# Application Operation Manual

## 1. Introduction

This document provides comprehensive information for operating and maintaining the Licensing Self-Certification Portal (LSCP) system. It covers system architecture, software inventory, security measures, backup procedures, and disaster recovery plans. This manual is intended for system administrators, IT support staff, and application maintenance teams.

## 2. System Overview

The LSCP system is designed to provide an electronic platform for the Buildings Department (BD) to manage licensing self-certification processes. It consists of two subsystems:

* **LSCP Web:** An external-facing web application for public users (applicants, AP/RSEs).
* **LSCP Mobile:** A mobile application (likely iAM Smart) for secure user authentication and digital signing.

## 3. System Architecture

The LSCP system is deployed in two primary data centers:

* **On-Premise (WKGO):** Located at the West Kowloon Government Offices. This environment hosts Production, UAT, and DEV instances behind an internal firewall.
* **Government Cloud Infrastructure Services (GCIS):** A cloud-based environment with Production and DR instances, segmented into iDMZ, Trusted Zone, and gDMZ subnets.

### 3.1. Key Components

* **External Application Servers (IIS):** Serve static web content (HTML, CSS, JavaScript) to external users.
* **External Web Servers (Node.js/ExpressJS):** Handle business logic, database operations, and API requests from the frontend.
* **BD Web Servers:** Similar to External Web Servers, but for internal BD users accessing the system through the Departmental Portal (OSDP).
* **Database Management Servers (Microsoft SQL Server):** Store system data, user information, and application data.
* **File Server:** Stores temporary and permanent files.
* **Reverse Proxy Servers:** Provide load balancing and security (WAF) for incoming requests.
* **vCenter Server:** Manages the VM Hypervisors on the physical servers.
* **Veeam Backup Server:** Creates and manages VM image backups.
* **Kiwi Log Server:** Centralized logging for system and application events.

### 3.2. System Diagram

(Refer to the original document for diagrams of the system architecture in both Production and DR environments.)

## 4. Software Inventory

### 4.1. Application Programs

Details of application programs are available in the Program Manual (T352).

### 4.2. System Software and Software Packages

#### WKGO Production Environment

| Machine | Hostname | Software