

**Oracle® Warehouse Management
Cloud**

Technical Architecture Guide

Release 7.0

Part No. E84378-01

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Oracle® Warehouse Management Cloud Technical Architecture Guide, Release 7.0

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Preface

This guide contains the network, hardware, and interface requirements for Oracle Warehouse Management Cloud. Oracle Warehouse Management Cloud was formerly known as LogFire.

Change History

Date	Document Revision	Summary of Changes
01/2017	-01	Initial version

1. Network Requirements

As a cloud SaaS application, Oracle Warehouse Management Cloud, formerly LogFire, is accessed over the internet. Adequate bandwidth is required to provide a responsive experience. Bandwidth requirements vary based on the volume at a client site. Bandwidth is not the only determining factor for application responsiveness. Among other factors, network related items such as latency and reliability of the network service may affect the application response.

To calculate the bandwidth required at a site, the determining factors are the number of users at the site, split into number of RF device users and number of Desktop Web interface users. This information will be used by Oracle Warehouse Management Cloud to recommend a bandwidth for the site. To provide some rough guidance, we recommend a minimum of 1.5Mbps dedicated^{1*} and that can support about 60 users (45 RF and 15 Desktop UI). Even if user counts are lower than that, we do not recommend going below this minimum bandwidth at a site.

¹ dedicated:

- Shared non-commercial internet services such as cable internet or DSL are not recommended.
- The bandwidth should be primarily allocated for the WMS, and not shared for other purposes, so that, for example a laptop user on the same WiFi network playing streaming music or video does not affect the bandwidth available to the WMS. Ideally the RF wifi network should not be used for other purposes.

2. Hardware

The following section describes the various hardware devices used by end users to access the Oracle Warehouse Management Cloud application or devices that are accessed by the application. The client's IT department is responsible to setting up and configuring these.

Desktop PCs

Oracle Warehouse Management Cloud provides a Desktop Web Interface to access the application. Any recent computer running Windows, Mac OS X or Linux with a modern browser is supported. A minimum browser resolution of 1440x900 is recommended. The application will work fine at lower resolutions but screen layout may be sub-optimal. A resolution of 1920x1080 will provide a much better experience.

The following browser versions are supported:

- Chrome 43
- Firefox 39
- Edge 38
- Safari 9

Earlier versions of these browsers are not supported, however they may also work fine. Internet Explorer 11 is supported to a more limited extent in that it may not be possible to resolve certain issues, if they arise.

RF Devices

Oracle Warehouse Management Cloud supports a handheld RF (Radio Frequency) device interface to access the application. The basic requirement for these devices are:

- Should have an SSH app that can connect via secure encrypted SSH protocol to any configurable port number
- Capable of supporting vt100 terminal emulation
- Ability to display atleast 24 characters by 16 lines of text
- Keyboard should have separate alpha and numeric keys with support for Control keys

Typical RF Devices used in warehouses run Windows Mobile Operating systems (version 5.x or 6.x) and uses WaveLink or equivalent SSH app. Note: SSH apps may not be included with the RF Device and may need to be bought separately. The RF Device vendor may offer other SSH apps. The following are some models used by current Oracle Warehouse Management Cloud clients:

- LXE/Honeywell MX7
- Motorola MC9190/MC9190G
- Motorola MC9590/MC9090
- INTERMEC CK3

Label printers

Oracle Warehouse Management Cloud supports the Zebra Printing Language, ZPL. Printers manufactured by Zebra as well as many other companies that support the ZPL printing language should work. The client is required to test it and verify that label printing works as expected. Some typical models in use by current clients are Zebra / ZM400, Zebra 105SL, INTERMEC /PD42. The

Oracle Warehouse Management Cloud application prints to label printers at client locations via network access that must be configured as described in the network configuration section below. These printers must be configured in the Oracle Warehouse Management Cloud application.

Laser printers

Report documents are typically generated as a PDF by the Oracle Warehouse Management Cloud application desktop web interface and can be printed to a local printer by the user. As such these printers typically do not need to be configured in the Oracle Warehouse Management Cloud application. If the ability to print certain PDF documents from the handheld RF interface is used, then laser printers also need to be setup in the application and accessed by the Oracle Warehouse Management Cloud application over the network similar to label printers.

Dot matrix printers

These are used for certain shipping documents such as GDD documents common in South American countries. These must be setup as network accessible printers similar to laser printers. Printers that support the ESC-P language are supported. Some sample models used by current clients are:

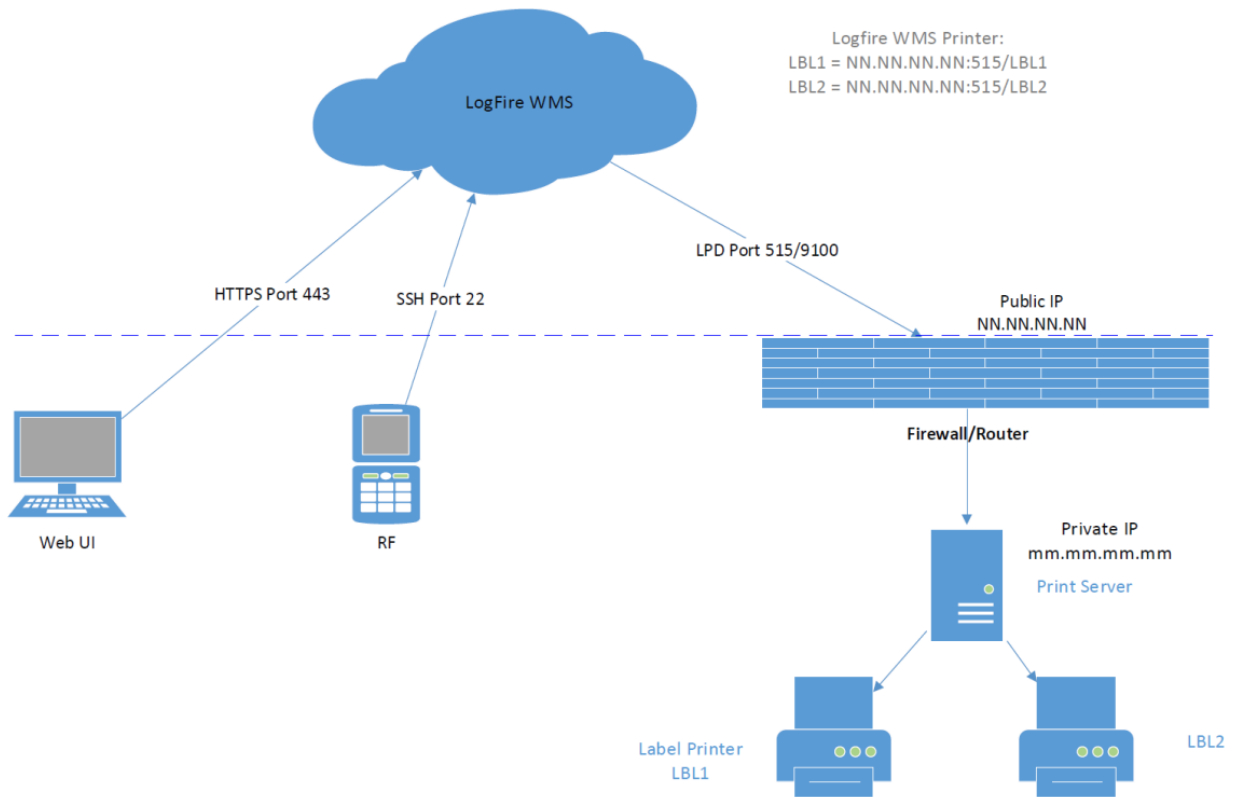
- PRINTRONIX/P7220
- EPSON / DFX 9000
- EPSON / FX890
- OKI/Pacemark 4410

Print Servers

We recommend that clients use a print server to manage printers that the Oracle Warehouse Management Cloud application needs to access. Printers connected to an external dedicated print server (typically a Windows Server or a Linux Server) are more robust and can handle larger volumes of labels. Printers that use a built in print server (network card or dongle) may have trouble with higher volumes and may have issues with lost labels or repeated labels etc. Based on the expected volume and type of use the right choice must be made. For example if they are going to routinely print dozens or hundreds of label at a time from the wave, they should have a dedicated print server to avoid problems. In addition, print servers avoid the need to have multiple public IP addresses for printers.

Network Configuration

The following diagram describes a typical configuration of how the various hardware devices in a facility running the Oracle Warehouse Management Cloud application accesses the Oracle Warehouse Management Cloud application.



3. Interfaces

Oracle Warehouse Management Cloud supports multiple standard communication mechanisms in addition to client specific custom ones. Standard data formats are XML and flat files. Standard communication methods are Web Services (XML data) or secure FTP (SFTP) for XML or flat files. All languages are supported. It is recommended that UTF-8 encoding is used for data in order to have the widest language compatibility, but other encodings are supported as well such as latin-1 (for western European languages only). Whichever encoding is chosen it must be configured in the Oracle Warehouse Management Cloud system so that data is interpreted accurately. The Oracle Warehouse Management Cloud services and support team will handle this.

