How to Guide

Azure Migration Scenario – MongoDB

Microsoft

NoSQL databases and Microsoft Azure

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OVERVIEW

This article provides a brief overview of NoSQL databases on a Microsoft Azure Cloud environment. Migration of the NoSQL databases from AWS or another cloud provider to Microsoft Azure generally involves two steps: infrastructure migration (deployment of the DB engine) and data migration.

DEPLOYMENT

There are two most common NoSQL solutions to be deployed in Microsoft Azure: Microsoft DocumentDB and MongoDB.

- **DocumentDB** is a true schema-free NoSQL document database service provided by Microsoft in Azure Cloud. Here is the starting point of the documentation: https://azure.microsoft.com/enus/documentation/articles/documentdb-introduction/
- **MongoDB** is a well-known open source NoSQL database. https://docs.mongodb.org/manual/?_ga=1.34680609.1023724.1446806197

The Azure Cloud Computing stack provides the following levels: Software as a Service (SaaS), Platform as a Service (PaaS) and Infrastructure as a Service (IaaS). The table below shows possible deployments of MongoDB and DocumentDB.

	MongoDB	DocumentDB
Software as a Service	+	+
Platform as a Service	+	-
Infrastructure as a Service	+	-

MongoDB IaaS/PaaS deployment

MongoDB can be deployed on a Virtual Machine in Azure (IaaS) running Windows or Linux OS.

- A step-by-step guide outlining how to install MongoDB on a Windows machine can be found here: https://azure.microsoft.com/en-us/documentation/articles/virtual-machines-install-mongodb-windowsserver/
- Here is a 'how to' guide for Linux based VMs: https://docs.mongodb.com/v3.0/administration/install-onlinux/
- You can leverage Azure PaaS and install MongoDB on a Worker Role which is very close to installation to a standalone VM. The following 'how to' guide with tips and tricks can be very useful: https://docs.mongodb.org/ecosystem/platforms/windows-azure/

- Microsoft provides complete end-to-end scenario of web application which uses MongoDB at the backend. It includes the step-by-step documentation, code snippets and full source code, which is

publically available here: https://azure.microsoft.com/en-us/documentation/articles/web-sites-dotnetstore-data-mongodb-vm/

MongoDB SaaS deployment

MongoLab (https://mongolab.com/azure/) provides a MongoDB-as-a-Service on Microsoft Azure.

DATA MIGRATION

The following data migration scenarios are available, depending on the target NoSQL database:

- Standard MongoDB backup and restore procedure: https://docs.mongodb.org/manual/tutorial/backupand-restore-tools/
- DocumentDB supports data migration from MongoDB: https://azure.microsoft.com/enus/documentation/articles/documentdb-import-data/#Overviewl
- MongoLab provides a set of tools for data migration: http://docs.mongolab.com/migrating/