

Dosis Notify

User Guide

Note: This text is intended to provide the content for the User Guide that can be edited and reformatted to the consistent format for Dosis 2.0 documentation.

Dosis Notify is a system that monitors the status of pharmacy equipment and alerts interested users on productivity interrupting events.

A process runs on the Dosis 2.0 Site Server, or on a standalone L60, monitoring the status of the site equipment. Periodic updates to site information, to user information, and equipment details are published to a web/RESTful server in the Manchac Alexandria data center. As “HALT” conditions are detected they are pushed to the Lookout server; if a HALT condition persists for a duration of time an alert is published to site subscribers.

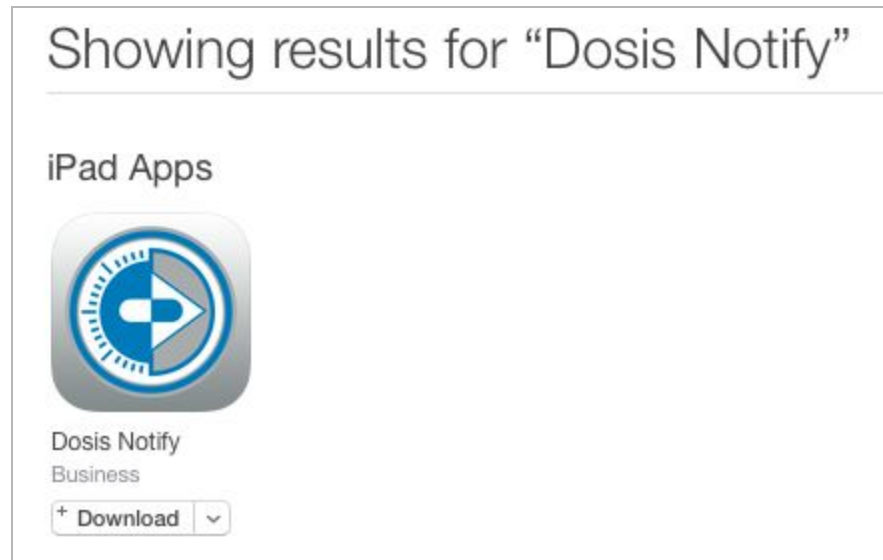
Alerts are published using Amazon’s notification service (SNS) and flow through Apple’s notification service to iOS mobile devices. They are displayed as normal iOS alerts and launch the Dosis Notify mobile app.

The iOS mobile app displays a table with the site equipment and their current overall status; each can be tapped into for a panel of details on the equipment. The mobile app provides a semi-live view into the status of the pharmacy equipment.

This document will describe each of these system components in more detail and provide tools to guide installation, maintenance and troubleshooting.

1. iOS Mobile Application

The iOS application is installed from this link to Apple’s iTunes [App Store](#), or by searching the store for “Dosis Notify”. It is a free app but requires a user PIN to connect to a user’s site.



iTunes search results.

The application is a “universal” app - the same runs on the iPad and on an iPhone and it supports all device sizes; it requires iOS 8+ to install. It requires no special access to user private information such as contacts or the phone number.

Initial App Setup

Once installed and launched a “welcome” wizard will ask for the user’s initials and PIN. There are also several options that may be set including the option to subscribe for live alerts. By default the app will not subscribe to alerts.

Carrier 8:08 AM

User Information

Initials: 1234

PIN: 1234

Verify PIN

Subscribe to alerts? ☐

Done!

1234

q w e r t y u i o p

a s d f g h j k l

z x c v b n m

123 space return

Entering User PIN

The PIN “1234” is a demo user account and will only show a “demo” pharmacy with “live” equipment.

Reference the user listing in the Dosis 2.0 web-ui under “Manage Users” to lookup a valid user PIN. When Dosis Notify has been enabled for a site an additional column is shown listing each user’s PIN.

Manage Users						
Q Search:						
First Name	Last Name	Initials	Role	Email Address	Mobile PIN	Active
Donald	Clump	DJC	User	thedonald@farside.com	20266101	☒

The PIN is simply a composite number combining the site ID with the user ID. In this case Donald Clump uses a pin of “20266101”. Enter this full number into the mobile app PIN field along with the initials “DJC”. (Note: at present the initials are ignored and not used to validate the PIN.)

To verify the PIN tap the “Verify PIN” button. A green checkmark indicates that the PIN is correct and has been verified by the Manchac server.



If the PIN can not be verified (either if incorrect or due to lack of network connection) a dialog is presented asking either to retry or edit the PIN to try again.

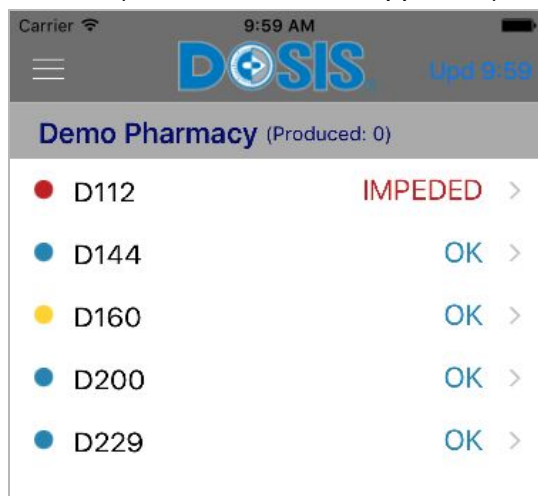
Subscribing to Alerts

By default alerts/notifications are not subscribed. To receive alerts when pharmacy equipment has remained in a HALT condition for a configured duration (default is 20 minutes) toggle the switch to on. The standard iOS dialog is presented indicating that the application wants to send the user notifications and asking for permission. If approved this user's device will be subscribed to receive site notifications.

If the toggle switch is left off, or if permission is denied, the device is not subscribed to receive notifications. However, alerts can later be enabled (or disabled) using the settings menu.

Completing Initial Setup

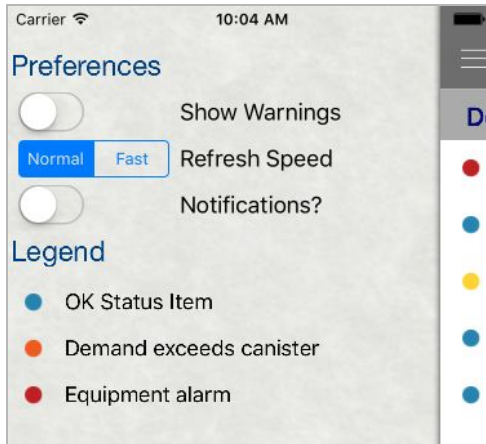
Once the “Done” button is tapped the PIN is validated (if not already), the device is subscribed to alerts (if switched on and approved), and the site device view is presented.



This view is the normal view presented in the future on launch.

Popup Menu Settings

To change settings from within the app tap the upper-left “menu” icon. A menu will either pop-up as a modal dialog, or “slide out” from the left. (Depends on the type of device.) The settings view has several configurable settings and a legend explaining the status “dot” of site equipment.



The settings are:

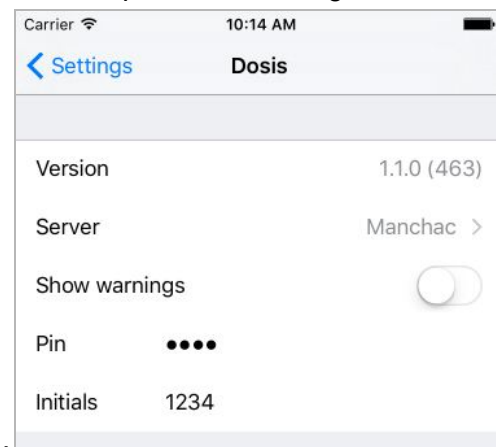
- Show Warnings for equipment. If on warnings are displayed for each item. If off the item is shown as “OK” unless there is an error.
- Refresh speed: The app will automatically update the equipment data every 90 seconds by default. If set to “Fast” the update pace is temporarily set to 30 seconds.
- Notifications: Controls subscription to receive alert notifications. Toggled on the device is subscribed to receive alerts; toggled off no alerts are received. Setting alerts off does not impact the equipment view; all data shown is identical.

The legend simply explains the meaning of the status “dot” to the left of each site equipment row.

Tap anywhere on the settings view, or “slide” the view to the left with a finger swipe gesture.

Dosis Notify iOS Settings

The Dosis Notify app has application settings under the normal iOS Settings. From the home screen tap the iOS Settings and scroll down to the Dosis Notify app



The settings are:

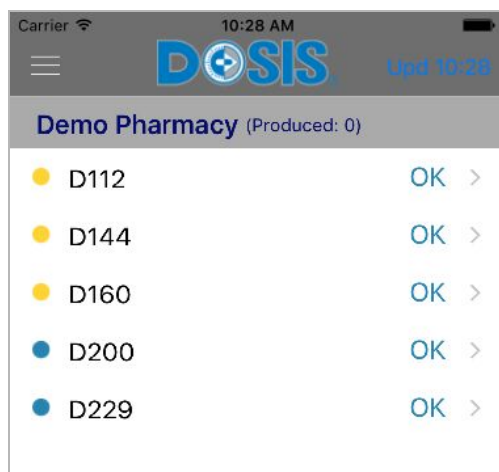
- Version - read-only text indicating the application version and build. (Important for support questions.)
- Server - Selects the server. The options are:
 - Manchac: Connect to Alexandria server (Production default)
 - Manchac Laf: Connect to Lafayette server (Note: the first version sets this to www.bredbeddle.com since there is no Lafayette server as yet.)
 - Local: Connect within the Manchac firewall (if necessary)
 - Dev: development/testing only
- Show warnings - same as internal settings option
- Pin: Set/Change the user PIN
- Initials: Set/Change the user initials

To change the user PIN the application should first be “killed” and then relaunched after changing the PIN setting. There is also (currently) an iOS 9 bug that can cause application settings to not appear. “Kill” the Settings app and relaunch settings to reset the views.

Site Equipment View

The main view displays one or more sites and the equipment for each. By default most users will show a single site. However a “special” user can be created with one or more sites added to their access list.

Each L60 (currently only C/L60’s are displayed) lists as a row in the table view.



On the right of the upper bar the last update time is displayed in an abbreviated format to provide an indication if the data is up-to-date. Tapping the text will refresh the data. Alternatively the table can be “pulled” down with a swipe drag gesture until the refresh indicator appears. The data is also automatically updated every 90 seconds (approx.) while the application is running in the foreground.

When the application transitions to the background or the iOS device is put to sleep it pauses server updates to preserve battery life.

Site Header

Each site renders under the site name header. The header name is followed by a summary of the total prescriptions filled for the current day. This number should be current within a minute (approx) what is displayed on the Dosis 2.0 web-ui for the site.



SS20128 (Produced: 1538)

Under the site header each physical equipment is listed.

Equipment Item

Each row represents one site equipment. The table row has three elements:



- Status “dot”: Displaying if the overall is OK, a canister will soon run out, or there is an error.
- The equipment name
- The overall condition

Tapping an equipment row presents the details for it.

Equipment Details

The equipment details list more information about the current condition and statistics for the site and for the specific equipment item.

Carrier 10:47 AM	
Back	Demo Pharmacy
Current Errors	
LSU Door Open	
Current Warnings	
Canister demand exceeds qty	1
Alerts	
(No current alerts)	
Site Production	
Cards Produced	0
Total Rx	0/0
Total Prepack	0/0
Labels Printed	0
PMIS Count	0
Customer	Demo Pharmacy/1234

Most of the items will be self-explanatory, and match what is displayed in the Dosis 2.0 web-ui for the site (system) and for an L60.

* Note that the site status and details view is not automatically updated while presented.

2. Site Setup

When a customer has subscribed to the Dosis Notify product Manchac's support team must install and enable it for the site. Once installed the site will automatically publish site details ready for viewing with the iOS mobile application.

The PIN for each user is listed (once Dosis Notify is enabled) in the "Manage Users" under the Dosis 2.0 web-ui Settings menu.

Manage Users						
Q Search:						
First Name	Last Name ▼	Initials	Role	Email Address	Mobile PIN	Active
Donald	Clump	DJC	User	thedonald@farside.com	20266101	☒

* At this time all users are active to use the mobile client. However, in production further steps may be implemented to tighten access and security.

3. Technical Overview

Note: This section is best suited for an internal document for support.

Looked at from afar there are three components to the Dosis Notify system:

1. Site daemon - monitors equipment and publishes updates to “Lookout”
2. Lookout - Notify server running in Alexandria/Lafayette
3. Mobile app - client receiving notifications and presenting site overview

The RPM “dosis-mobile-2.1.x.rpm” must be installed and set to auto-start for a site that has subscribed to the Dosis Notify product. There is no further required configuration.

The Lookout server is current a “live” VM running in Alexandria with a database holding site details and mobile device registrations. The site daemon and mobile clients send and request data using a RESTful interface. There is also a rudimentary web UI as a placeholder until the [Overseer 2](#) is updated. Internally the host is “lookout” while externally it is mapped to <http://notify.dosis.com:20010>.

The mobile app is currently just the iOS client, available on the Apple AppStore.

Site Daemon and Dosis Web-UI

The site runs a single site daemon on the site server, or on a standalone L60. This is a python program and uses SQLAlchemy to monitor the site’s Dosis 2.x Postgres database.

On startup the daemon inspects the database to determine the site ID, name, list of users and list of equipment. Each is sent up to the Lookout server. Periodically the site details are scanned looking for changes (about every 5 minutes during the day) and equipment details are scanned (about every minute); equipment metrics are sent up to the Lookout server and if there is a ‘HALT’ condition the error is published. At night the scan is either at a reduced pace, or skipped.

By default no special configuration is required for Dosis Notify. However, the Dosis web-ui site setting “ENABLE_NOTIFY” must be set to ENABLE for the service to begin/continue publishing updates to Lookout.

ENABLE_NOTIFY	Enables Dosis Notify for this site:	☐
LOOKOUT_SERVER_HOST	Host or IP to Lookout server for Dosis Notify:	10.180.0.4

Optionally adjust the host IP to the Lookout server; this will generally be left to the default.

The ENABLE_NOTIFY flag may be temporarily unchecked to prevent the service to publish updates. This is useful if equipment maintenance is underway to prevent alerts to the mobile clients. Enabling will return the service to normal scanning and publishing.

Lookout Server

The Lookout server, running in the Alexandria data-center, is the hub between all sites and the mobile clients. It presents a RESTful API that the site services use to push site and equipment data and alerts, and a mobile version that the mobile clients use. The sites access the Lookout server via the internal VPN connections while the mobile clients access over the open Internet through notify.dosis.com:20010.

Lookout runs as a Django 1.8 web process under Apache, but includes a service (Celery) for monitoring sites and for sending notifications for HALT conditions that have aged. All data is stored in a local Postgres database; all schema updates are done using standard Django 1.8 migrations.