# Application Operation Manual for Licensing Self-Certification Portal (LSCP)

**Version: 0.1**

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## 1. Introduction

This Application Operation Manual (AOM) provides relevant information for the application operation staff of the Licensing Self-Certification Portal (LSCP) system. It documents instructions for running the application system, including job submission, report checking, and dispatching. This manual covers both the LSCP Web and LSCP Mobile subsystems.

## 2. Scope

This manual describes relevant information for the application operation staff of the LSCP system.

## 3. References

* System Analysis and Design Report
* System Manual (T351)
* Program Manual (T321)
* Computer Operation Procedure Manual (T356)

## 4. Definitions and Conventions

* **BD:** Buildings Department
* **LSCP:** Licensing Self-Certification Portal
* **DMZ:** Demilitarized Zone
* **SAN:** Storage Area Network
* **VM:** Virtual Machine
* **ITU:** Information Technology Unit
* **WKGO:** West Kowloon Government Offices
* **GCIS:** Government Cloud Infrastructure Services

## 5. System Overview

The LSCP system aims to provide an electronic platform for site inspection and monitoring personnel to manage and review records.

### 5.1 System Architecture

The LSCP system comprises two subsystems: LSCP Web and LSCP Mobile. The system is hosted across two datacenters: On-premises (WKGO) and Government Cloud Infrastructure Services (GCIS).

* **On-Premise (WKGO):** Behind an internal firewall with NAT, divided into Production, UAT, and DEV subnets for internal users. A reverse proxy server with load balancing is used for increased security.
* **GCIS:** Divided into Internet DMZ (iDMZ), Trusted Zone, and Gnet DMZ (gDMZ). Both iDMZ and gDMZ have reverse proxy servers and Web Application Firewalls (WAF).

### 5.2 System Media Input and Output

LSCP application uses Veeam for backup and restore. Refer to the Computer Operation Procedure Manual for details.

## 6. Operations Description

### 6.1 Online Schedule

LSCP Web Service is available according to the following schedule:

| Day | Time |
| --- | --- |
| Monday to Friday | 00:00 ? 23:59 |
| Saturday | 00:00 ? 23:59 |
| Sunday | 00:00 ? 23:59 |
| Public Holiday | 00:00 ? 23:59 |

## 7. Scheduled Batch Jobs

The following table lists the batch jobs and their locations:

|  | Job Name | Job Description/ File Location | Running Location | Automatic / Manual Trigger |
| --- | --- | --- | --- | --- |
| 1 | INT-MWMS2-01 Data Import from MWMS2 | Import AP/RSE/RGE/RC Basic Information into LSCP database | Application Server | Automatic |
| 2 | UF-WEB-010-15 App-158 Notification | Notify representatives & TCP(s) of outstanding un-filed Form APP-158 | Application Server | Automatic |
| 3 | UF-WEB-010-10 Form A Notification | Notify representatives & TCP(s) of outstanding un-filed Form APP-A | Application Server | Automatic |
| 4 | Import SMIS Excel into LSCP | Import data from SMIS allowing users to create site projects and supervision plans | Application Server | Manual |
| 5 | Production backup |  | Veeam backup | Automatic |

### 7.1 INT-MWMS2-01 Data Import from MWMS2

| **ID/ Name** |  |
| --- | --- |
| **Hostname** |  |
| **IP** |  |
| **Task** |  |
| **Frequency** |  |
| **Files** |  |

## 8. Run Job Specifications

### 8.1 Data Import from MWMS

The contractors? information can be imported from MWMS through the Batch job.

#### 8.1.1 Functions

The contractors? information can be imported from MWMS through the Batch job.

## 9. Error Handling

### 9.1 Critical Error Handling

1. Try to access the BD Common Home from FrontEnd Server.
2. If it still fails, please try to restart frontend server. Make sure the necessary service is running after restart. Please refer to section 6.1 (shut down) and 7.10 (start up) of Computer Operation Procedure Manual
3. If not, please restart the load balancer. Please refer to section 6.10.1 (shut down) and 7.1.1 (start-up) of Computer Operation Procedure Manual.

## 10. Equipment Configuration

### 10.1 Computer Hardware

The Configuration of Physical Server in Production

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Model** | **Host Name** | **IP** | **Serial No.** | **Disk Configuration** |
| Dell PowerEdge R750 Server | prd-scs-admin-server-01 | 192.168.10.22, 10.5.161.206 | F646RX3 | RAID-5 |
| Dell PowerEdge R750 Server | prd-scs-admin-server-02 | 192.168.10.23, 10.5.161.207 | D646RX3 | RAID-5 |
| Dell PowerEdge R750 Server | prd-scs-nas | 192.168.10.35, 10.5.161.218 | ??? | ??? |

The Configuration of SAN storage in Production

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Type** | **Model** | **Serial No.** | **No. of hard disks** | **IP Address** |
| SAN Switch | Dell DS6610B | FRC1924T0CC | N/A | 192.168.10.16 |
| SAN Switch | Dell DS6610B | FRC1924T0CD | N/A | 192.168.10.17 |
| SAN Storage | Dell PowerStore 500T | HV1NBX3 | 11 | 192.168.10.26, 192.168.10.27, 192.168.10.28, 192.168.10.29 |

The Configuration of Backup storage in Production

| **Type** | **Model** | **Serial No.** | **Volume Size** | **IP Address** |
| --- | --- | --- | --- | --- |
| Backup Appliance | Dell DataDomain 3300 | 17XMBX3 | 15TB | 192.168.10.20 |

The Configuration of Tape Library in Production

| **Type** | **Model** | **Serial No.** | **No. of slots** | **IP Address** |
| --- | --- | --- | --- | --- |
| Tape Library | Dell ML3 | 3555L3A7801YY0 | 35 | 192.168.10.20 |

The Configuration of Firewalls in Production

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Host Name** | **Internal IP** | **External IP** | **Model** | **Serial No.** |
| PA-850-SCSPri | 192.168.10.12 | 10.5.161.205 | Palo Alto PA-850 | 11901063047 |
| PA-850-SCSSec | 192.168.10.13 | 10.5.161.220 | Palo Alto PA-850 | 11901063049 |

The Configuration of switches in Production

| **Host Name** | **Internal IP** | **Model** | **Serial No.** |
| --- | --- | --- | --- |
|  | 192.168.10.14 | Catalyst |  |
|  | 192.168.10.15 | Catalyst |  |

The Configuration of KVM in Production

|  |  |
| --- | --- |
| **Model** | **Serial No.** |
| Cyber View |  |

The Configuration of UPS in Production

|  |  |  |
| --- | --- | --- |
| **Model** | **Serial No.** | **IP Address** |
| Vertiv? Liebert? GXT5 3000 | 2102311887222A010008 | 192.168.11.20 |
| Vertiv? Liebert? GXT5 3000 | 2102311887222A010004 | 192.168.11.21 |

Hardware Components of Production Servers

| Item | Hardware Component | Configuration | Qty |
| --- | --- | --- | --- |
| 1 | ESXi Hypervisor Server (prd-scs-admin-server-01) | Dell PowerEdge R750 | 1 |
|  |  | Intel(R) Xeon(R) Gold 6326 CPU @ 2.90GHz | 1 |
|  |  | 32GB DDR4 Synchronous Registered (Buffered) | 8 |
|  |  | 1.2TB SAS HDD | 3 |
|  |  | ESXi 8.0.3 | 1 |
| 2 | ESXi Hypervisor Server (prd-scs-admin-server-02) | Dell PowerEdge R750 | 1 |
|  |  | Intel(R) Xeon(R) Gold 6326 CPU @ 2.90GHz | 1 |
|  |  | 32GB DDR4 Synchronous Registered (Buffered) | 8 |
|  |  | 1.2TB SAS HDD | 3 |
|  |  | ESXi 8.0.3 | 1 |
| 3 | NAS (prd-scs-nas) | Dell PowerEdge R750 | 1 |
|  |  | CPU??? | ??? |
|  |  | RAM??? | ??? |
|  |  | HDD??? | ??? |
|  |  | Windows Server 2022 | ??? |
| 4 | SAN Switch (prd-scs-sw-01) | Dell DS6610B | 1 |
|  |  | Ports | 16 |
| 5 | SAN Switch (prd-scs-sw-02) | Dell DS6610B | 1 |
|  |  | Ports | 16 |
| 6 | SAN Storage (PS500T-Cluster1) | Dell PS500T | 1 |
|  |  | 3.8TB NVME SSD | 11 |
| 7 | Backup Appliance (prd-scs-backupstorage-01) | Dell DataDomain DD3300 | 1 |
| 8 | Tape Library | DELL ML3 | 1 |
| 9 | Firewall (PA-850-SCSPri) | Palo Alto PA 850 | 1 |
| 10 | Firewall (PA-850-SCSSec) | Palo Alto PA 850 | 1 |
| 11 | Switch (???) | Cisco ??? | 1 |
| 12 | Switch (???) | Cisco ??? | 1 |
| 13 | KVM | CyberView | 1 |
| 14 | UPS (???) | Vertiv? Liebert? GXT5 3000 | 1 |
| 15 | UPS (???) | Vertiv? Liebert? GXT5 3000 | 1 |

Partition Configuration of Production Servers

| **Host Name** | **Drive** | **Capacity** | **Description** |
| --- | --- | --- | --- |
| prd-scs-admin-server-01 | local | 2.4TB | VMware ESXi Operating system |
| prd-scs-admin-server-02 | local | 2.4TB | VMware ESXi Operating system |
| PS500T-Cluster1 | VM\_Volume01 | 20TB | Shared pool of storage space |
| PS500T-Cluster1 | QuorumDisk-VM-1 | 2.5GB | Shared pool of storage space |
| prd-scs-nas | C: | ??? | OS |
|  | D: | ??? | Data |

The Configuration of Physical Server in DR Site

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Model** | **Host Name** | **IP** | **Serial No.** | **Disk Configuration** |
| Dell PowerEdge R750Server | dr-scs-admin-server-01 | 192.168.20.17, 10.5.174.216 | G646RX3 | RAID-5 |
| Dell PowerEdge R750Server | dr-scs-nas | 192.168.20.35, 10.5.174.225 | ??? | ??? |

The Configuration of SAN storage in DR Site

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Type** | **Model** | **Serial No.** | **No. of hard disks** | **IP Address** |
| SAN Switch | Dell DS6610B | FRC1924T0CE | N/A | 192.168.20.14 |
| SAN Storage | Dell PowerStore 500T | 3W1NBX3 | 11 | 192.168.20.20, 192.168.20.21, 192.168.20.22, 192.168.20.23 |

The Configuration of Backup storage in Production

| **Type** | **Model** | **Serial No.** | **Volume Size** | **IP Address** |
| --- | --- | --- | --- | --- |
| Backup Appliance | Dell DataDomain 3300 | J6XMBX3 | 15TB | 192.168.20.25 |

The Configuration of Firewalls in DR Site

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Host Name** | **Internal IP** | **External IP** | **Model** | **Serial No.** |
| PA-850-SCSDR | 192.168.20.12 | 10.5.174.215 | Palo Alto PA-850 | 011901063069 |

The Configuration of Switches in DR Site

|  |  |  |  |
| --- | --- | --- | --- |
| **Host Name** | **Internal IP** | **Model** | **Serial No.** |
| ??? | 192.168.20.13 | Catalyst ??? | ??? |

The Configuration of UPS in DR Site

|  |  |  |
| --- | --- | --- |
| **Model** | **Serial No.** | **IP Address** |
| Vertiv? Liebert? GXT5 3000 | 2102311887222A01000A | 192.168.20.11 |

Hardware Components of Disaster Recovery Servers

| Item | Hardware Component | Configuration | Qty |
| --- | --- | --- | --- |
| 1 | ESXi Hypervisor Server (dr-scs-admin-server-01) | Dell PowerEdge R750 | 1 |
|  |  | Intel(R) Xeon(R) Gold 6326 CPU @ 2.90GHz | 1 |
|  |  | 32GB DDR4 Synchronous Registered (Buffered) | 8 |
|  |  | 1.2TB SAS HDD | 3 |
|  |  | ESXi 8.0.3 | 1 |
| 2 | NAS (dr-scs-nas) | Dell PowerEdge R750 | 1 |
|  |  | CPU??? | ??? |
|  |  | RAM??? | ??? |
|  |  | HDD??? | ??? |
|  |  | Windows Server 2022 | ??? |
| 3 | SAN Switch (dr-scs-sw-01) | Dell DS6610B | 1 |
|  |  | Ports | 16 |
| 4 | SAN Storage (PS500T-Cluster2) | Dell PS500T | 1 |
|  |  | 3.8TB NVME SSD | 11 |
| 5 | Backup Appliance (dr-scs-backupstorage-01) | Dell DataDomain DD3300 | 1 |
| 6 | Firewall (PA-850-SCSPri) | Palo Alto PA 850 | 1 |
| 7 | Switch (???) | Cisco ??? | 1 |
| 8 | KVM | CyberView | 1 |
| 9 | UPS (???) | Vertiv? Liebert? GXT5 3000 | 1 |

## 11. Software Inventories

### 11.1 Inventory of Application Programs

For details of Application Programs for LSCP, please refer to Program Manual (T352).

### 11.2 Inventory of System Software and Software Package

Summary of software required is given in the following table:

#### 11.2.1 Production Environment ? WKGO

| Machine | Hostname | Software  
This is a packed representation of the codebase. To view the original source, unpack this file with Repomix.

``` <!DOCTYPE html> SCS System - Computer Operation Procedures Manual Application Operation Manual This document provides a comprehensive guide for operating the Licensing Self-Certification Portal (LSCP) system.

1. Introduction This document outlines the procedures for operating and maintaining the LSCP system, including system overview, interface requirements, technical specifications, and operational procedures.

2. System Overview The LSCP system is a web-based application designed to facilitate the self-certification process for licensing within the Buildings Department (BD). It comprises two sub-systems: LSCP Web and LSCP Mobile. The system interfaces with several other systems, including: BD Website Minor Works (MWMS 2.0) ESH ERKS BRAVO The system operates in a hybrid environment, integrating Cloud GCIS and On-Premises infrastructure.

3. Interface Requirements REQ-IR-02 Interface with BD Website: Displays pre-accepted temporary structure data. (Priority: High, Frequency: Ad-hoc) REQ-IR-03 Interface with Minor Works: Receives AP/RSE data from MWMS 2.0 via sFTP. Provides departmental portal link to CRM of MWMS. (Priority: High, Frequency: Ad-hoc) REQ-IR-04 Interface with ESH: Provides information and hyperlinks of SCS to ESH. (Priority: High, Frequency: Ad-hoc) REQ-IR-05 Interface with ERKS: Imports documents into ERKS for record keeping. (Priority: High, Frequency: Ad-hoc) REQ-IR-06 Interface with BRAVO: Redirects to BRAVO using a specific URL with parameters. (Priority: High, Frequency: Ad-hoc)

4. Technical Requirements The SCS system must adhere to the following technical requirements: Req. ID Requirement Name Target Users Priority REQ-TR-0124x7 Internet and IntranetSystem AdminH REQ-TR-02Integrated Cloud GCIS and On PremisesSystem AdminH REQ-TR-03Input ValidationSystem AdminH REQ-TR-04Record Relocation from GCIS to On PremisesSystem AdminH REQ-TR-05High AvailabilitySystem AdminH REQ-TR-06Monitoring and Alert GenerationSystem AdminH REQ-TR-07DR DrillSystem AdminH REQ-TR-08UTF-8, Unicode or HKSCSSystem AdminH REQ-TR-09System LoggingSystem AdminH REQ-TR-10High ConfigurableSystem AdminH REQ-TR-11Backup and RecoverySystem AdminH REQ-TR-12Operation System and Browser CompatibilitySystem AdminH REQ-TR-13Review and Update privilegeSystem AdminH REQ-TR-14Health CheckSystem AdminH REQ-TR-15Encryption on All CommunicationsSystem AdminH REQ-TR-16Version Control for applicationSystem AdminNA REQ-TR-17Monthly Usage Statistics and Ad-hoc StatisticsSystem AdminH