# Data Manual for Licensing Self-Certification Portal (LSCP)

**Version: 1.1** (Combined from v0.1 and Data Catalogue v1.1)

**January 21, 2025**

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| Amendment History |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Change Number | Revision Description | Pages Affected | Revision/Version Number | Date | Approval Reference |
| 1 | First Draft | All | 1.0 | 21/01/2025 |  |
| 2 | Added missing models and descriptions | 1,3,4-6 | 1.1 | 21/01/2025 |  |
| 3 | 1st draft (Initial Data Manual) | All | 0.1 | 16/01/2025 |  |

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# **1. Introduction**

This document provides a comprehensive data catalogue for the Combined System Development Services of the Licensing Self-Certification Portal (LSCP) of the Buildings Department (BD). The system utilizes a dual-database architecture, incorporating MongoDB for operational data and Microsoft SQL Server (MSSQL) for transactional data. This catalogue details the structure, statistics, and key aspects of each database to facilitate understanding and management of the system's data assets.

# **2. Definitions**

| Terms | Definitions |
| --- | --- |
| BD | Buildings Department |
| LSCP | Licensing Self-Certification Portal |
| AP | Authorized Person |
| RSE | Registered Structural Engineer |
| IAM Smart | A single digital identity authentication platform for the Hong Kong Government |
| OTP | One-Time Password |
| BD Letter | A formal letter issued by Buildings Department |
| LSO | Licensing Subject Officer |
| MSSQL | Microsoft SQL Server database |
| MongoDB | NoSQL document-oriented database |

# **3. Data Architecture Overview**

The LSCP system employs a dual-database architecture designed for optimal performance and data integrity.

## MongoDB Database

MongoDB serves as the primary operational database, handling dynamic application data, user sessions, and day-to-day operations. Its flexible schema allows for evolving data structures and supports high-volume read operations.

**Key Statistics (as of 2025/3/4 10:10:39 AM):**

* Database Size: 88.10 MB
* Collections: 12
* Total Documents: 1,278,983
* Total Data Size: 371.24 MB

## MSSQL Database

Microsoft SQL Server serves as the transactional database, storing structured data related to applications, submissions, and system reference data. It provides robust data integrity, transaction support, and is named bd\_scs with schema dbo.

## Data Flow Between Systems

* MongoDB manages frontend operational data and user sessions.
* MSSQL stores backend transactional data and historical records.
* Data synchronization occurs through application services.
* Critical data is maintained in both systems with appropriate reconciliation mechanisms.

## Data Entity Relationships

The following diagram represents the high-level relationships between key entities across both databases:

+----------------+  
 | Users |  
 +----------------+  
 |  
 v  
+----------------+ +----------------+ +----------------+  
| Applications |<---------->| Cases |<---------->| Submissions |  
+----------------+ +----------------+ +----------------+  
 | | |  
 v v v  
+----------------+ +----------------+ +----------------+  
| Attachments | | Tasks | | Eminutes |  
+----------------+ +----------------+ +----------------+

# **4. Database Specifications**

This section provides detailed specifications for both databases used in the LSCP system, including collection/table structures, data types, and descriptions.

## 4.1 MongoDB Collections

MongoDB is used for operational data with the following collections:

### 4.1.1 tasks

**Collection Statistics**

* Document Count: 5,523
* Size: 0.99 MB
* Average Document Size: 0.18 KB

**Field Analysis**

| Field Name | Data Type | Occurrences | Description |
| --- | --- | --- | --- |
| \_\_v | objectId, int | 1000 | Version number |
| \_id | objectId | 1000 | Unique identifier |
| application | objectId | 998 | Reference to application |
| createdAt | date | 1000 | Creation timestamp |
| status | string | 1000 | Task status |
| submissionCase | objectId | 998 | Reference to submission case |
| taskType | string | 998 | Type of task |
| team | string | 835 | Team assigned to the task |
| user | string, objectId | 713 | User assigned to the task |

### 4.1.2 eminutes

**Collection Statistics**

* Document Count: 133
* Size: 0.03 MB
* Average Document Size: 0.24 KB

**Field Analysis**

| Field Name | Data Type | Occurrences | Description |
| --- | --- | --- | --- |
| \_\_v | int | 133 | Version number |
| \_id | objectId | 133 | Unique identifier |
| comment | string | 64 | Comment text |
| content | string | 133 | Main content |
| createdAt | date | 133 | Creation timestamp |
| efolio | string | 100 | Electronic folio reference |
| eminuteId | string | 133 | Minute identifier |
| from | objectId, string | 133 | Sender reference |
| status | string | 133 | Status of the minute |
| subject | string | 133 | Subject of the minute |
| submissionCase | objectId | 133 | Reference to submission case |
| sysFileRefId | string | 65 | System file reference ID |
| to | objectId, string | 129 | Recipient reference |

### 4.1.3 submissions

**Collection Statistics**

* Document Count: 0
* Size: 0.00 MB
* Average Document Size: 0.00 KB

**Note:** This collection exists but currently contains no documents.

### 4.1.4 applications

**Collection Statistics**

* Document Count: 381
* Size: 0.36 MB
* Average Document Size: 0.96 KB

**Field Analysis**

| Field Name | Data Type | Occurrences | Description  
| Field Name | Data Type | Occurrences | Description

### 4.1.5 notifications

**Collection Statistics**

* Document Count: 1,837
* Size: 0.24 MB
* Average Document Size: 0.13 KB

**Field Analysis**

| Field Name | Data Type | Occurrences | Description |
| --- | --- | --- | --- |
| \_\_v | int | 1000 | Version number |
| \_id | objectId | 1000 | Unique identifier |
| createdAt | date | 1000 | Creation timestamp |
| eminute | objectId | 58 | Reference to e-minute |
| notificationType | string | 1000 | Type of notification |
| requireSendEmail | bool | 1000 | Flag indicating if email should be sent |
| task | objectId | 942 | Reference to task |
| user | string | 991 | User associated with the notification |

### 4.1.6 bsblocks

**Collection Statistics**

* Document Count: 98,397
* Size: 6.40 MB
* Average Document Size: 0.07 KB

**Field Analysis**

| Field Name | Data Type | Occurrences | Description |
| --- | --- | --- | --- |
| \_\_v | int | 1000 | Version number |
| \_id | objectId | 1000 | Unique identifier |
| bdgis | string | 1000 | BDGIS identifier |
| blockId | string | 1000 | Block identifier |

### 4.1.7 cases

**Collection Statistics**

* Document Count: 451
* Size: 1.17 MB
* Average Document Size: 2.65 KB

**Field Analysis**

| Field Name | Data Type | Occurrences | Description |
| --- | --- | --- | --- |
| ActualReplyDate | null, date | 39 | Actual reply date |
| Area | string | 26 | Area |
| AuditResult | string | 11 | Audit result |
| CaseOfficer | string | 108 | Case officer |
| Category | string | 384 | Case category |
| District | string | 37 | District |
| FileReference | string | 60 | File reference |
| LAFileReference | object | 17 | LA file reference |
| Nature | null, string | 382 | Nature of the case |
| ObjectiontoLR | string | 12 | Objection to LR |
| ReceivedDate | date, null | 375 | Received date |
| Referrer | object | 43 | Referrer information |
| Region | string | 32 | Region |
| Remarks | string | 7 | Remarks |
| Reminders | array | 55 | Reminders |
| SubmissionType | string | 8 | Submission type |
| SubstantialReplyDate | null, date | 42 | Substantial reply date |
| TargetReplyDate | date, null | 111 | Target reply date |
| ThreeTierReqt | string | 12 | Three-tier requirement |
| ViaSCS | bool | 17 | Via SCS |
| \_\_v | int | 451 | Version number |
| \_id | objectId | 451 | Unique identifier |
| application | objectId | 450 | Reference to application |
| assignedBS | objectId | 274 | Assigned Building Surveyor |
| assignedGR | objectId | 137 | Assigned General Registry |
| building\_information | object | 14 | Building information |
| caseDescription | object | 9 | Case description |
| caseOfficerReceive | string | 172 | Case officer receiving |
| caseOfficerReply | string | 72 | Case officer reply |
| createdAt | date | 451 | Creation timestamp |
| deck\_study | object | 451 | Deck study information |
| documentChecklist | object | 2 | Document checklist |
| dv | object | 197 | DV information |
| frc | object | 451 | FRC information |
| misc | object | 451 | Miscellaneous information |
| moe | object | 451 | MOE information |
| seniorCaseOfficerReceive | string | 54 | Senior case officer receiving |
| seniorCaseOfficerReply | string | 41 | Senior case officer reply |
| site\_inspection | object | 7 | Site inspection information |
| structural\_ccc\_bs | object | 451 | Structural CCC BS information |
| structural\_schnlh | object | 152 | Structural SCHNLH information |
| structural\_schnlhkinds | object | 301 | Structural SCHNLH kinds information |
| team | string | 374 | Team assigned to the case |
| ubw | object | 451 | UBW information |
| updatedAt | date | 16 | Last update timestamp |

### 4.1.8 oauthtokens

**Collection Statistics**

* Document Count: 3,019
* Size: 2.29 MB
* Average Document Size: 0.78 KB

**Field Analysis**

| Field Name | Data Type | Occurrences | Description |
| --- | --- | --- | --- |
| \_\_v | int | 1000 | Version number |
| \_id | objectId | 1000 | Unique identifier |
| accessToken | string | 1000 | Access token |
| accessTokenExpiresAt | date | 1000 | Access token expiration timestamp |
| client | object | 1000 | Client information |
| refreshToken | string | 1000 | Refresh token |
| refreshTokenExpiresAt | date | 1000 | Refresh token expiration timestamp |
| user | objectId | 1000 | Reference to user |

### 4.1.9 sysfilerefs

**Collection Statistics**

* Document Count: 601,808
* Size: 204.70 MB
* Average Document Size: 0.35 KB

**Field Analysis**

| Field Name | Data Type | Occurrences | Description |
| --- | --- | --- | --- |
| \_\_v | int | 1000 | Version number |
| \_id | objectId | 1000 | Unique identifier |
| createdDt | date | 1000 | Creation date |
| createdName | null, string | 1000 | Creator name |
| createdPost | null, string | 1000 | Creator post |
| fileDescription | null, string | 1000 | File description |
| fileName | string | 1000 | File name |
| fileSize | int | 1000 | File size in bytes |
| fileType | string | 1000 | File type (MIME type) |
| lastModifiedDt | date | 1000 | Last modified date |
| lastModifiedName | null, string | 1000 | Last modifier name |
| lastModifiedPost | null, string | 1000 | Last modifier post |
| refType | string | 1000 | Reference type |
| storageType | string | 1000 | Storage type |
| sysFileRefId | string | 1000 | System file reference ID |
| uploadName | string | 1000 | Uploader name |

### 4.1.10 attachments

**Collection Statistics**

* Document Count: 57,161
* Size: 26.85 MB
* Average Document Size: 0.48 KB

**Field Analysis**

| Field Name | Data Type | Occurrences | Description |
| --- | --- | --- | --- |
| \_\_v | int | 1000 | Version number |
| \_id | objectId | 1000 | Unique identifier |
| application | objectId | 999 | Reference to application |
| createdAt | date | 1000 | Creation timestamp |
| fileDescription | string | 1000 | File description |
| fileName | string | 1000 | File name |
| fileSize | int | 1000 | File size in bytes |
| fileType | string | 1000 | File type (MIME type) |
| sysFileRef | string | 1000 | System file reference |
| updatedAt | date | 999 | Last update timestamp |
| user | string | 1000 | User who uploaded the attachment |

### 4.1.11 users

**Collection Statistics**

* Document Count: 1,156
* Size: 0.68 MB
* Average Document Size: 0.61 KB

**Field Analysis**

| Field Name | Data Type | Occurrences | Description |
| --- | --- | --- | --- |
| \_\_v | int | 1000 | Version number |
| \_id | objectId | 1000 | Unique identifier |
| createdAt | date | 1000 | Creation timestamp |
| displayName | string | 1000 | Display name |
| email | string | 1000 | Email address |
| enabled | bool | 1000 | User enabled status |
| groups | array | 1000 | User groups |
| password | string | 1000 | Hashed password |
| passwordExpired | bool | 1000 | Password expired status |
| phone | string | 1000 | Phone number |
| photoURL | string | 1 |  |