

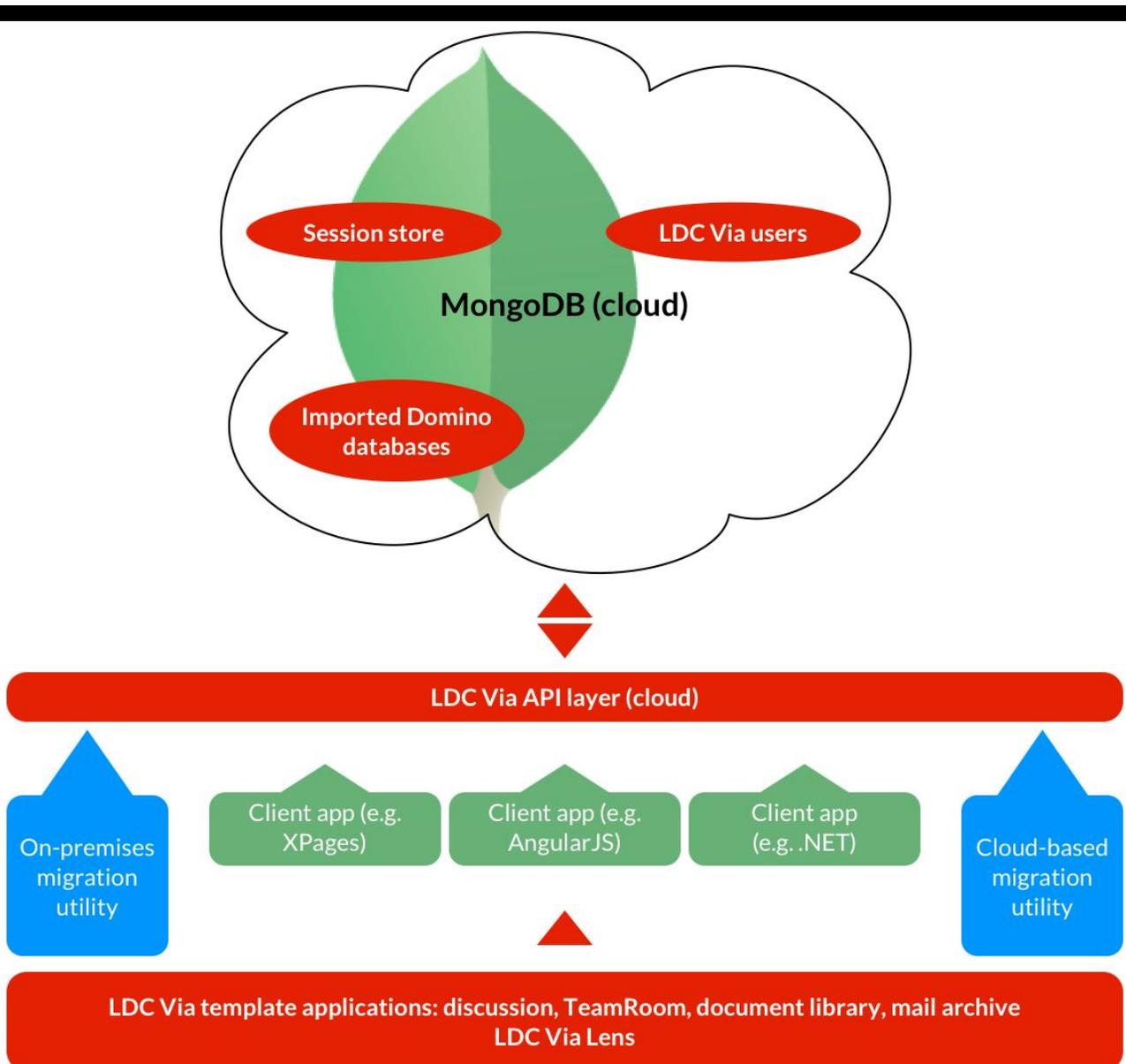


# White paper: LDC Via for Domino Migration

## Overview

LDC Via comprises five core components:

1. A set of tools which facilitate the migration of IBM Domino-based data ("documents") to the popular "NoSQL" database platform, MongoDB.
2. A RESTful web API providing an interface to your data. The API implements the "readers and authors" security layer familiar to Domino users, and permits the retrieval, manipulation and creation of migrated and new documents, management of users, etc.
3. A web-based document browser, which displays your data in a pleasing way, and allows simple searches and exports.
4. A number of "out of the box" template applications for interacting with data migrated from standard Domino templates (discussion, document library, TeamRoom, mail archive).
5. LDC Via Lens: a simple configurable application "template" which lets organisation super-users define "forms" and "views" for data hosted in LDC Via so that users can work with imported data right from the get-go.



## Example use-cases

### Data archiving

Simple, cost-effective data archiving which allows for the reduction (or wholesale retirement) of Domino storage. The on-line data viewing tools within LDC Via allow users to quickly track down required data, run simple queries, etc. The API even means that Domino applications can continue to function as they are, only with older data archived in LDC Via, keeping the Domino application lightweight and performant.

### End of life Domino apps

Domino environments can be retired, whilst underlying data and / or applications can be moved to LDC Via and given a new lease of life via the LDC Via API.

We offer example code demonstrating how migrated Domino data can be re-purposed using the LDC Via API in IBM XPages, in an AngularJS application (static HTML and Javascript), as well as from a standard node.js web application using the popular middleware Express. With the RESTful API model, many other approaches are possible: you pick the development environment and tools best suited for the job, whether that's Java-based, Javascript-based, PHP, .NET and C#, hosting within a portal offering or SharePoint, etc.

### External app integration

Many Domino apps sit inside the organisational firewall. Where integration with third parties is desirable, pushing selected data to LDC Via in the cloud is a compelling option—the API's RESTful interface can then provide the required functionality whilst limiting the impact on internal applications and their functionality.

### Data staging, analytics & reporting

Once data is in MongoDB, there are various options when it comes to reporting: pre-aggregation services can assist here, and there are plenty of third-party reporting solutions built on MongoDB (for example, Pentaho, JasperReports, or icCube offerings like icStorm and icCake).

Of course, data in NoSQL systems like MongoDB are essentially "schema-less" and more traditional business intelligence solutions can find this a challenge. If these older tools are required, one option is to use MongoDB as a "staging environment" from which normalised data can be fed into a relational database for onward analysis and reporting.

## The API

MongoDB is a document store, and as such a good fit for migrated Domino data, but it doesn't offer the same levels of security we take for granted in our Domino applications. This is where the security layer in LDC Via comes in, as the tool offers user management and security features over and above those found in MongoDB, designed in a way that will be familiar to Domino users.

Our bundled standard templates and samples show how the LDC Via API can be used to access migrated data. Here are just some of the things the API provides:

- The ability to list and delete document collections (these can include all field values, with rich text represented in text format).
- The ability to read and write to specific documents, including rich text.
- The ability to create LDC Via users, linked to the relevant organisation.
- Document data such as field values, attachments and doclinks can all be queried.
- The API provides utility methods to perform useful actions such as deriving a list of distinct values from a given field across a whole collection (akin to a `@DbColumn` call on a view of similar document types in Notes).
- Full-text search functionality, which honours any document security set, is available for all paid tiers in LDC Via.
- Data can be exported to Microsoft Excel and to PDF.

## How data migration works

Migration of Domino data into LDC Via works in two main ways:

1. *Entirely in the cloud.* LDC Via pulls Domino data from a web-facing server via Domino Data Services. This requires a modern version of Domino, and the server needs to be internet-facing.
2. *On-premises to LDC Via (cloud).* We supply a software tool that can be run on a workstation or server. This uses the Domino Java API to push the Domino data into the LDC Via cloud.

In the near future we will offer an "LDC Via appliance" which bundles the full LDC Via application layer with MongoDB, geared up for running on-premises within the firewall. Note however that this is still in development—if you are interested in beta testing the LDC Via appliance offering, please get in touch.

*If you have specific requirements for your on-premises implementation please contact us.*

## Statement of direction

LDC Via version 1.0 was released on schedule at the end of March 2015. Subsequent releases have added more functionality such as LDC Via Lens (a simple generic "forms and views" template for any migrated application), plus premium features such as full-text search. Future plans for LDC Via include:

- More comprehensive user management tooling.
- Single Sign On (SSO) integration with corporate systems such as the Domino Directory or Active Directory, using technologies such as OAuth and SAML.
- An on-premises appliance-based implementation of the full LDC Via product, for those organisations that prefer to keep their data and applications inside the firewall.
- Comprehensive training documents and videos, for both data migration and the development of applications using the LDC Via APIs.
- More out-of-the-box template applications (suggestions welcome!)
- Investigations around providing an end-to-end migration offering for IBM Quickr instances (i.e. data migration plus template application).
- Bi-directional synchronisation: currently the tool is a one way push from Domino into MongoDB, but there are plans to offer synchronisation for systems which span the platforms.
- Possible expansion to other "endpoint" database platforms should there be the demand. For example, Microsoft SQL Server, or other NoSQL document stores like Cloudant and CouchBase.

## About LDC Via

LDC Via Ltd. was formed in 2014 from the LDC brand, which in turn dates back to 2008. The LDC via website can be found at <http://ldcvia.com> and the team are available on Twitter at [@ldcvia](https://twitter.com/ldcvia) or via email at [support@ldcvia.com](mailto:support@ldcvia.com).