss the design goals and gather business and technical requirements, including constraints, risks and assumptions
- Conduct Discovery sessions with current infrastructure and database experts
- Provide a design addressing requirements identified during Discovery
  - Nutanix cluster and VM (virtual machine) database sizing
  - Network requirement
  - Database cluster design (if applicable)
  - Security
  - Data protection
  - Availability
  - Recoverability
- The design includes best practices for both infrastructure and database engines

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## PREREQUISITES

- Existing Nutanix cluster running the latest versions of Nutanix software: AOS and supported hypervisors (VMware vSphere or Nutanix AHV)
- Appropriate Nutanix product licenses
- Appropriate operating system and database software licenses
- All the prerequisite requirements for the Design Workshop, Migration Planning Workshop, Database and NDB Installation service, Database Backup Architecture and Copy Data Management service
- Existing database server that meets NDB requirements to register with NDB

### **Nutanix Database Migration Planning Workshop:**

- Analyze the data identified during discovery by working with your current infrastructure and database administrators
- Discuss migration goals such as application availability requirements, maintenance windows and downtime maintenance windows
- Discuss migration options and constraints for each option based on database versions, operating system and application availability
- Review database sizing and performance requirements
- Provide a database migration plan for each variation
- Conduct migration of one test database with a maximum size of up to 200 Gb equivalent to the same database version of Nutanix

### **Database & NDB Installation:**

- Assign networks from Prism and create network profiles used for database provisioning (one network profile included)
- Provision new databases from the registered database server (one Time Machine SLA, software, compute, network and database parameter profiles for one database type: Oracle, SQL Server, MySQL, MariaDB or PostgreSQL)
- Demonstrate and set up RBAC and notifications (up to 2 user accounts)
- If applicable, register existing (brownfield) Oracle databases or Microsoft SQL Server to NDB
- Clone data from an existing Time Machine into new and existing database servers running on Nutanix, including scheduled data refresh (validate one database clone)

### **Database Backup Architecture & Copy Data Management (CDM) Service**

- Provide an architectural overview of NDB CDM
- Review features and functions of NDB CDM, including database restore, cloning with snapshot and point-in-time recovery (PITR)
- Set up NDB in your environment
- Demonstrate registration of existing database servers running on Nutanix in your environment, including Time Machine and application of SLAs
- Clone database data from one Time Machine into new and existing database servers running on Nutanix, including scheduled data refresh (up to one database type)
- Discuss and demonstrate CDM options for creating clones
  - 1 Schedule
  - 2 Refresh
  - 3 Pre/post command execution

### **Deliver a service overview session introducing database backup architecture**

- Conduct a deep-dive session describing the backup architecture of any databases and NDB SLA constructs based on backup policies
- Explain the significance of Time Machine in defining backup policies
- Explain how to configure SLAs in terms of backup and retention
- Understand SLA requirements and demonstrate the creation of backup policies
- Demonstrate database backup management using SLAs
  - 1 Snapshot frequency as per defined RPO and RTO
  - 2 Log catch-up requirement
- Demonstrate a database restoration from Time Machine in your environment

**Note:** The knowledge transfer session accommodates up to 10 participants

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## DELIVERABLES

- Design document and configuration workbook
- Migration Plan
- NDB configuration for one of the scenarios defined in the project scope
- Knowledge Transfer Workshop

### Database Migration Using Database Native Tools:

- Review database migration planning document
- Validate database migration plan and rollback options
- SQL: Migrate databases up to 2 TB in size or up to 20 databases, whichever is the lesser
- Oracle: Migrate databases up to 2 TB in size or up to 4 databases, whichever is the lesser
- Apply Nutanix best practices for databases of up to 1 TB
  - Add disks and data files
  - Reconfigure SQL Server database to use multiple data files
  - Split the database across multiple drives for increased performance
- Validate databases after migration

**Note:** Application validation to be performed by customer. Performance tuning is out of scope.

- Document migration procedure

**Note:** Database migration service portion of the Pro service is fixed scope and doesn't change based on the configuration size of the Pro service

### Small configuration includes one database type:

- Oracle: Up to 5 databases of a single variation<sup>1</sup> and of reasonable size and complexity
- SQL Server: Up to 10 database servers or 50 databases on a single variation<sup>2</sup> and of reasonable size and complexity

### Medium configuration includes one database type:

- Oracle: Up to ten 10 databases, up to 2 variations<sup>1</sup> and of reasonable size and complexity
- SQL Server: Up to 20 database servers or 100 databases, up to 2 variations<sup>2</sup> and of reasonable size and complexity

### Large configuration includes one database type:

- Oracle: Up to 40 databases, up to 3 variations<sup>1</sup> and of reasonable size and complexity
- SQL Server: Up to 50 database servers or 400 databases, up to 3 variations<sup>2</sup> and of reasonable size and complexity

<sup>1</sup>Oracle Database variation: A unique combination of a database version, database type (RAC or standalone), database storage (ASM or file system), operating system and node type (physical or virtual)

<sup>2</sup>SQL Server variation: A unique combination of a database version, database type (AAG, FCI or standalone), operating system and node type (physical or virtual)

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## TASKS

	Duration
Database Design Workshop	3 or more days
Database Migration Planning Workshop	3 or more days
Database and NDB Installation	Up to 3 days
Database Backup Architecture and Copy Data Management	Up to 2 days
Database Migration Using Database Native Tools	Up to 5 days

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## TERMS AND CONDITIONS

This document contains the entire scope of the service offer. Anything not explicitly included above is out of scope. This service offer is subject to the Nutanix Services General Terms and Conditions that can be viewed at <https://www.nutanix.com/support-services/consulting-services/terms-and-conditions>



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