Oracle Utilities Network Management System

Operations Mobile Application

Installation and Deployment Guide

Release 1.12.0.3.0

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Oracle Utilities Network Management System Operations Mobile Application Installation and Deployment Guide, Release 1.12.0.3.0

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Appendix A

Preface

The information in this document is intended to guide you through a successful implementation and deployment of the Oracle Utilities Network Management System Operations Mobile Application.

This preface contains these topics:

- **Audience**
- **Related Documents**
- **Conventions**

Audience

This document is intended for anyone responsible for implementing the Oracle Utilities Network Management System Operations Mobile Application.

Related Documents

For more information, see the following documents in the Oracle Utilities Network Management System Release Release 1.12.0.3.0 documentation set:

- *Oracle Utilities Network Management System Quick Install Guide*
- *Oracle Utilities Network Management System Installation Guide*
- *Oracle Utilities Network Management System User's Guide*
- *Oracle Utilities Network Management System Configuration Guide*
- *Oracle Utilities Network Management System Adapters Guide*
- *Oracle Utilities Network Management System Release Notes*

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
italic	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
`monospace`	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

Chapter 1

Installation and Deployment Overview

- **Server Installation Overview**
- **Client Development Installation Overview**
- **Client Deployment Overview**

The Oracle Network Management System Operations Mobile Application (or App) is delivered as two components:

1. The server side Mobile Gateway. This gateway must be installed on an application server available to the clients. If the clients are coming in from the public internet, this Mobile Gateway must be available on the public internet. This Mobile Gateway will then interface to the Oracle Network Management System application server based on firewall/network configurations setup by your IT staff.
2. The Oracle Network Management Systems Operations Mobile Application Software Development Kit (Operations Mobile Application/SDK), which contains the source code of the mobile application. The Operations Mobile Application/SDK must be compiled to the target platform and installed on the platforms in order to run.

Server Installation Overview

Follow these steps to install, build and deploy the Oracle Network Management System Operations Mobile Application:

1. Install and configure the Oracle Network Management System as described in the *Oracle Utilities Network Management System Installation Guide.*
2. Install the Oracle Network Management Systems Mobile Gateway server as defined in the section Mobile Gateway Installation.
3. Configure the model requirement of the mobile app as defined in the section Mobile Application Model Configuration.

Client Development Installation Overview

Follow these steps to install, build and deploy the Oracle Network Management System Operations Mobile Application:

1. Decide the client platforms you plan on supporting, use the table in the Hardware Requirements section to identify the build environment platform that supports your targeted clients. It is recommended to build the browser platform of the application for testing and system verification.
2. Review and prepare for the download and installation of required Oracle and third-party software as described in the section Pre-requisite Software.
3. Install the third-party software.
4. Unzip the Oracle Network Management System Operations Mobile Application project files from the $CES_HOME/sdk/nms_crew.zip file to your build environment system.
5. Install the Cordova Platforms and Plugins
6. Build the Oracle Network Management Systems Operations Mobile App for each of the desired platforms.
7. Run the compiled client using the browser to test your built application.
8. Run the compiled client using the target hardware platform in development mode.

Client Deployment Overview

The Deployment of the client will be based on a number of constraints:

1. The target client platform.
2. IT installation vs end user Installation

Please work with your IT department to identify the best deployment method.

Chapter 2

Supported Platforms and Hardware Requirements

- **Hardware Requirements**
- **Pre-Requisite Software**

Hardware Requirements

Client Hardware Requirements

The following are the hardware requirements for the mobile application client:

iOS Tablets

iOS devices running iOS 8.1.x or greater

Android Tablets

Android device running Android 4.4 or greater

Chrome or Safari Browser

Chrome browser running 40.0 or newer running on Windows, Linux, or Mac Hardware or Safari browser running on Mac OSX.

Server Hardware Requirements

The following are the hardware requirements for the mobile application server:

Application Server

An Oracle WebLogic application server is required to deploy the nms-ws.ear file that is included in the Oracle Network Management System release package. The WebLogic version must match the version used for the Oracle Network Management System cesejb.ear.

Development Hardware Requirements

The following are the hardware requirements for the development of the mobile application client:

Build Environment Hardware	Android Tablets	iOS Tablets	Chrome or Safari Browser
Windows	Yes	No	Yes

Build Environment Hardware	Android Tablets	iOS Tablets	Chrome or Safari Browser
Macintosh OS X	Yes	Yes	Yes
Linux	Yes	No	Yes

Pre-Requisite Software

The following software must be installed and configured prior to installation of the Oracle Network Management System Operations Mobile Application Software Development Kit:

- Node.js (v0.12.0 or above) a platform built on Chrome's JavaScript runtime for building fast, scalable network applications.
- Git (v1.9.5) a repository which offers all of the distributed revision control and source code management functionality in order to have the mobile standard plugins.
- Apache Ant (v1.8.2) or above for automating the software build processes.
- Ant contrib (v1.0b2)
- Cordova CLI (v5.1.1 or newer) Cordova is a mobile development framework for enabling programmers to develop applications in HTML5, Javascript and CSS3 instead of relying on platform-specific APIs like those in iOS or Android. Cordova enables wrapping up of HTML, CSS and Javascript code depending upon the platform of the device.
- Oracle WebLogic 11g for the NMS Mobile Gateway
- Android SDK for creating new applications for the Android operating system. The recommended level is Android SDK Level 19 (Android version of 4.4.2).
- XCode 6.1 or greater and Apple Developer ID for iOS 8.x devices for developing the applications using iOS SDK.

The Apache Cordova website contains many resources and tutorials on the installation and usage of the Apache Cordova development and runtime processes. Please refer to the Apache Cordova website: http://cordova.apache.org. Go to the Documentation link and complete The Command-Line Interface Installation.

Ant is not included in the Cordova CLI installation, please verify you have ant installed. You can test for ant with the following command:

```
$ ant -version
```

It should return something like this:

```
Apache Ant(TM) version 1.8.2 compiled on December 20 2010
```

If not installed, please install using instructions from the Apache Ant Project website, http://ant.apache.org.

Chapter 3

Mobile Gateway Server Installation

Deploy the Mobile Gateway

The Oracle Network Management System Mobile Gateway is delivered in the $CES_HOME/dist/install directory and when the nms-install-config --java is run, the deployable Oracle Network Management System Mobile Gateway will reside in $NMS_HOME/java/deploy/nms-ws.ear.

The Oracle Network Management System Mobile Gateway nms-ws.ear is deployed to the target WebLogic server

The nms-ws.ear expects a proxy user to connect between the nmw-ws.ear and the cesejb.ear, the default is nms1 and it needs to be included in the Role NmsMobile.

The following assumes that you are installing the mobile gateway to the same managed server that cesejb.ear is running. This configuration is recommended only for test systems.

The default proxy user is "mobile-proxy" If you wish to change it to something else, edit $NMS_CONFIG/jconfig/build.properties and add this line (change "mobile-proxy" to the name of the user you wish to create):

```
config.ws_runas_user = mobile-proxy
```

Next, in the WebLogic console, do the following:

- Under Summary of Security Realms, myrealm, Roles and Policies:
  1. Expand Global Roles
  2. Click on Roles
  3. Click on New to create a new Role: NmsMobile
- Under Role Conditions:

  Add the user mobile-proxy, or whatever proxy username you are using. The proxy user should NOT be a member of any group.).

Finally run nms-install-config --java, which will rebuild the ear files with the configured username, and install nms-ws.ear

If the nms-ws.ear file is deployed on the same WebLogic server as the Oracle Network Management System cesejb.ear file, there is no additional configuration required.

If the nms-ws.ear file is deployed on a different WebLogic server that the cesejb.ear, you will need to do the remaining steps in this section.

If the server is in a different domain, define a proxy user and role as you did for the main NMS server.

In the WebLogic Console, click **Foreign JNDI Providers**, **New**, **Next**. Then select the server or cluster you wish to install to, then click **Finish**.

Click on the created **Foreign JNDI Provider** and fill in the following:

Configuration Parameter	Value
Initial Context Factory	weblogic.jndi.WLInitialContextFactory
Provider URL	From the NMS Web Workspace Help panel; for example, `t3s://your_serve.company.com:7702`
User	The mobile proxy username
Password	Password for User

Next, click on **Links** and add the following link:

Local JNDI Name	Remote JNDI Name
cesejb/MobileOperationsBean/remote	cesejb/MobileOperationsBean/remote

Configuring WebLogic to Handle HTTP Basic Challenges Correctly

By default WebLogic attempts to intercept all HTTP Basic Authentication challenges. This default behavior needs to be disabled for the WebLogic domain where the nms-ws.ear is deployed for Oracle Network Management System

Operations Mobile Application to function correctly.

See your WebLogic documentation for the location of the WebLogic configuration file named: config.xml

Add the <enforce-valid-basic-auth-credentials> element to config.xml within the<security-configuration> element. The edited file should look like the following:

```
...
<enforce-valid-basic-auth-credentials>false</enforce-valid-basic-auth-
credentials>
</security-configuration>
...
```

Save the updated config.xml file and restart WebLogic (if it is running).

Chapter 4

NMS Server Configuration

- **GeoJSon Map Generation**
- **Mobile User Validation**

GeoJSon Map Generation

Overview

The Oracle Network Management System Operations Mobile App uses electrical facility maps in GeoJSon format (see http://geojson.org for details). Oracle Network Management System provides tools and scripts to build GeoJSon versions of your electrical facility maps.

Directory Location

The GeoJSon files required by the Mobile App should be generated in the $OPERATIONS_MODELS/export directory. Input to the GeoJSon generator are .mb files.

If you are running NMS 1.12, the $OPERATIONS_MODELS/export directory is created by the Model Build Services when the -export parameter is provided on the Model Build Service startup. In addition to creating this directory, Model Build Service will create a .mb file in the $OPERATIONS_MODELS/export directory for every map built in the system. These .mb files are the inputs to the GeoJSon file generator.

If you are running an older system the NMS 1.12, you will need to create the export directory and copy your $OPERATIONS_MODELS/patches/done/*.mb files to the $OPERATIONS_MODELS/export directory since Model Build Service does no support the -export parameter in these older releases.

Build Processes

Once you have the $OPERATIONS_MODELS/export directory created and populated with the source .mb files, you will need to create a script to convert .mb files to GeoJSon files. Oracle has released an OPAL template script you can use to create your GeoJSon files:

$CES_HOME/OPAL/bin/OPAL_build_mobile_maps.ces

Please use it as a template to build your own project version of this script.

This script is typically placed called from the <project>_postbuild.ces script so that it is run after every model build process.

GeoJSON Configuration File

The GeoJSon generation process requires a <project>_geojson_export.dat file to do the following:

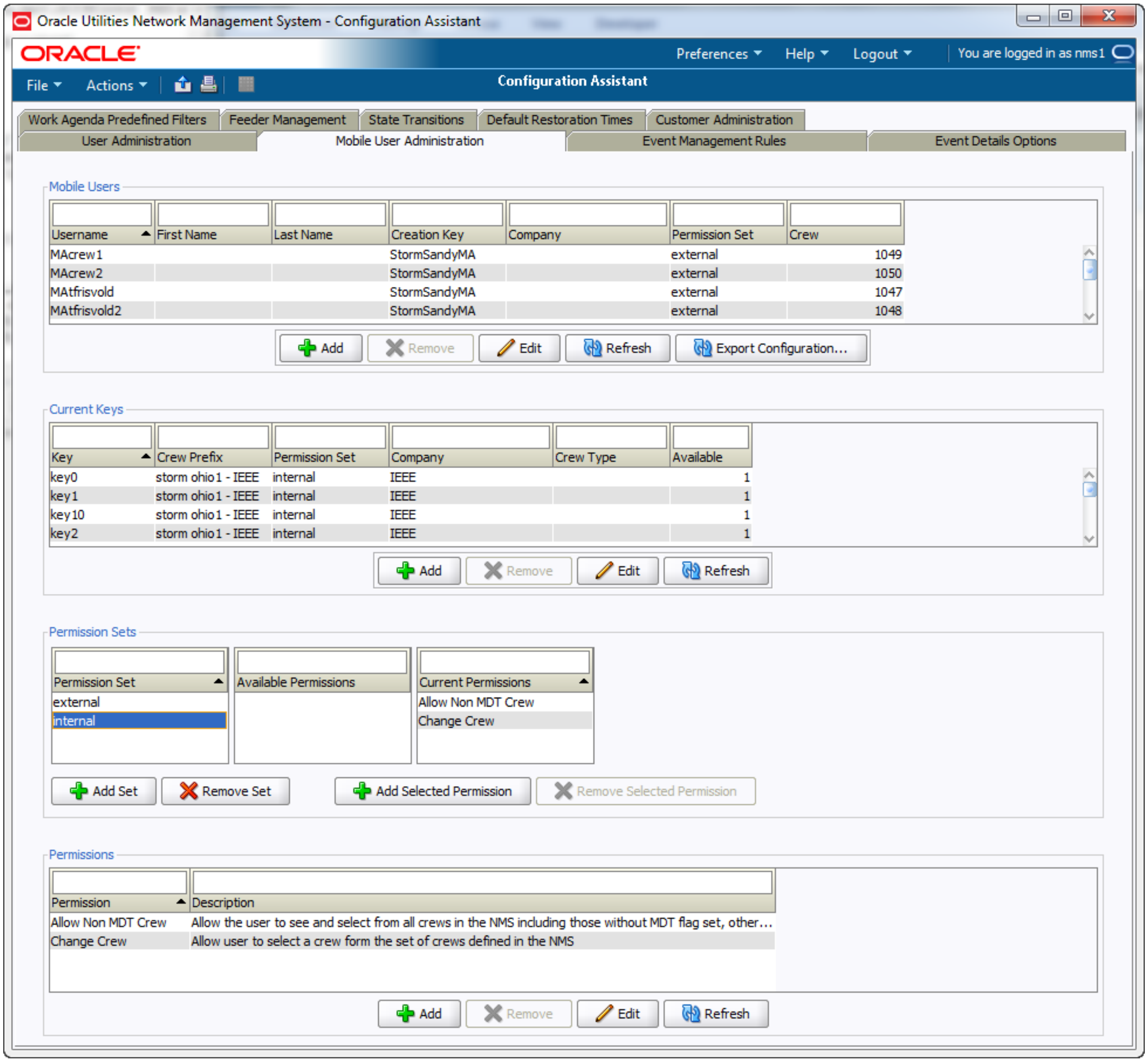
- Identify the classes of objects in the source .mb files to convert to GeoJSon file features.
- Identify the attributes to being into the GeoJSon files for each object class.
- Define the coordinate conversion parameters to convert the .mb file coordinates to the mobile app required coordinate system.

Please use the template provided in the following location:

$CES_HOME/OPAL/sql/OPAL_geojson_export.dat

Mobile User Validation

Mobile user validation is done in the Network Management System Configuration Assistant and is a separate validation scheme than the Network Management System Web Workspace users.



Mobile Users

Username	First Name	Last Name	Creation Key	Company	Permission Set	Crew
MAcrew1			StormSandyMA		external	1049
MAcrew2			StormSandyMA		external	1050
MAtfrisvold			StormSandyMA		external	1047
MAtfrisvold2			StormSandyMA		external	1048

Current Keys

Key	Crew Prefix	Permission Set	Company	Crew Type	Available
key0	storm ohio1 - IEEE	internal	IEEE		1
key1	storm ohio1 - IEEE	internal	IEEE		1
key10	storm ohio1 - IEEE	internal	IEEE		1
key2	storm ohio1 - IEEE	internal	IEEE		1

Permission Sets

Permission Set	Available Permissions	Current Permissions
external		Allow Non MDT Crew
internal		Change Crew

Permissions

Permission	Description
Allow Non MDT Crew	Allow the user to see and select from all crews in the NMS including those without MDT flag set, other...
Change Crew	Allow user to select a crew form the set of crews defined in the NMS

Permissions and Permission Sets

Permissions are used to allow users to have access to functionality and information. The permissions available include:

- Allow Non MDT Crew
- Change Crew

Permission sets are groups of permissions. Users and Keys have permission sets associated to them.

Two simple permissions sets are typical in configuration:

- Internal permission set with both Allow Non MDT Crew and Change Crew permissions
- External permission set with no permissions

Predefined Users

Mobile users can be defined in the Network Management Systems using the Configuration Assistant Mobile User Administration tab. An administrator can create the predefined username using the Mobile Users section by hitting the **Add** button and filling out the Add/Edit Mobile User Information panel and saving the changes.

Operations Mobile Application users can enter the username/password as authorized in this section to gain access to the application functionality.

Create Users Using a Key

Mobile users may be created on the mobile client when the user is given a key authorizing the creation of a mobile user. In the mobile app login page, the user can check the **new user** box and enter in a new username, password, and the provided new user key and create a new mobile user.

The keys required to create a mobile user from the mobile application are maintained in the mobile_new_user_keys database table in the Network Management System. This table can be managed using the Network Management System Configuration Assistant Mobile User Administration tab in the Current Keys section. Simply add a new key with an availability count greater than zero, the key can be used by a mobile app user to create a new username/password into the system. The number of times this key can be user is based on the available number, each time the key is used, the available number is decremented.

To create a key for the mobile application, click the **Add** button at the bottom of the Network Management System Configuration Assistant Mobile User Administration Current Keys section and filling out the **Add/Edit Mobile Keys Information** panel and saving the changes.

If a key contains a crew type and crew prefix, a crew will be created automatically for the users created with the key.

For more details on the Configuration Assistant Mobile User Administration, refer to the *Oracle Utilities Network Management System User's Guide* and the *Oracle Utilities Network Management System Configuration Guide*.

Chapter 5

Client Development Setup on OSX

This chapter describes installing, building, and testing the Operations Mobile Application using a Macintosh running OSX.

- **Install Software**
- **Build Operations Mobile Application**
- **Testing**

Install Software

- **Install Prerequisite Software**
- **Install Operations Mobile App SDK**
- **Install Platforms and Plugins**

Install Prerequisite Software

Install the Prerequisite Software as defined in the Supported Platforms and Hardware Requirements Chapter Prerequisite Software Section of this document.

If you are targeting the Android platform for the application, install the Android SDK. The recommended level is Android SDK Level 19 (Android version of 4.4.2).

If you are targeting the iOS devices, install XCode 6.1 or greater and Apple Developer ID for iOS 8.x devices.

You may need to use proxy settings in order to get the third party software to work through your corporate network. Here are suggested environment variable to use, will need adjustments to match your corporate network addresses and ports.

```
http_proxy=http://www-proxy.us.oracle.com:80

HTTP_PROXY=http://www-proxy.us.oracle.com:80

https_proxy=http://www-proxy.us.oracle.com:80

HTTPS_PROXY=http://www-proxy.us.oracle.com:80

NPM_CONFIG_proxy=http://www-proxy.us.oracle.com:80

NPM_CONFIG_http.proxy=http://www-proxy.us.oracle.com:80

NPM_CONFIG_https.proxy=http://www-proxy.us.oracle.com:80
```

You should set the following to point to your Android Home location:

```
ANDROID_HOME=/Users/appbuild/Library/Android/sdk
```

You should set the following to point to your Android Home location:

```
ANT_HOME=/Users/appbuild/ant
```

Install Operations Mobile App SDK

The Operations Mobile App SDK is located in the $CES_HOME/sdk/nms_crew.zip file of your Oracle Network Management System. Copy this directory to your development build environment system and unzip it. This will be your Cordova project directory.

Install Platforms and Plugins

Change to your Cordova project directory (ie /Users/appbuild/nms_crew):

```
cd /Users/appbuild/nms_crew
```

Clean out platform directories:

```
rm -rf platforms/ios
rm -rf platforms/android
rm -rf platforms/browser
```

Add the Cordova Platforms you plan on building. You should always include `browser`. The `android` and `ios` platforms are optional based on your target platform.

```
cordova platform add browser
cordova platform add android@3.7.2
cordova platform add ios
```

Copy the overridden platform files:

```
cp -r override/. platforms
```

Add the Cordova plugins. All are required.

```
cordova plugin add cordova-plugin-camera
cordova plugin add cordova-plugin-geolocation
cordova plugin add cordova-plugin-network-information
cordova plugin add cordova-plugin-file
cordova plugin add cordova-plugin-console
```

Build Operations Mobile Application

Put ant, node, and the android tools in your path:

```
export PATH=/Users/appbuild/ant/bin:$PATH:/usr/local/bin:/ Users/
appbuild/node/bin:$ANDROID_HOME/tools
```

Build the target application platforms:

```
cordova build browser

cordova build android -- --ant

cordova build ios --device


cd "/Users/appbuild/nms_crew/platforms/ios/build/device"

/usr/bin/xcrun -sdk iphoneos8.4 PackageApplication "$(pwd)/Nms
Crew.app" -o "/Users/appbuild/nms_crew/platforms/ios/Nms_Crew.ipa"
```

Testing

- **Test with Safari Browser**
- **Test with IOS Device**
- **Test with Android Device**

Test with Safari Browser

The Safari browser is the best place to test your application on the Mac platform. Open Safari and open this location:

```
File:///Users/appbuild/nms_crew/platforms/browser/www/index.html
```

This will open the application splash screen. Follow the steps in the OPAL Operations Mobile Application Tests chapter.

Test with IOS Device

You can test the application using IOS devices using these methods:

- XCode iOS Emulators
- XCode Debug Installer using an iPad and a USB Cable
- Install the .ipa file using iTunes.

Test with Android Device

You can test the application using Android devices using these methods:

- Android SDK Emulators
- Android SDK Installer using an Android Device and a USB Cable
- Android .apk installation directly on an Android Device

Chapter 6

Client Development Setup on Windows

This chapter describes installing, building, and testing the Operations Mobile Application using a PC running Microsoft Windows.

- **Install Software**
- **Build Operations Mobile Application**
- **Testing**

Install Software

- **Install Prerequisite Software**
- **Install Operations Mobile App SDK**
- **Install Platforms and Plugins**

Install Prerequisite Software

Install the Prerequisite Software as defined in the Supported Platforms and Hardware Requirements Chapter Prerequisite Software Section of this document.

If you are targeting the Android platform for the application, install the Android SDK. The recommended level is Android SDK Level 19 (Android version of 4.4.2).

You may need to use proxy settings in order to get the third party software to work through your corporate network. Here are suggested environment variable to use, will need adjustments to match your corporate network addresses and ports.

```
http_proxy=http://www-proxy.us.oracle.com:80
HTTP_PROXY=http://www-proxy.us.oracle.com:80
https_proxy=http://www-proxy.us.oracle.com:80
HTTPS_PROXY=http://www-proxy.us.oracle.com:80
NPM_CONFIG_proxy=http://www-proxy.us.oracle.com:80
NPM_CONFIG_http.proxy=http://www-proxy.us.oracle.com:80
NPM_CONFIG_https.proxy=http://www-proxy.us.oracle.com:80
```

You should set the following to point to your Android Home location:

```
ANDROID_HOME=/users/appbuild/Library/Android/sdk
```

You should set the following to point to your Android Home location:

```
ANT_HOME=/users/appbuild/ant
```

Install Operations Mobile App SDK

The Operations Mobile App SDK is located in the $CES_HOME/sdk/nms_crew.zip file of your Oracle Network Management System. Copy this directory to your development build environment system and unzip it. This will be your Cordova project directory.

Install Platforms and Plugins

Change to your Cordova project directory (ie /users/appbuild/nms_crew):

```
cd /Users/appbuild/nms_crew
```

Clean out platform directories:

```
rm -rf platforms/ios
rm -rf platforms/android
rm -rf platforms/browser
```

Add the Cordova Platforms you plan on building. You should always include `browser`. The "android" and "ios" platforms are optional based on your target platform.

```
cordova platform add browser
cordova platform add android@3.7.2
```

Copy the overridden platform files:

```
cp -r override/. platforms
```

Add the Cordova plugins. All are required.

```
cordova plugin add cordova-plugin-camera
cordova plugin add cordova-plugin-geolocation
cordova plugin add cordova-plugin-network-information
cordova plugin add cordova-plugin-file
cordova plugin add cordova-plugin-console
```

Build Operations Mobile Application

Put ant, node, and the android tools in your path using system setting or environment variables.

Build the target application platforms:

```
cordova build browser
cordova build android -- --ant
```

Testing

- **Test with Chrome Browser**
- **Test with Android Device**

Test with Chrome Browser

The Chrome browser is the best place to test your application on the windows platform. Chrome must be started with a special security mode to allow AJAX calls to remote systems. Use Windows Task Manager to kill all chrome processes. Set the chrome startup with the "-disable-web-security" option in the Target for the properties:

```
"C:\Program Files (x86)\Google\Chrome\Application\chrome.exe" --
disable-web-security
```

```
Start Chrome, open the application from your build project
directory:
```

```
File:///C:/users/appbuild/nms_crew/platforms/browser/www/
index.html
```

This will open the application splash screen. Follow the steps in the OPAL Operations Mobile Application Tests chapter.

Test with Android Device

You can test the application using IOS devices using these methods:

- Android SDK Emulators
- Android SDK Installer using an Android Device and a USB Cable
- Android .apk installation directly on an Android Device

Chapter 7

Client Development Setup on Linux

This chapter describes installing, building, and testing the Operations Mobile Application using a PC running Linux.

- **Install Software**
- **Build Operations Mobile Application**
- **Testing**

Install Software

- **Install Prerequisite Software**
- **Install Operations Mobile App SDK**
- **Install Platforms and Plugins**

Install Prerequisite Software

Install the Prerequisite Software as defined in the Supported Platforms and Hardware Requirements Chapter Prerequisite Software Section of this document.

If you are targeting the Android platform for the application, install the Android SDK. The recommended level is Android SDK Level 19 (Android version of 4.4.2).

You may need to use proxy settings in order to get the third party software to work through your corporate network. Here are suggested environment variable to use, will need adjustments to match your corporate network addresses and ports.

```
http_proxy=http://www-proxy.us.oracle.com:80
HTTP_PROXY=http://www-proxy.us.oracle.com:80
https_proxy=http://www-proxy.us.oracle.com:80
HTTPS_PROXY=http://www-proxy.us.oracle.com:80
NPM_CONFIG_proxy=http://www-proxy.us.oracle.com:80
NPM_CONFIG_http.proxy=http://www-proxy.us.oracle.com:80
NPM_CONFIG_https.proxy=http://www-proxy.us.oracle.com:80
```

You should set the following to point to your Android Home location:

```
ANDROID_HOME=/users/appbuild/Library/Android/sdk
```

You should set the following to point to your Android Home location:

```
ANT_HOME=/users/appbuild/ant
```

Install Operations Mobile App SDK

The Operations Mobile App SDK is located in the $CES_HOME/sdk/nms_crew.zip file of your Oracle Network Management System. Copy this directory to your development build environment system and unzip it. This will be your Cordova project directory.

Install Platforms and Plugins

Change to your Cordova project directory (`/users/appbuild/nms_crew`):

```
cd /Users/appbuild/nms_crew
```

Clean out platform directories:

```
rm -rf platforms/ios
rm -rf platforms/android
rm -rf platforms/browser
```

Add the Cordova Platforms you plan on building. You should always include `browser`. The "android" and "ios" platforms are optional based on your target platform.

```
cordova platform add browser
cordova platform add android@3.7.2
```

Copy the overridden platform files:

```
cp -r override/. platforms
```

Add the Cordova plugins. All are required.

```
cordova plugin add cordova-plugin-camera
cordova plugin add cordova-plugin-geolocation
cordova plugin add cordova-plugin-network-information
cordova plugin add cordova-plugin-file
cordova plugin add cordova-plugin-console
```

Build Operations Mobile Application

Put ant, node, and the android tools in your path using system setting or environment variables.

Build the target application platforms:

```
cordova build browser
cordova build android -- --ant
```

Testing

- **Test with Chrome Browser**
- **Test with Android Device**

Test with Chrome Browser

The Chrome browser is the best place to test your application on the windows platform. Chrome must be started with a special security mode to allow AJAX calls to remote systems. Use Windows Task Manager to kill all chrome processes. Set the Chrome startup with the "`-disable-web-security`" option in the Target for the properties:

Start Chrome, open the application from your build project directory:

```
File:///users/appbuild/nms_crew/platforms/browser/www/index.html
```

This will open the application splash screen. Follow the steps in the OPAL Operations Mobile Application Tests chapter.

Test with Android Device

You can test the application using IOS devices using these methods:

- Android SDK Emulators
- Android SDK Installer using an Android Device and a USB Cable
- Android .apk installation directly on an Android Device

Chapter 8

Client Deployment

The deployment of the Oracle Network Management Operations Mobile Application is completely up to the Utility's IT department. This chapter will identify options to consider based on the deployment platform.

- **Android**
- **iOS**

Android

Android platforms have these options for deployment:

Google Play Store

The Google Play Store provides public access to your Android application. See Google's developers website for details: http://developer.android.com/distribute

Alternative Distribution Options

The Google offers options to distribute your application through any App Marketplace, Email, or your private or public website. In order to install an app on your device that does not originate from the Google Play Store, the device will need to set the "Opt-In for Appls from Unknown Sources".   See Google's developer's website for details: http://developer.android.com/distribute/tools/open-distribution.html

Pre-Installed Devices

You could make Android tablets available for your mobile users (both internal and external) where you pre-install the Operations Mobile Application on device.

IT Installation Service

You could provide a service by your IT team to install the Operations Mobile Application on internal or external users own devices.

iOS

Apple supports the following methods to distribute your application. It is up to your IT department to determine the best deployment strategy for your iOS application.

App Store

Apple provides public access to your iOS application. See the Apple iOS developer website for details.

iOS Developer Enterprise Program

The iOS Enterprise Distribution program allows a company to distribute their own in-house apps directly. It is intended for employees of the licensee company only and that licensee must be a company or organization with a DUNS number.

Custom B2B Apps Program

Apple has programs for volume purchasing and custom B2B apps. These programs operate from the online Business Store. The Volume Purchasing Program allows businesses to buy apps from the public App Store in bulk. Custom B2B Apps extend the Volume Purchase Program for custom B2B apps built by third-party developers. The third-party developer determines which Volume Purchase customer(s) can purchase a given app. Such apps are not available on the public App Store but only through the Business Store.

Ad Hoc Distribution (intended for Testing)

Ad Hoc Distribution allows you to distribute apps to up to 100 iOS devices for testing. You must register these devices manually by their ID. Devices can be removed/replaced once each membership year). Ad Hoc Distribution is a feature of both the iOS Developer Program and the iOS Developer Enterprise Program.

iOS Beta Testing Service: TestFlight

TestFlight is a free over-the-air platform used to distribute beta and internal iOS applications to team members. Developers can manage testing and receive feedback from their team with TestFlight's Dashboard.

TestFlight makes use of your iOS Enterprise License or Developer License to create Enterprise and Ad Hoc provisioned apps.

Chapter 9

OPAL Operations Mobile Application Tests

The following scenario may be run against an OPAL demonstration system.

1. Install the app on your target platform.
2. Start app
3. Press the **Settings** button
4. Verify the NMS Server Mobile RESTful URI is set correctly
5. Press the **Home** button, press the **Login** button, select the **New User** checkbox, and create new user with your choice of name, password, and fill in the **New User Key** field with:

   ```
   StormSandy
   ```

6. Press **Login**. The main app page will open.
7. On the main app page, expand the Crew panel by pressing the **+** control.
8. Press the "**Please select crew**" control next to **Current Crew**.
9. Press the refresh crews button on the top right of the **NMS Crew Select** page.
10. In the NMS Crew Select page, select the last crew in the list (*e.g.*, OMS Crew9).
11. The main app page will be displayed with the selected crew listed in the **Current Crew** field.
12. Change the crew status by pressing **On Shift**.
13. The initial location on the map is **Todd's Maple Grove** neighborhood. Press the GPS icon to focus on your current GPS location.
14. Press the Map icon to view the utility's service area. once there, press the map reload button to load electrical maps and conditions in the view.
15. Press the Location on Map icon and then select a location on the map (*e.g.*, over a road). Notice the location **Lat/Long** field is populated with the coordinates.
16. Press the **+ DA** button to open the DA entry page:
17. Expand the **Enter Damage Details** and select **Road Block** and enter a comment (*e.g.*, tree on the road) and press **Submit** in the upper right of the page. A message will appear confirming that the damage report was saved.
18. Press **OK** and then the **Back Button** on the upper left of the page to go back to the main app page.
19. Press the map icon and you will be taken back to the map.
20. Press the map refresh button. The DA report symbol will appear on the selected location.

Appendix A

Restricted Use and User License Terms

- **Mobile Archive Restricted Use**
- **Mobile Application End User License Terms**

Mobile Archive Restricted Use

The Oracle Utilities Network Management System Program includes one or more mobile application archives or libraries (each a "Mobile Archive"). Your use of the Mobile Archive is limited to the following:

1. Modify the Mobile Archive to include your custom branding, look and feel, and functionally extensions;

2. Insert your brand or logo where indicated (removing Oracle's brands, logos, and trademarks, if any, but not removing or modifying any Oracle copyright statements except as stated in the following paragraph) in the Mobile Archive;

3. If you modify the Mobile Archive as set forth above, append the word "Portions" before any Oracle copyright statement (as an example, "Portions Copyright © 2015, Oracle and/or its affiliates. All rights reserved.")

4. Compile, complete, and sign the Mobile Archive with your own mobile operating system-specific certificate(s), thereby creating a mobile application ("Mobile Application"); and

5. Distribute the Mobile Application within your enterprise or entity to your internal users and/or to your third party end users ("End Users"). You may not distribute the Mobile Archive to your internal end users except to the extent necessary for the creation of the Mobile Application. You may not distribute the Mobile Archive to End Users.

With respect to your distribution of the Mobile Archive as included in a Mobile Application (a) you must abide by the terms and conditions in the Programs license agreement pertaining to separately licensed third party technology and the separate terms applying to such technology, and (b) these terms constitute your order under which you are permitted to distribute the Mobile Archive portion of the Programs. With respect to creating a Mobile Application, you acknowledge that you must separately agree to and abide by license terms with the applicable mobile operating system provider and possibly other third parties. For example, for iOS applications, you agree that the Mobile Application, in whole or in part, may not be installed on a mobile device or executed except as incorporated into an iOS application that has been signed using an appropriate Apple-issued certificate that you obtained directly from Apple and that is deployed in full compliance with your agreement with Oracle (including these terms) and license terms set forth in a separate agreement between you and Apple.

Mobile Application End User License Terms

Any Mobile Application distribution to End Users must be subject to a legally binding end user license agreement (the "EULA") between you and each End User pertaining to the Mobile Application that must, at a minimum, contain the following terms:

(a) Include acknowledgements by you and the End User that the EULA is concluded between you and the End User only and that the following apply:

(i) you are solely responsible for each Mobile Application's content, maintenance, and support; and

(ii) you are solely responsible for addressing, settling, and discharging any claims of the End User or any third party relating to the Mobile Application or the End User's possession and/or use of that Mobile Application, including, but not limited to product liability claims; any claim that the Mobile Application fails to conform to any applicable legal or regulatory requirement; any claims arising under consumer protection or similar legislation; and any claims that the End User's possession and use of that Mobile Application infringes a third party's intellectual property rights;

(b) Provide only a non-transferable, terminable license to the End User that prohibits (i) modifying or creating derivative works or (ii) decrypting, decompiling, reverse engineering, disassembling or attempting to derive the Mobile Application source code (unless such actions are expressly permitted by applicable law);

(c) Notify the End User that the Mobile Application is subject to a restricted license and can be used only in conjunction with the specific Oracle-based solution(s) for which it is designed;

(d) Provide no limitation of your liability to the End User beyond what is permitted by applicable law;

(e) Require the End User to comply fully with all relevant export laws and regulations of the U.S. and other applicable export and import laws to assure that the Mobile Application, nor any direct products thereof, is exported, directly or indirectly, in violation of applicable laws;

(f) State in the EULA your name and address to which any End User questions, complaints or claims with respect to the Mobile Application can be directed;

(g) State in the EULA that the End User must comply with applicable third-party terms when using the Mobile Application and that third-party components that may be appropriate or necessary for use with the Mobile Application are specified in the documentation for that program (or as otherwise notified by you) and that those third party components are licensed to the End User only for use with the Mobile Application under the terms of the third party license agreement specified in the documentation for that program (or as otherwise notified by you) and not under the terms of the EULA;

(h) State that the licenses provided in the EULA automatically terminate upon breach of the EULA terms and in addition that the licenses provided in the EULA may be terminated upon notice;

(i) State that upon termination of the EULA the End User must discontinue all use of the Mobile Application and to delete all copies of the Mobile Application;

(j) Disclaim in the EULA, to the extent permitted by applicable law, a third party's liability for (a) any damages, whether direct, indirect, incidental, special, punitive or consequential, and (b) any loss of profits, revenue, data or data use, arising from use of the Mobile Application;

(k) Designate Oracle as a third party beneficiary. Oracle will have the right to enforce the EULA against the End Users; and

(l) State that your licensors retain all ownership and intellectual property rights in the Mobile Application.

You agree to inform Oracle promptly if you are aware of any breach of the EULA. You agree to be financially responsible to Oracle for all damages or losses caused by your failure to include the required contractual terms set forth above in each EULA between you and an End User.