

z/TPF Support for MongoDB: User management enhancements

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z/TPF Development Lab

z/TPF Support for MongoDB - Overview

MongoDB by the numbers

85m

Downloads

With over 85 million downloads and MongoDB Atlas clusters, MongoDB is hands-down one of the most widely used databases in the industry

1mil

Community members

The official MongoDB forums have over a million users discussing the database management system daily

12

Officially supported languages

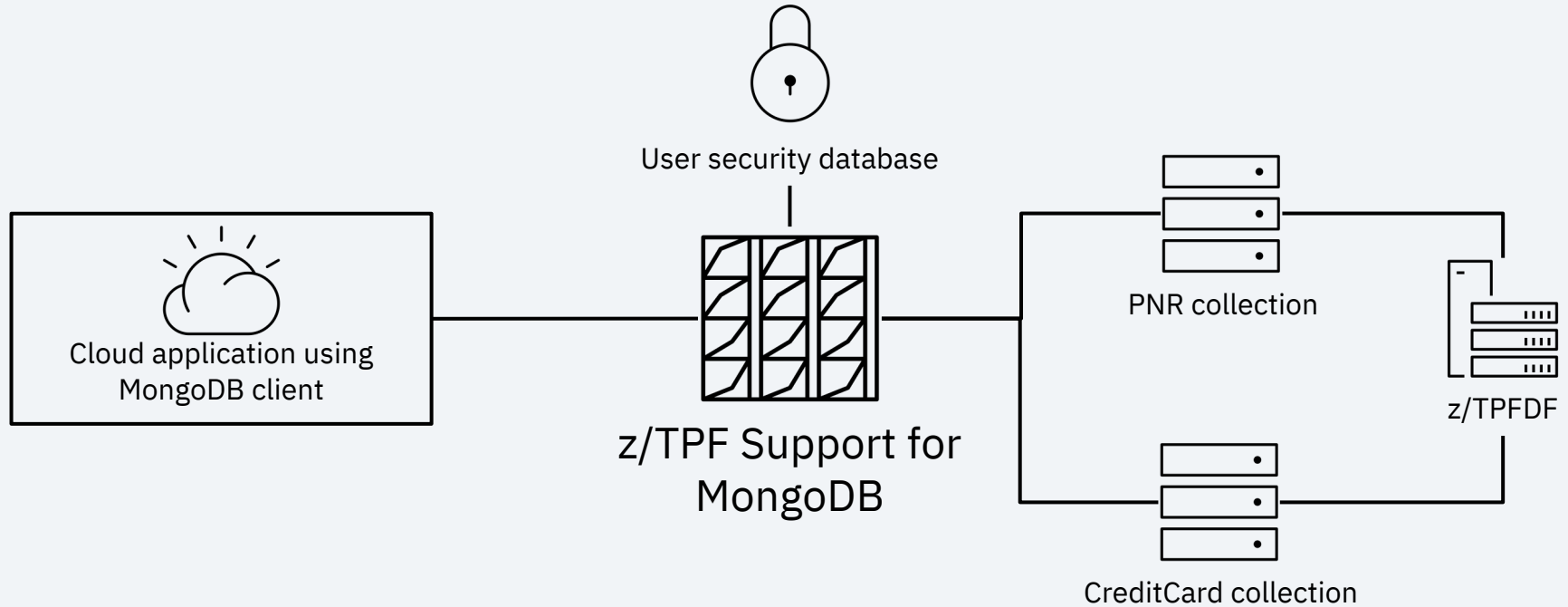
MongoDB officially supports libraries for 12 programming languages, running the gamut from legacy standards like C to up-and-comers like Rust

35k

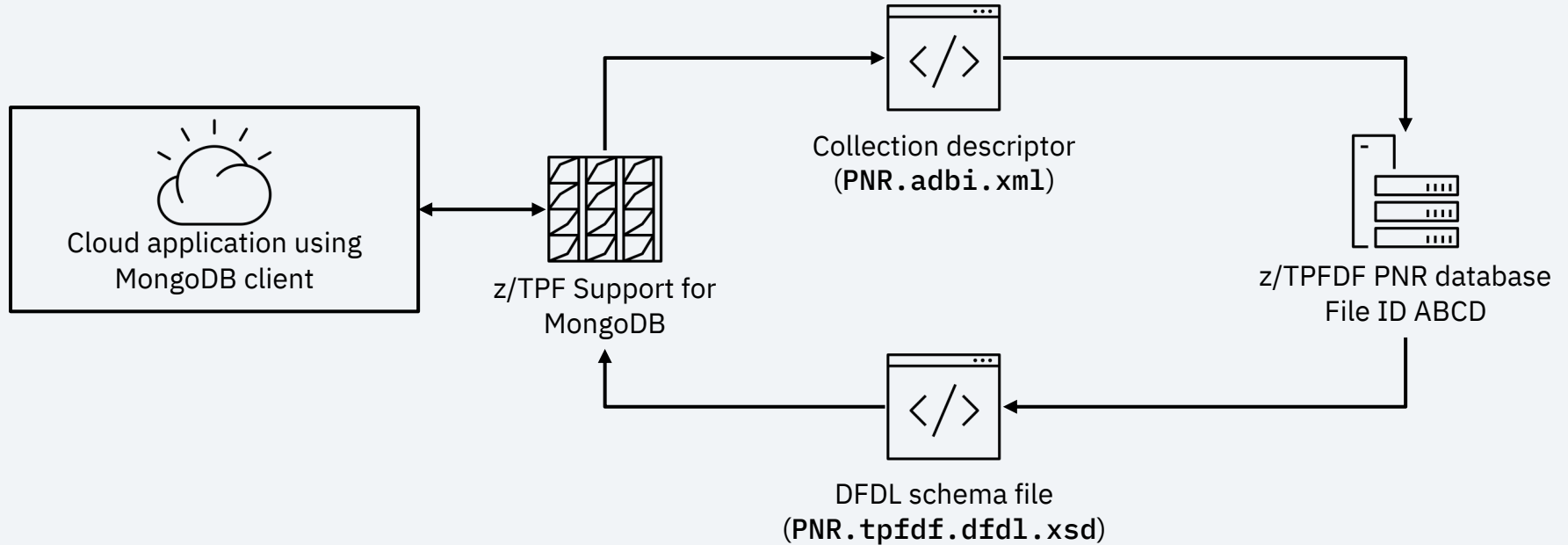
GitHub repos

The active MongoDB community provides a wealth of examples and use cases for MongoDB usage

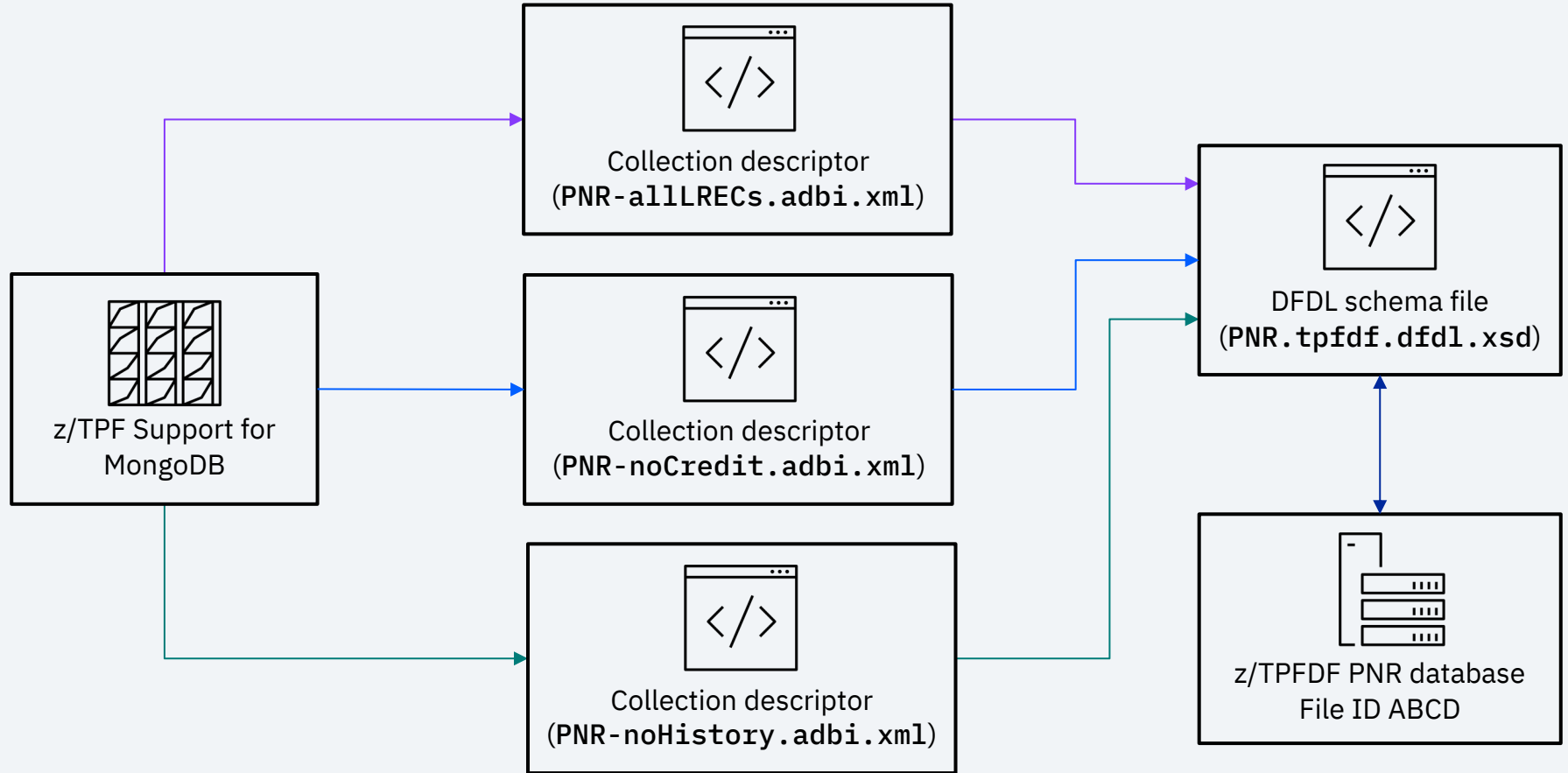
Accessing z/TPFDF data from cloud applications



Configuring a collection



Same data, different lenses



z/TPF User Security Database



Collections

A collection represents a z/TPFDF file ID. Each collection contains documents, which represent the subfiles in the z/TPFDF file.



Roles

Roles define different privileges that a user might have for a collection. Each role can be configured with the permissions to read, update, insert, and/or delete documents in one or more collections.



Users

Different users have different needs and permissions. Each MongoDB client may only need to access certain collections. A user can have many roles, each of which provide privileges to one or more collections.



Management

You can use the ZROLE command to create, modify, and delete roles. You can use the ZRUSR command to create, modify, and delete users. You can also use ZRUSR to manage the roles that each user has.

A MongoDB client can also issue standard user and role management commands to a z/TPF MongoDB server.

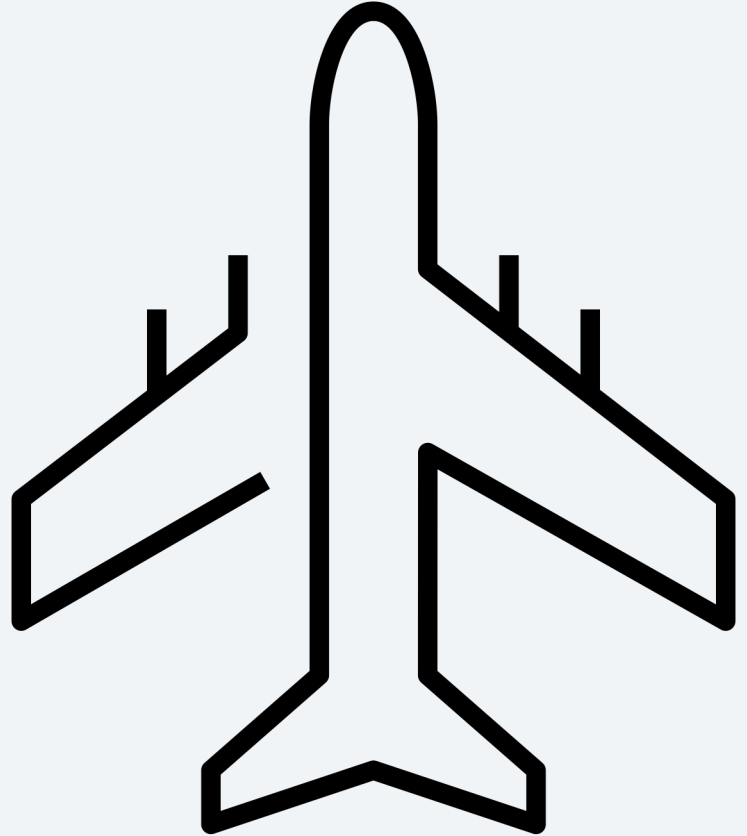
Enhancement: Individual Role Management Commands

(PJ46331, March 2021)

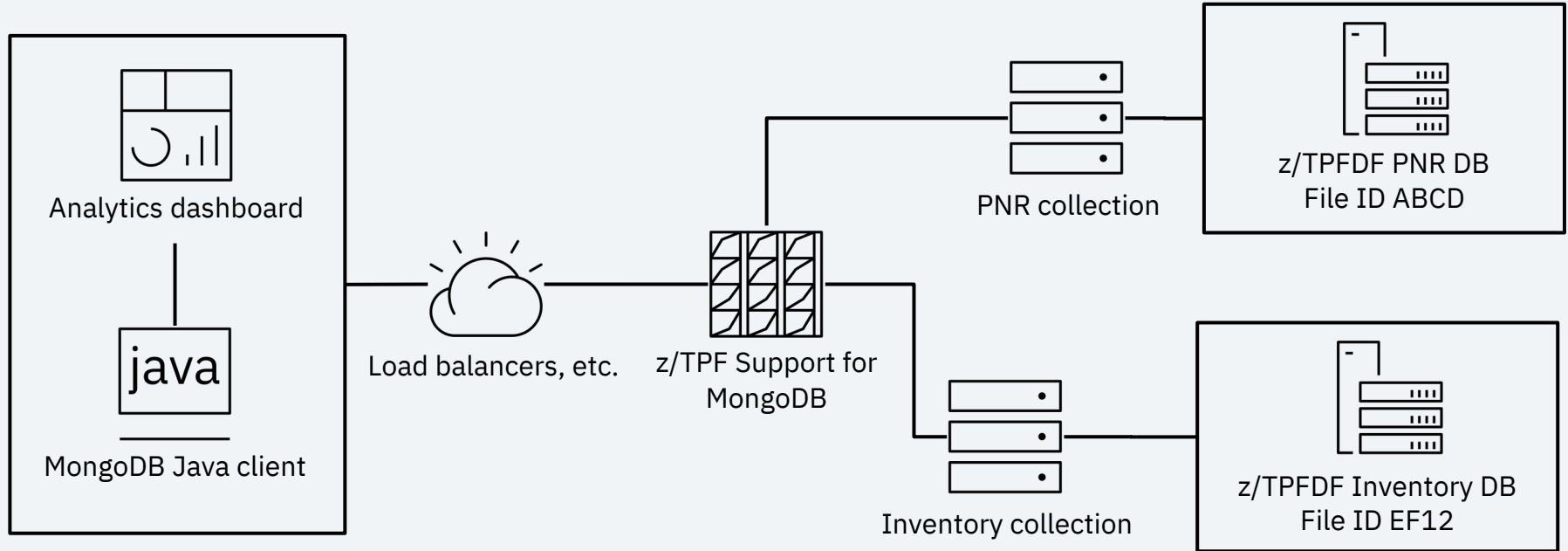
Introducing Airlines, Inc.

Airlines, Inc. is a global distribution system. Recently, they have been investing heavily into modernizing their reservation systems while maintaining the resiliency of their existing legacy infrastructure.

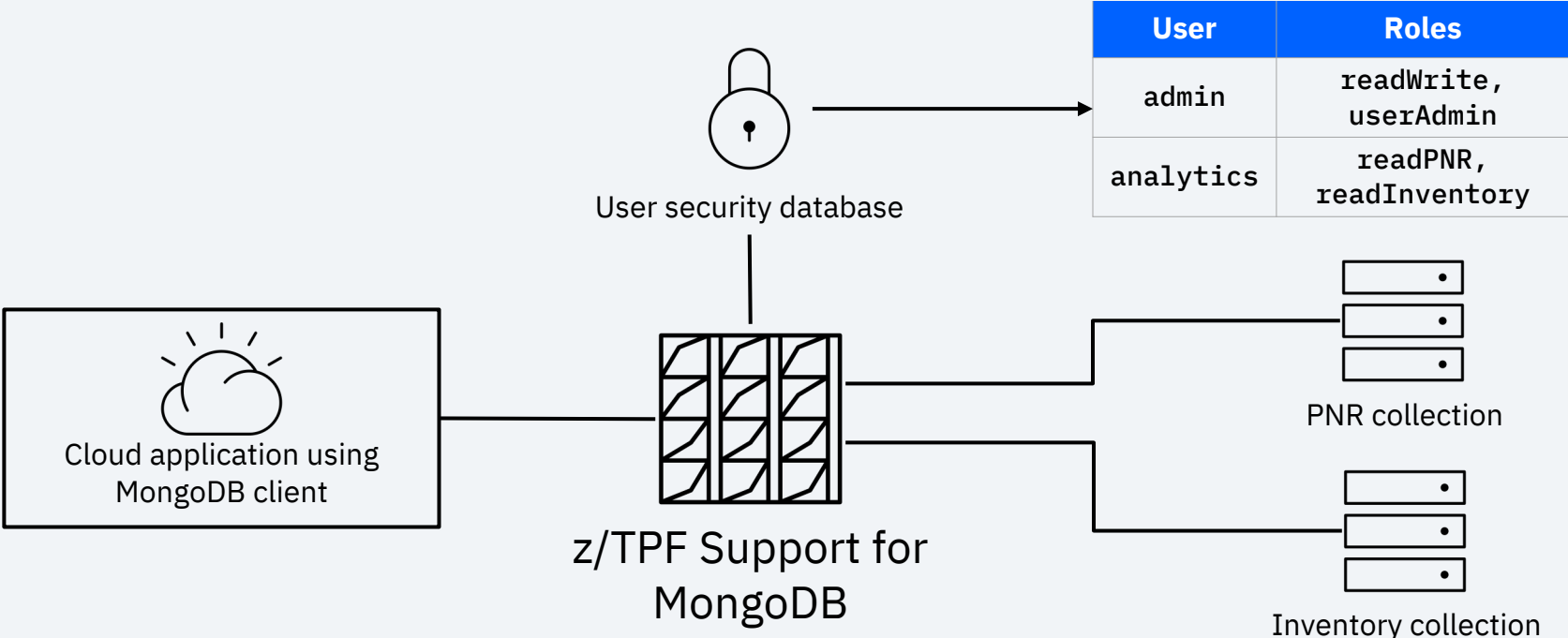
Does that sound like anyone you know?



Analytics with z/TPF Support for MongoDB



Controlling Access to Sensitive Data



Pain Points

As Airline, Inc. expands usage of z/TPF Support for MongoDB, they develop more MongoDB applications and add more collections to the MongoDB server.

Airline, Inc.'s database administrator, Andres, manages each user's access to each collection. When a user needs access to a database, Andres enters a **ZRUSR UPDATE** command to modify the user's roles.

ZRUSR UPDATE only supports a full replacement of a user's role list. To add a role, Andres must specify each of the user's existing roles along with the new role. As the number of collections and users grows, it becomes tedious and error-prone to enter the full list of roles on each entry.



Individual role management commands

PJ46331 provides support for two new **ZRUSR** commands:

Use **ZRUSR GRANT** to add one or more new roles to a MongoDB user.

Use **ZRUSR REVOKE** to remove one or more roles from a MongoDB user.

PJ46331 also provides support for equivalent MongoDB commands:

Use **db.grantRolesToUser()** to add one or more new roles to a MongoDB user.

Use **db.revokeRolesFromUser()** to remove one or more roles from a MongoDB user.

Now, Andres can easily grant or revoke a user's access to a particular collection without manually entering a long list of roles.

Sponsor User Program

Your
requirements
drive our
development.

We want sponsor users!

Our development cycle is driven by your feedback.

Please don't hesitate to submit an RFE, contact us through email, or open a support case.

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Questions?

Thank you

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