

**Oracle® Warehouse Management
Cloud**

Technical Requirements Guide

Update 20B

Part No. F29969-01

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Oracle® Warehouse Management Cloud Technical Requirements Guide, Update 20B

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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
03/2017	-01	Initial version
05/2017	-02	Revised Interfaces
03/2018	-03	Updates for 9.0.0
01/2020	-04	Added note about WebRF to section 2: Hardware, RF Devices section.
3/2020	-05	Added Mobile App details to Hardware section.

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 Wi-Fi network playing streaming music or video does not affect the bandwidth available to the WMS. Ideally, the RF Wi-Fi 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 for 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 64
- Firefox 59
- Edge 40
- Safari 11

Earlier versions of these browsers, especially within the past 12 months, and Internet Explorer 11, should mostly work fine, though they are not officially supported, in that it may not be possible resolve certain issues, if they arise, in those browsers.

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 a Secure Shell (SSH) app that can connect via secure encrypted SSH protocol to any configurable port number
- Capable of supporting vt100 terminal emulation
- Ability to display at least 24 characters by 16 lines of text, preferably 29 x 19
- 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) or Android. WaveLink is a typical SSH application used by Oracle Cloud WMS customers, and others can be used as well. 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 customers:

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

NOTE: WebRF is not intended to be a production solution for RF. For mobile, an SSH app is needed for connection.

Mobile App

Built using Oracle's latest mobile application technology, VBCS (Visual Builder Cloud Service), the Oracle WMS Cloud Mobile app features modern, graphical, mobile screens that can display images and scan barcodes on both iOS and Android-based devices.

This app is available via the Apple App Store and Google Play Store. In a future update, the app will also be released via the VBCS/OIC marketplace so that customers that subscribe to OIC (oracle integration cloud) can customize the app themselves. The WMS Cloud Mobile App leverages the native mobile capabilities of iOS and Android. The app is supported on the following Android and iOS versions/ devices:

Android

- Android 5 and higher
- Will work on regular phones and ruggedized warehouse devices

iOS

- iOS
- iOS 11.4 and higher
- Supports iPhone, iPad and iPod touch

Additional Notes

- You can setup multiple profiles or environments within the app that allow you to point the app to different WMS cloud environments.
- The app supports both single and multi-field barcodes using the existing configuration available in the WMS Cloud service.
- The app can use the device's camera to scan barcodes or can also work with a barcode scanner attachment that converts the barcode into keyboard input.
- The app supports the same literals and language translation configuration and features available with the WMS Cloud web UI and the text based Mobile RF.
- The app supports display and upload of images.
- The app layout is optimized for phone sized screens rather than tablet sized screens.

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 customer 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, Zebra R110Xi4 and INTERMEC /PD42.

The Oracle Warehouse Management Cloud application prints to label printers at customer 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. Clients should base printing choices on the expected volume and type of use. 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 access the Oracle Warehouse Management Cloud application.

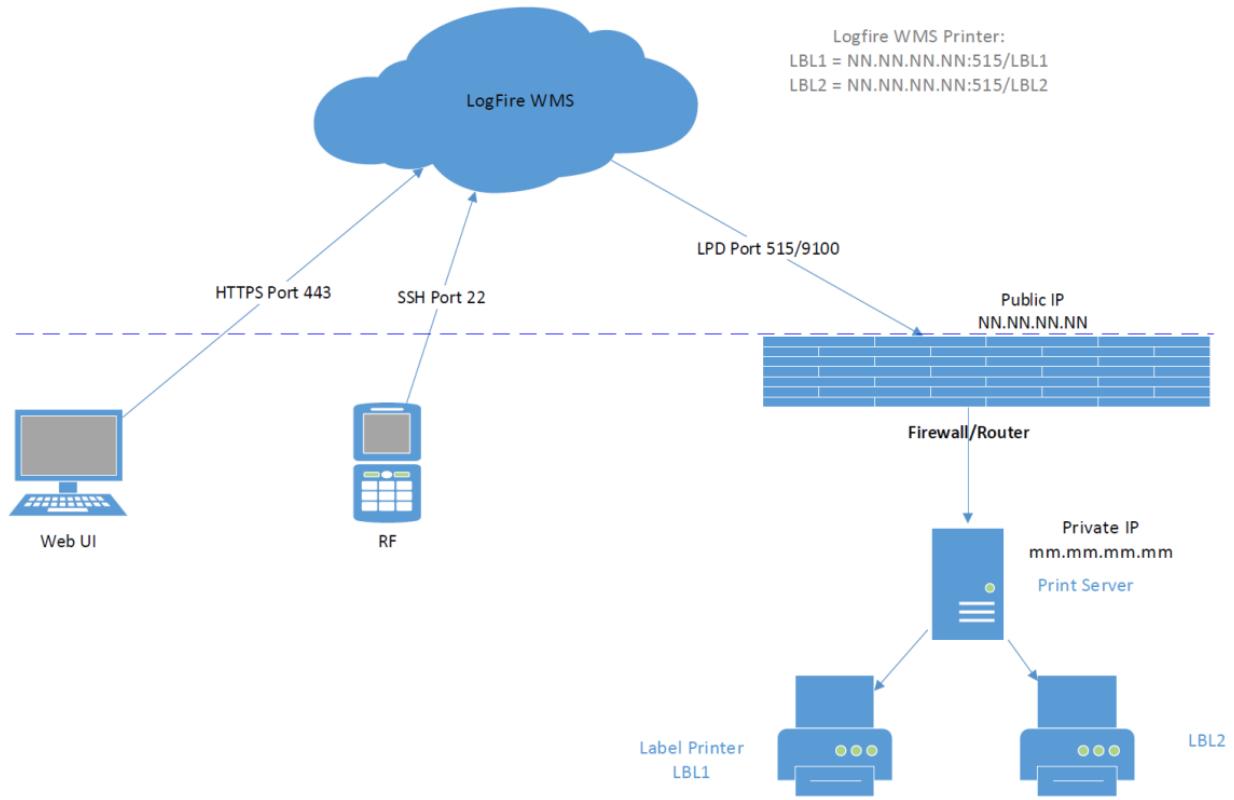


Figure 1: Cloud WMS Network Configuration

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. We recommend that you use Web Services rather than SFTP as it offers several advantages. 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. If you have further question please contact The Oracle Warehouse Management Cloud services and support team.

4. Authentication

In addition to the built in username and password authentication capability, Cloud WMS can also use customer's systems to authenticate users. Currently only authentication is supported and groups or authorization policies are not supported (they can be managed within the WMS). The following methods are supported:

- ADFS Backend: Cloud WMS can authenticate against Active Directory Federated Services
- OAuth2 Backend: This is supported using only this grant type: Resource Owner Password Credentials Grant
- HTTP POST Backend: This can be any HTTP service defined by the customer to which we can POST the username and password. Upon receiving a specific previously agreed upon response, user will be allowed into the application.
- SAML2 Single Sign On (SSO): In this mechanism, Cloud WMS will redirect to the configured SAML2 compliant identity provider's login page and the username and password are entered there instead of on the Cloud WMS login page. Upon successful authentication, the user is redirected back to the application.

Configuration for the above authentication methods is performed by Oracle Cloud Operations. Customers should raise a support request via MOS. You should also setup the alternate username within the application for users that need to be authenticated using one of the above methods.

NOTE: Since SAML2 is a web-based mechanism, it is not supported for logging into the mobile RF application, however it is possible to use one of the other methods above for the same user.