

# Magnet™ Mobile App Manager Administrator Guide

2.0

**Revision A** 

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#### Magnet Systems, Inc.

435 Tasso Street Suite 100 Palo Alto, CA 94301

650-329-5904

info@magnet.com



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## 1. Introducing the Mobile App Manager

The Magnet<sup>™</sup> Mobile App Manager (MAM) is a run-time server that monitors the service status of Magnet MES and provides app management functionality by way of the Magnet Mobile App Manager Console and Mobile App Store.

#### **Mobile App Manager Console**

The Magnet MAM Console is a Web interface of the Magnet Mobile App Manager that enables IT administrators to centrally manage and administer apps on client devices. Access to the MAM Console is defined by role-based and group association, which is defined in LDAP. Using the MAM Console, IT administrators can:

- Enable employee BYOD.
- Remotely install, remove, upgrade, and track apps.
- Customize an enterprise private-label app store.
- Remotely activate / deactivate user accounts.
- Push required apps to authorized users.
- View logs to monitor events history.

#### **Mobile App Store**

The Mobile App Store is an app for installing and managing apps on a mobile device and is installed on iOS and Android devices. The Mobile App Store includes a suite of sample apps that are organized in categories. Via the MAM Console, IT administrators can brand the Mobile App Store with the enterprise private label. The App Store branding kit can be obtained on request.

Mobile App Store





# 2. Getting Started

The Magnet Mobile App Manager Console (Management Console) is a Web-based user interface that enables IT personnel to centrally manage and administer apps. The Magnet Mobile App Manager Console is also used for device provisioning.

### **Logging On to the Manager Console**

The following browsers are supported:

- Firefox 16 and above
- Chrome
- Safari 5 and above



Internet Explorer is not currently supported because there are issues around installing apps.

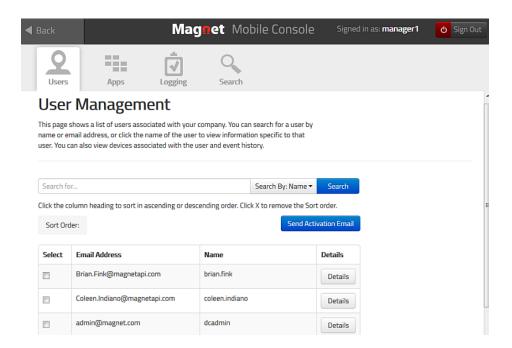
- 1 Launch a browser, and enter the URL.
- **2** Enter the username and password.



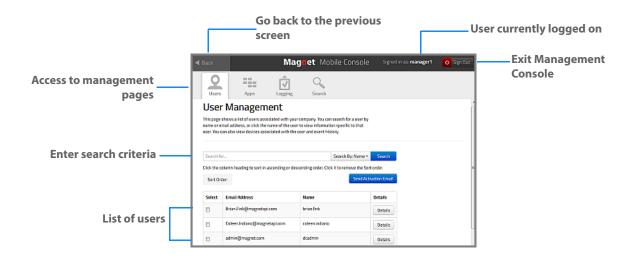
Please contact Magnet Systems for the URL, username, and password.

3 Click Sign in.

The Management Console home page opens.



### **Exploring the Manager Console User Interface**



### **Taking the Next Step**

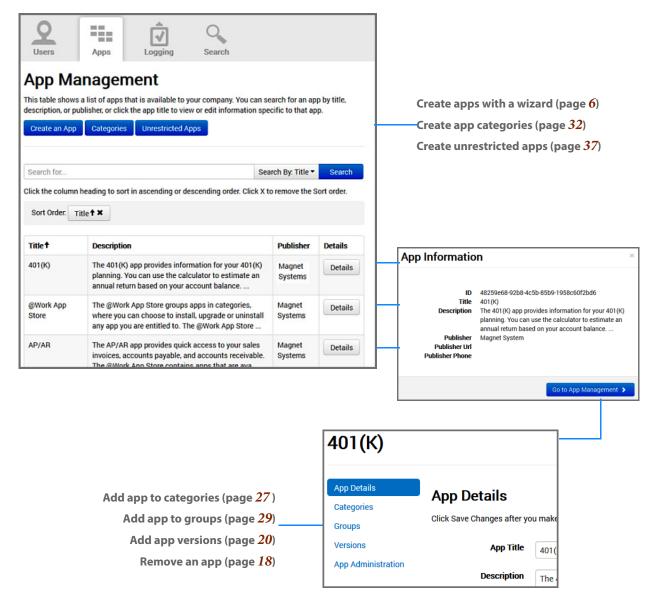
Proceed to *Managing Apps* to create and publish new apps followed by *Managing Users* to push apps to user devices.





# 3. Managing Apps

The *Apps* tab is the entry point for managing apps and categorizing them. It includes adding app versions and removing an app category as well as provisioning user devices. To access the *App Management* page, click the **Apps** tab. The following illustration shows the navigation among app-related pages.



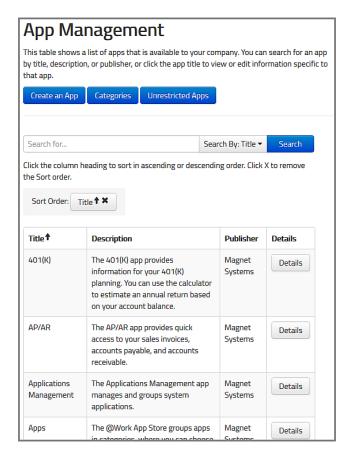
### **Creating an App**

An installation wizard guides you through the installation process. Each step is dependent, which means you must complete step 1 before moving on to step 2. By clicking **Continue**, the step becomes accessible at any time during the installation process. For example, steps 1 and 2 are done and you are on step 3, you can go back to steps 1 or 2 when you need to make changes.

You can organize your apps by category. The Magnet Mobile Server provides eight default categories for organizing your apps. You can assign an app to one or more categories. Refer to *Creating an App Category* on page 32 to add new categories.

User groups are pre-configured through LDAP. You can assign users with an app access level based on their group association (refer to *Adding an App to a Group* on page *29*). A user may belong to multiple groups, but each group has different app access level. In this case, the last group/status pair supersedes others.

1 Select the **Apps** tab to open the *App Management* page.





#### 2 Click Create an App.



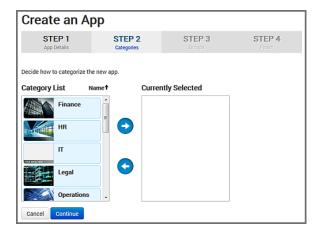
- **3** Enter the following information that will be displayed on the user's device.
  - App Title: The name of the app.
  - Description: A summary of what the app does.
  - Publisher: The person or company who publishes the app.
- **4** Enter the following optional information.
  - Publisher URL:
  - Publisher Phone:
  - Support URL:
- 5 Change (if needed) the option from the **Hidden from App Store** drop-down list.
  - Yes indicates to upload the app, but hide it from Apps@Work.
  - No (default) indicates to make the app visible to Apps@Work.



App@Work is an app that is used to install and manage all enterprise apps.



6 Click **Continue** to assign the app to one or more categories. The STEP 2 screen opens.



7 Select a category from the *Category List* panel, drag and drop it or click • to move it to the *Currently Selected* panel.

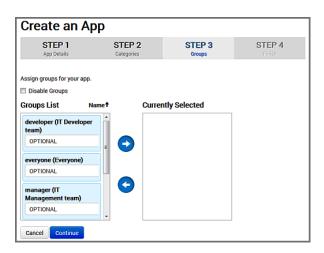


It is good practice to assign at least one category although it is not required at this time and you can assign one later (refer to *Adding an App to a Category*). When an app is not assigned to a category, the app is not available to users.

When assigning an app to multiple categories, press <Shift> while making the selection; click • to move them to the *Currently Selected* panel.

The drag-and-drop function does not work when selecting multiple categories.

8 Click **Continue** to assign the app to a user group. The STEP 3 screen opens.





**9** Select the group from the *Groups List* panel, click • to move it to the *Currently Selected* panel.



Assigning an app to a group is not required at this time and you can assign the app to a group later (refer to *Adding an App to a Group*). When an app access level is not assigned, the app is available to users of that group.

When assigning an app to multiple groups, press <Shift> while making the selection; click • to move them to the *Currently Selected* panel.

The Disable Groups option is not available for this release.

- **10** Assign an app access level to the group by selecting one from the drop-down list.
  - **REQUIRED** indicates that they must take this app and that users cannot delete it.
  - OPTIONAL indicates that users may take this app by their choosing.
  - **BLOCKED** indicates that users are not permitted to install this app.



Refer to *Installing Apps* on page 45 for installing required apps.

**11** Click **Continue** to review the information you entered.

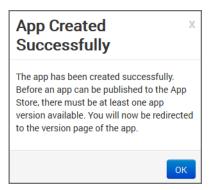
The STEP 4 screen similar to the following opens. In this example, it shows two categories and two groups selected for app "Instagram2".





12 Click **Create App** to complete, or click the **STEP** tab to go back and change any information.

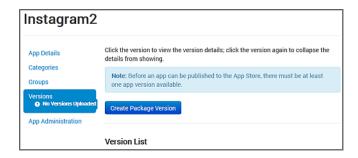
A dialog box opens informing you of the status.



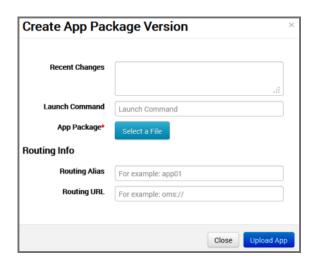


All STEP tabs are now accessible. You can go back to any previous tabs to make changes.

**13** Click **OK** to go to the *App Version* page, as shown in the following example.



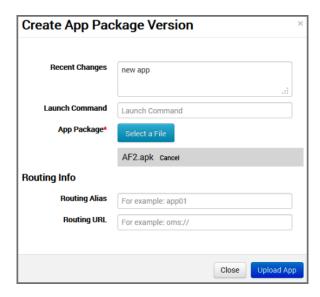
**14** Click Create Package Version.





- **15** Enter a description of recent changes to the app in the **Recent Changes** field.
- **16** Click **Select a File**, and navigate to the file location where the app package file (APK, file format for Android) is kept.

The following screen shows an example of an app package selected.



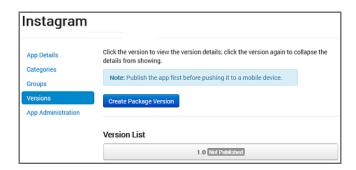
17 Click Upload App.

A dialog box appears informing you of the status.



A given app version can be uploaded only once. An error occurs and the operation fails when you try to upload the same app version again.

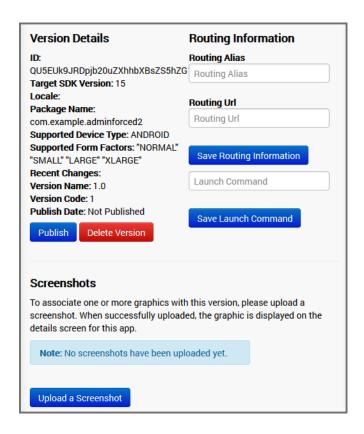
**18** Click **OK** to return to the *App Version* page and to publish the app version.





**19** Click **Not Published** to publish the version.

A screen similar to the following appears, showing the detailed information of the version to be published.





An app version must be published or it will not appear in Apps@Work, and users will be unable to install it. You can publish the app later; refer to *Creating App Versions* on page 20 for information.

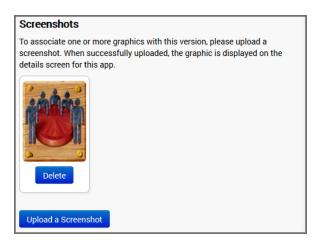
**20** Click **Upload a Screenshot** (optional) to associate a graphic with this app version.





- **21** Enter the name and description for the graphic in their respective fields.
- **22** Click **Select a File** and navigate to the file folder where the graphic file is located.
- 23 Click OK.

The graphic is displayed when successfully uploaded, as shown in the following example.



24 Click Publish.

A dialog box appears informing you of the status.

**25** Click **OK** to return to the app version page, and the version is now changed to **Published**.

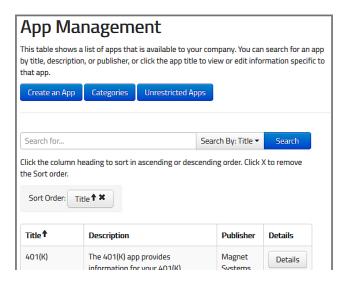




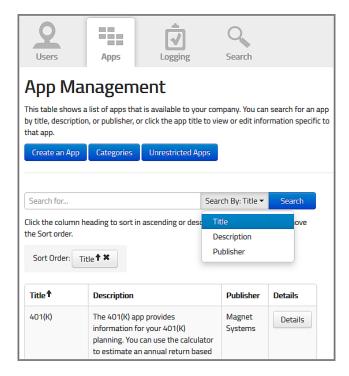
#### **Searching for an App**

You can only search for an app that your organization has previously created. You can specify the search by title, publisher, or description. For a more specific search, click the **Advance Search** tab (refer to *Chapter 6*, *Searching with Filters*).

1 Select the **Apps** tab to open the *App Management* page.

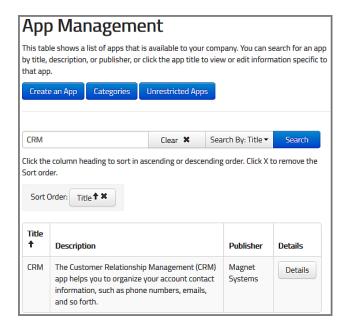


**2** Select a search preference from the **Search By** drop-down list.





**3** Enter your search preference (title, description, or publisher) and click **Search**. The result is displayed, as shown in the following example.



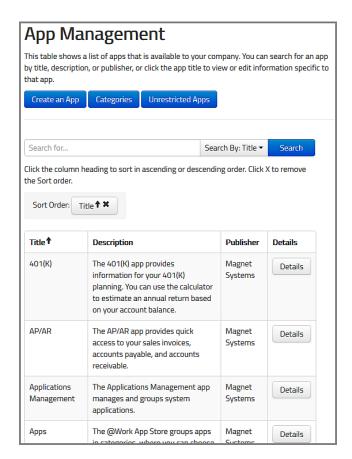


The text for search is case sensitive.



#### **Modifying an App**

1 Select the **Apps** tab to open the *App Management* page.



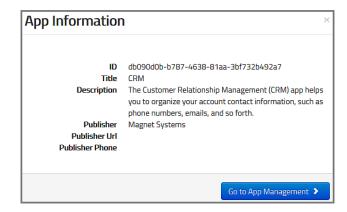
**2** Select an app of interest.

— Or —

Search for an app of interest (refer to *Searching for an App*).

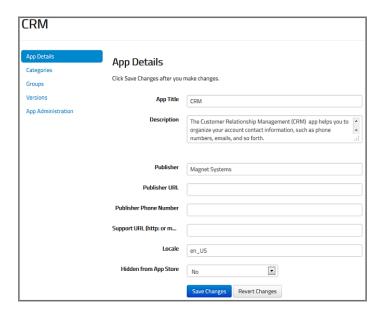
3 Click Details.

The following screen shows the CRM app has been selected.





4 Click Go to App Management.



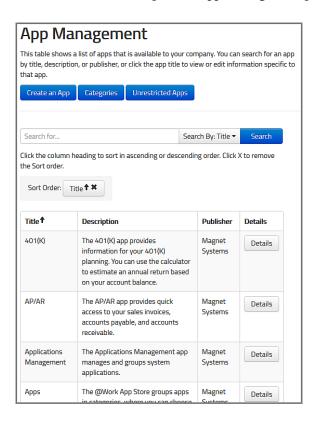
- **5** Modify any fields.
- 6 Click Save Changes when done.The updated app information is saved to Apps@Work.



#### Removing an App from Apps@Work

When an app is removed, it is removed from Apps@Work. The app is not removed from the user device.

1 Select the **Apps** tab to open the *App Management* page.



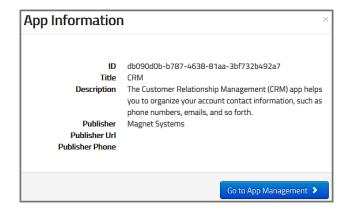
**2** Select an app of interest.

- Or -

Search for an app of interest (refer to *Searching for an App*).

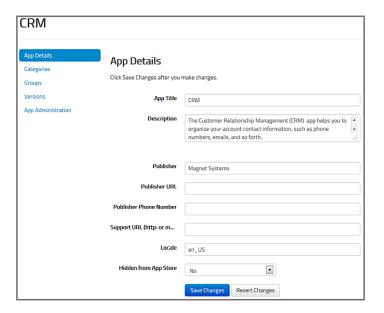
3 Click Details.

The following screen shows the CRM app has been selected.





4 Click Go to App Management.



5 Click App Administration.



6 Click Delete App.

A dialog box appears asking for confirmation.

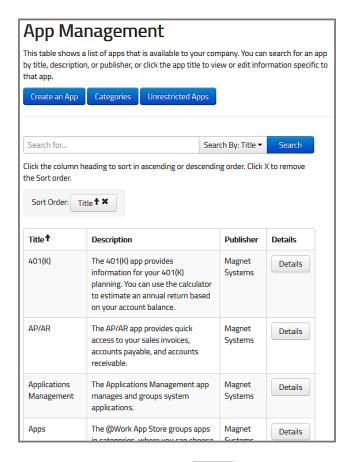
**7** Click **OK** to confirm the operation.



### **Creating App Versions**

You can create an app version after an app has been created. To make an app available to users, an app version must be published to appear in Apps@Work, so it is available for users to install.

1 Select the **Apps** tab to open the *App Management* page.



**2** Select an app of interest, click **Details**.

The detailed information of the selected app appears, as shown in the following example.





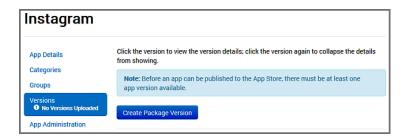
#### 3 Click Go to App Management.

The status of the version is indicated, as shown in the following example.

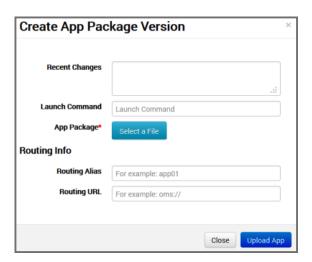


#### 4 Click Versions.

A page opens displaying the version list, as shown in the following example.



5 Click Create Package Version.

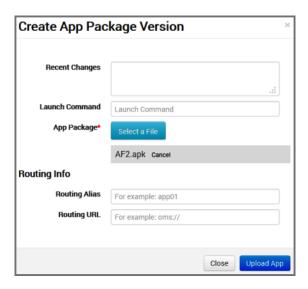


**6** Enter a description of the app in the **Recent Changes** field.



7 Click Select a File, and navigate to the file location where the app package file (APK, file format for Android or IPA for iOS) is kept.

The following screen shows an example of the app package selected.



8 Click Upload App.

A dialog box appears informing you of the status.



A given app version can be uploaded only once. An error occurs and the operation fails when you try to upload the same app version again.

**9** Click **OK** to return to the *App Version* page to publish the app.



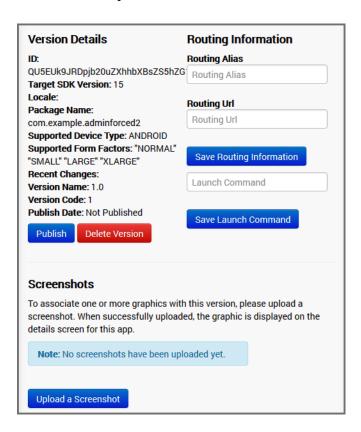


Be sure to publish an app version or the app will not appear in Apps@Work, and users will be unable to install it.

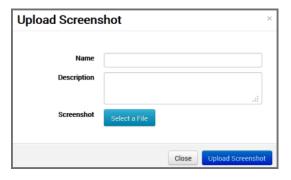


**10** Click **Not Published** to publish the version.

A screen similar to the following appears, showing the detailed information of the version to be published.



**11** Click **Upload a Screenshot** (optional) to associate a graphic with this app version.

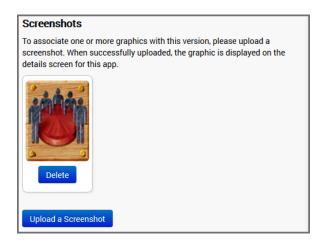


- **12** Enter the name and description for the graphic in their respective fields.
- **13** Click **Select a File** and navigate to the file folder where the graphic file is located.



#### 14 Click OK.

The graphic is displayed when successfully uploaded, as shown in the following example.



#### 15 Click Publish.

A dialog box appears informing you of the status.

**16** Click **OK** to return to the app version page, and the version is now changed to **Published**.

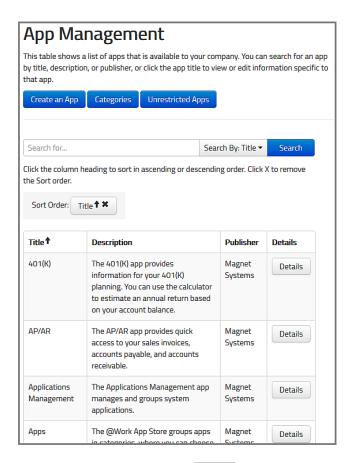




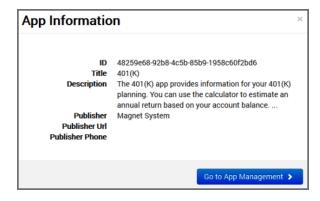
### **Publishing an App**

Before your users can install an app, you must publish it first.

1 Select the **Apps** tab to open the *App Management* page.



Select an app of interest, click **Details** to display the app detailed information. The following example shows the detailed information of the 401(K) app.





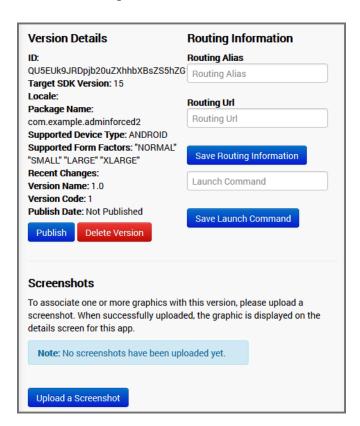
- 3 Click Go to App Management.
- 4 Click Versions.

A page opens displaying version list, as shown in the following example.



**5** Click **Not Published** to publish the version of the app.

A screen similar to the following appears, showing the detailed information of the version to be published.

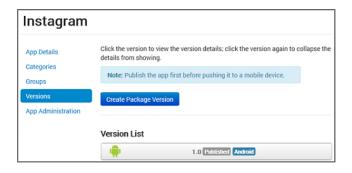


6 Click Publish.

A dialog box appears informing you of the status.

7 Click **OK** to return to the app version page, and the version is now changed to **Published**.





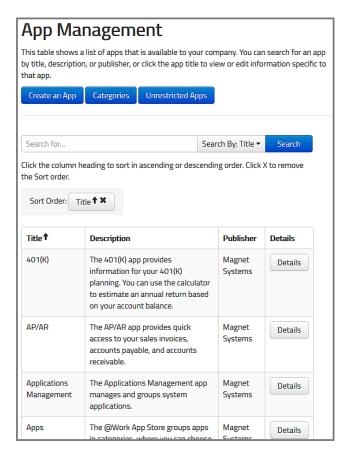
8 Click Publish.

A dialog box appears informing you of the status.

### **Adding an App to a Category**

You can add an app to one or more categories. When an app is not assigned to a category, the app is not available to Apps@Work, which means the app is not visible to users for installation.

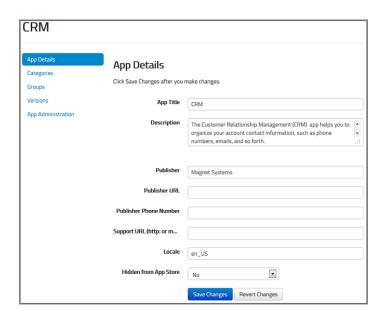
1 Select the **Apps** tab to open the *App Management* page.



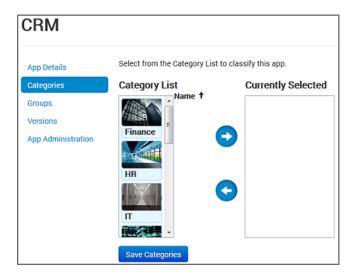


**2** Select an app of interest.

Search for an app of interest (refer to *Searching for an App*). The following screen shows an example of CRM app selected.



3 Click Categories.



- 4 Select the category from the *Category List* panel, drag and drop it or click
  - to move it to the *Currently Selected* panel.



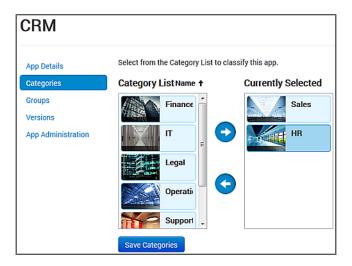


When assigning an app to multiple categories, press <Shift> while making the selection; click • to move them to the *Currently Selected* panel.

The drag-and-drop function does not work when selecting multiple categories.

#### 5 Click Save Categories.

The selected categories are now displayed as shown in the following example.

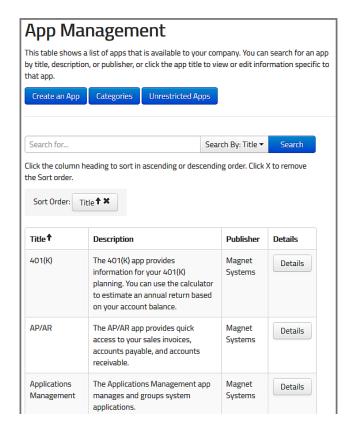


### **Adding an App to a Group**

User groups are pre-configured through LDAP. You can assign users with an app access level based on their group association. A user may belong to multiple groups but each group has different app access status. In this case, the last group/status pair supersedes others.



1 Select the **Apps** tab to open the *App Management* page.

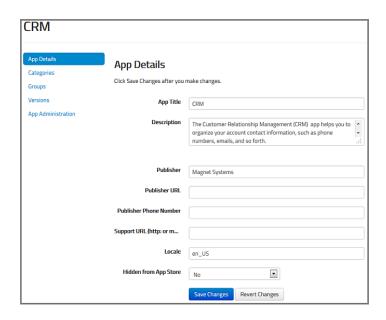


**2** Select an app of interest.

- Or -

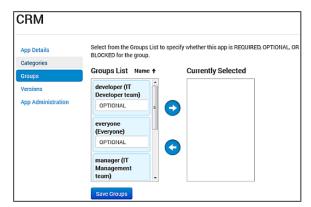
Search for an app of interest (refer to *Searching for an App*).

The following screen shows an example of the CRM app selected.





#### 3 Click Groups.



**4** Select the group from the *Groups List* panel, drag and drop it or click **◆** to move it to the *Currently Selected* panel.



When assigning an app to multiple groups, press <Shift> while making the selection; click • to move them to the *Currently Selected* panel.

The Disable Groups option is not available for this release.

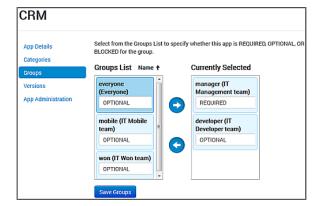
- 5 Assign an app access level to the group by selecting one from the drop-down list.
  - **REQUIRED** indicates that users must take this app and that they cannot delete it.
  - **OPTIONAL** indicates that users may take this app by their choosing.
  - **BLOCKED** indicates users are not permitted to install this app.



Refer to *Installing Apps* on page 45 for installing required apps.

6 Click Save Groups.

The selected groups are now displayed as shown in the following example.

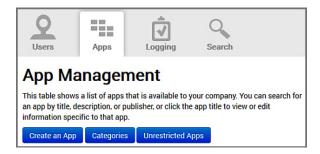




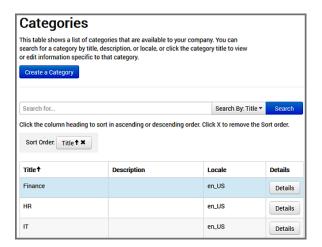
#### **Creating an App Category**

The Magnet Mobile Server provides eight default app categories: Finance, HR, IT, Legal, Operations, Sales, Support, System. You can create new ones or modify existing ones.

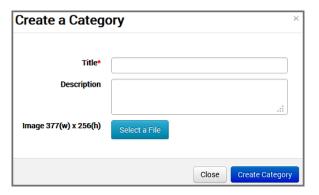
1 Select the **Apps** tab to open the *App Management* page.



**2** Click **Categories**; a page similar to the following opens.



3 Click Create a Category.



- **4** Enter the category name you want users to see in the **Title** field.
- **5** Enter (optionally) additional information in the **Description** field.



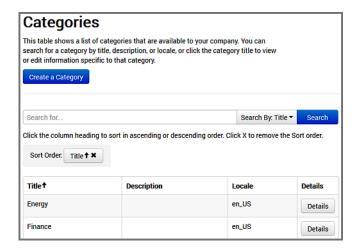
6 Click Select a File to upload an image file that will be displayed in Apps@Work on a user's mobile device.



The image file must be in the PNG format and the image size must not exceed 377W x 256H pixels.

#### 7 Click Create Category.

A page opens displaying the category created. The following example shows a newly-created category, "Energy."



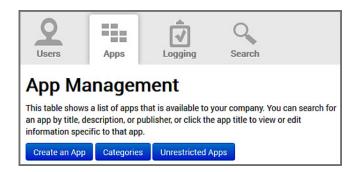


The newly-created app category is initially placed in the default en\_US locale, which you can change (refer to *Modifying an App Category*).

## **Searching for an App Category**

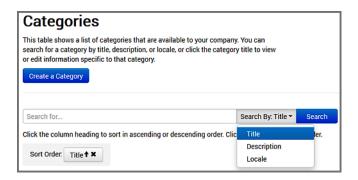
You can search for an app category by title, description, or locale.

1 Select the **Apps** tab to open the *App Management* page.

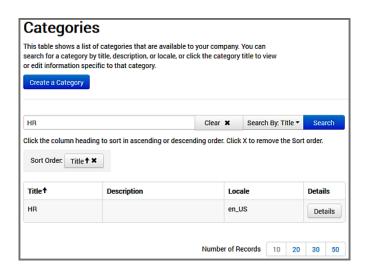




- 2 Click Categories.
- **3** Select a search filter from the **Search By** drop-down list, as shown in the following example.



Enter the search criteria and click Search.
The result is displayed in the table as shown in the following example.





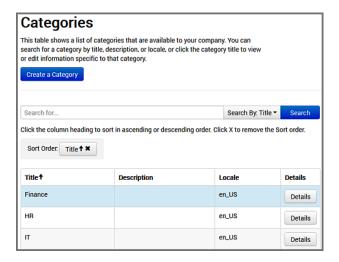
The text for search is case sensitive.



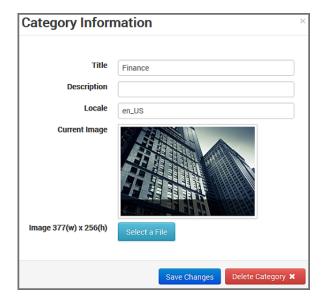
## **Modifying an App Category**

You can make changes to an app category.

- 1 Select the **Apps** tab to open the *App Management* page.
- 2 Click Categories.



3 Select a category to which you want to make changes, click **Details**. The *Category Information* page similar to the following opens.



4 Modify any information, and click **Save Changes**.



## **Removing an App Category**

Removing an app category does not remove apps that are within that category. Apps are still available when they are associated to other categories. When apps are exclusively associated to a category being removed, they are no longer visible to App@Work; however, apps are not deleted and can be recategorized.

- 1 Select the **Apps** tab to open the *App Management* page.
- 2 Click Categories.
- 3 Select the category you want to remove, click **Details**.

  The *Category Information* page similar to the following opens.



4 Click Delete Category.

A dialog box appears asking for confirmation.

5 Click Continue.

A dialog box appears informing you of the deletion status.

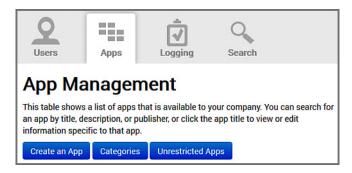
6 Click **OK** to return to the *Categories* page.
The category is immediately removed from the category list.



## **Creating an Unrestricted App**

An unrestricted app is an app that is to be distributed only to a selected group of users. You can use this feature for the distribution of production-ready apps across the enterprise or, for the pre-release app to elicit user feedback.

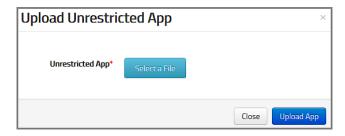
1 Select the **Apps** tab to open the *App Management* page.



**2** Click Unrestricted Apps.

# Unrestricted Apps This table shows a list of Unrestricted Apps that are available to your company. An Unrestricted App is an app that is to be distributed only to a selected group of users. You can filter your search by selecting criteria from the Search By: drop-down list. You can click the app title to view or edit information specific to that title. Create an Unrestricted App

3 Click Create an Unrestricted App.



- 4 Click Select a File and navigate to the folder where the unrestricted file is located.
- 5 Select a file of interest, and click **OK** to return to the previous screen. The file you selected now appears as shown in the following example.





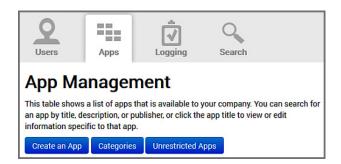
6 Click Upload App.

A message informing of the operational status appears.

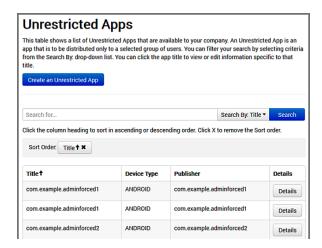
7 Click **OK** to return to the *Unrestricted Apps* page. The newly created App appears on the table.

## **Modifying Unrestricted App Information**

1 Select the **Apps** tab to open the *App Management* page.



- **2** Select the **Apps** tab to open the *App Management* page.
- **3** Click Unrestricted Apps.





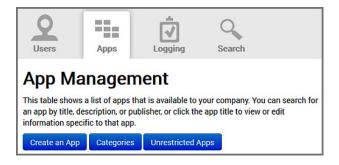
**4** Select an unrestricted app to which you want to make changes, click **Details**. The *Unrestricted App Information* page similar to the following opens.



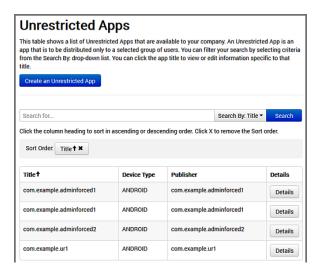
5 Modify any information, and click Save Changes.

## **Deleting an Unrestricted App**

1 Select the **Apps** tab to open the *App Management* page.

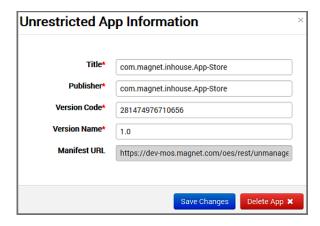


**2** Click Unrestricted Apps.





**3** Select the unrestricted app you want to remove, click **Details**.



4 Click Delete App.

The following dialog box appears asking for confirmation.



**5** Click **Continue** to return to the *Unrestricted Apps* page, and the app is removed from the table.





# 4. Managing Users

Users and groups are configured through LDAP. When user devices are activated, they can be manually deactivated.

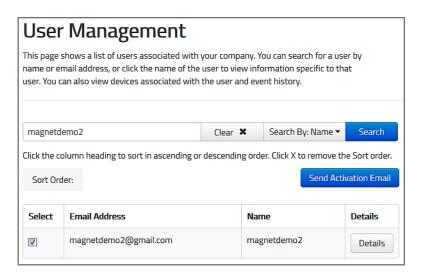
This chapter provides instructions for the following topics:

- Sending account notification to users (page 42)
- Searching for users (page **43**)
- Deactivating a device account (page **44**)
- Installing apps (page **45**)
- Removing apps (page 46
- Reviewing events history (page 48)

## **Sending Account Activation Notification to Users**

You can send an account activation notification to a group of users or one individual.

Click the Users tab to open the User Management page.



**2** Select users from the list.

— Or —

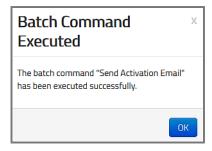
Search an individual user.



The text for search is case sensitive.

3 Click Send Activation Email.

The following dialog box appears when the notification has been sent.



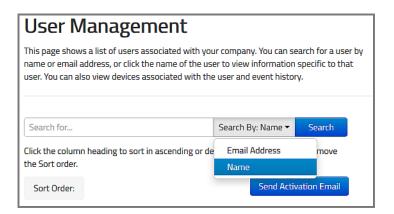
4 Click OK.



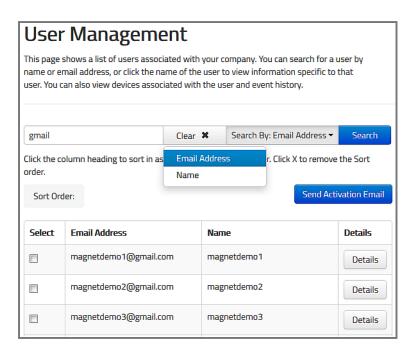
## **Searching for Users**

You can search for a user by name or e-mail address.

1 Select a search preference from the **Search By** drop-down list.



**2** Enter your search preference (name/email), click **Search**. The result is displayed as shown in the following example.





The text for search is case sensitive.



## **Deactivating a Device Account**

As security measures and as part of the normal business process, you can prevent a device from accessing enterprise services by deactivating its account. The device is still fully operational when it is deactivated; however, access to enterprise services is disabled and the use of the enterprise applications are disengaged.

- 1 Select a user account of interest from the *User Management* page.
  - Or —

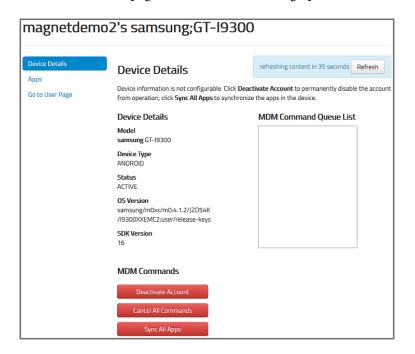
Search for a user account of interest (refer to Searching for Users).

2 Click Details.

A *User Information* form similar to the following appears displaying the account information.



3 Click the device that you want to deactivate.
The *Device Details* page similar to the following opens.





4 Click Deactivate Account.

A dialog box appears informing you of the operational status.

**5** Click **OK** to return to the *Device Details* page.

## **Installing Apps**

When a device is connected to a network (cellular or WiFi) while you issue the **Install** command, the app is immediately installed on the device based on the group's association. If an app is required for a group, the app will be installed without notification sent to the device. If an app is optional, a notification is sent to the device, and the user can decide whether or not to install the app.

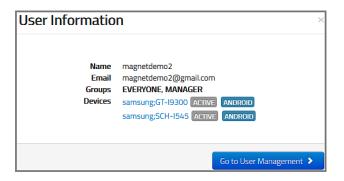
1 Select a user account of interest from the *User Management* page.

- Or -

Search for a user account of interest (refer to Searching for Users).

2 Click **Details**.

A *User Information* form similar to the following appears displaying the account information.



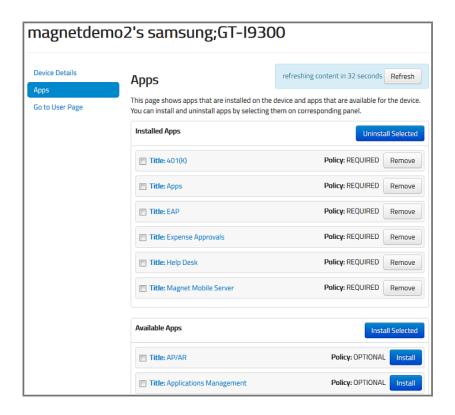
3 Click the device to which you want to install apps.
The *Device Details* page similar to the following opens.





#### 4 Click Apps.

A page similar to the following appears displaying apps available for installation.





The apps must be created and published to be available. Refer to *Creating an App* on page 6 for information.

**5** Select the apps to install.

A dialog box appears informing that the installation command has been sent to the device.

## **Removing Apps**

When a device is connected to a network (cellular or Wi-Fi) at the time you issue the **Uninstall** command, the app is immediately removed from the device. If the device is not connected to a network when you issue the **Uninstall** command, you can click **Show** to force the app removal when the device is reconnected.

1 Select a user account of interest from the *User Management* page.

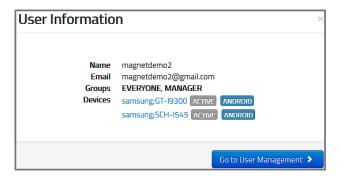
- Or -

Search for a user account of interest (refer to *Searching for Users*).



#### 2 Click Details.

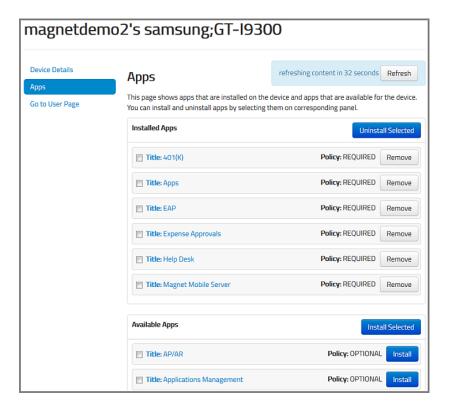
A *User Information* form similar to the following appears displaying the account information.



**3** Click the device from which you want to remove apps. The *Device Details* page similar to the following opens.



4 Click Apps.





- 5 Select from the *Installed Apps* list the apps you want to remove.
- **6** Click Uninstalled Selected.



The app is not removed from the MAM Console when the Uninstalled command is issued while the device is not connected. Continue with the following step to force an app removal from the device when it is reconnected.

## **Viewing Events History**

The Magnet Mobile Server stores a history of events that can be helpful for diagnostic purposes. For additional information, you can view the *History* page to find out who deactivated the device and when it was deactivated.

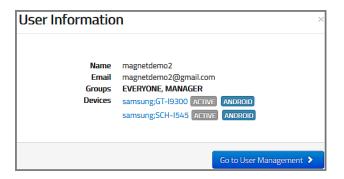
1 Select a user account of interest from the *User Management* page.

— Or —

Search for a user account of interest (refer to *Searching for Users*).

2 Click Details.

A *User Information* form similar to the following appears displaying the account information and device status.



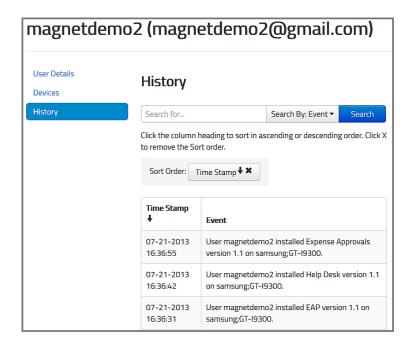
3 Click Go To User Management.

The *User Details* page appears.





Click **History** to display a page similar to the following.



Filter your search criteria by **Timestamp** or **Event** to view a specific event.



Viewing Events History



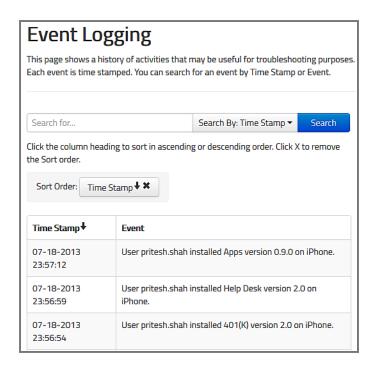


# 5. Logging Events

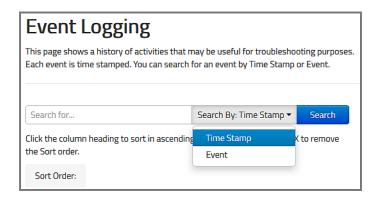
Event logging provides information that is useful for diagnostics and auditing. Each event is time stamped. The following events are logged:

- Security-related events list users who have logged on to the MAM Console.
- Information events describing the successful operation of installing an app.
- Auditing of user activities
- 1 Click the **Logging** tab.

A screen similar to the following appears.



Select a search preference from the **Search By** drop-down list.



Review the events.

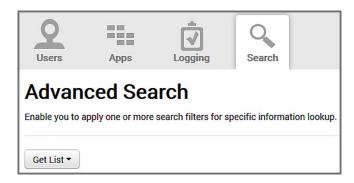




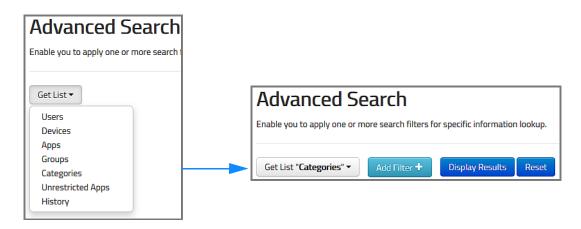
# 6. Searching with Filters

The *Advanced Search* feature enables you to apply one or more filters for looking up specific information.

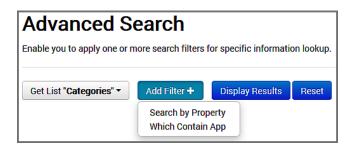
Click the Search tab.
 A screen similar to the following appears.



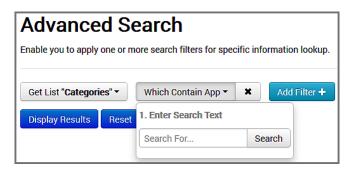
2 Select from Get List the information you want to search.
For example:



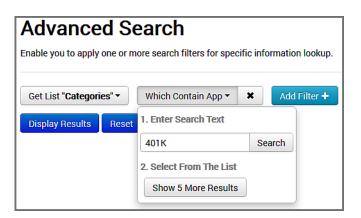
3 Click Add Filter to display the filter.



4 Select the filter to display search options, as shown in the following example:



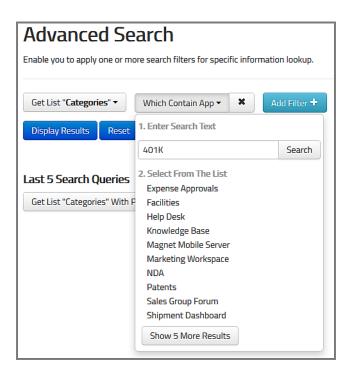
**5** Enter the text you want to search. For example:





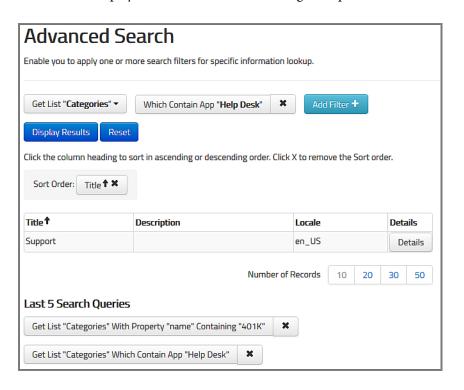
#### 6 Click Search.

A list of apps is displayed containing the text you entered, as shown in the following example.



**7** Select an intended item from the list.

The result is displayed, as shown in the following example.







## A. Setting up an LDAP Server

LDAP (Lightweight Directory Access Protocol) is an application protocol to manage and access the distributed directory information service, which provides a set of records that is organized in a hierarchical structure. The StartTLS operation establishes Transport Layer Security (TLS) on the connection. It provides data confidentiality and data integrity protection.

This appendix provides information and instructions for building a new LDAP server. Follow the descriptions in the subsequent sections for each LDIF file definition, then copy and import the file to populate the LDAP server. The LDAP Persister is the LDAP client instance to your enterprise LDAP server through which the Magnet Mobile Server authenticates user access.

For those who already have an LDAP server set up and configured, follow your own practice for creating an LDAP client instance, which allows the Magnet Mobile Server to authenticate user roles and group associations.

## **LDAP Server Directory Structure**

LDAP provides an interface with directories:

- An entry consists of a set of attributes.
- An attribute has a name and one or more values. (Attribute names are typically mnemonic strings, such as "cn" for common name, "dc" for domain component, "sn" for surname, and "mail" for email address.)

## **LDIF Records**

The LDAP Data Interchange Format (LDIF) is a standard plain text data interchange format for representing LDAP directory content and update requests. LDIF conveys directory content as a set of records, one record for each object (or entry). It also represents update requests, such as Add and Modify.

The Magnet Mobile Server LDAP client instance requires certain groups and roles defined and added to the enterprise LDAP server. An LDIF file containing properly defined user groups and roles would be an excellent way for importing the information into an LDAP server.

### Users\_Groups.LDIF

A typical LDAP server has top-level nodes named *Users* and *Groups* defined in the organizational unit (ou). The LDAP Persister uses this system account's distinguished name (dn) to bind to the LDAP server during the initialization and perform all LDAP queries on behalf of all other accounts.

The "dc" attribute indicates the base node that the LDAP Persister uses as the base point for searching any user object queries, for example, "ou=users,dc=sample,dc=com."

A *users\_groups.ldif* file includes these entries.



Replace red **text** entries with your environment.

#### **Users**

dn: ou=Users,dc=sample,dc=com
objectClass: organizationalUnit

objectClass: top

ou: Users

#### Groups

dn: ou=Groups,dc=sample,dc=com
objectClass: organizationalUnit

objectClass: top

ou: Groups



#### **Users.LDIF**

The *users.ldif* identifies users that have access to the LDAP server.

```
dn: cn=user,ou=Users,dc=sample,dc=com
objectclass: top
objectclass: person
objectclass: inetOrgPerson
objectclass: organizationalPerson
cn: user
sn: LastNameuser
uid: user
givenName: FirstName1
initials: N1
telephoneNumber: 888-8888-8888
title: admin
userpassword: test
mail: user@sample.com
postaladdress: 100 Some Street, Some City, Some Country
```

#### **Groups.LDIF**

The *groups.ldif* identifies the roles of authenticated members. The LDAP Persister maps this attribute to user roles and uses this attribute as the base point for searching group object queries.

The Magnet Mobile Server uses two groups:

- Mobile Admins: Members assigned to this group have administration rights and privileges to access the Magnet Mobile Console.
- Mobile Users: Members assigned to this group are able to access (or download) mobile apps with proper authentication.



These group names are arbitrary; however, these names must match those on both LDAP server and client.

#### Mobile Admins

```
dn: cn=mobileAdmins,ou=Groups,dc=sample,dc=com
objectClass: groupOfNames
cn: mobileAdmins
member: cn=user,dc=sample,dc=com
description: Mobile Admin Group
```



#### Mobile Users

```
dn: cn=mobileUsers,ou=Groups,dc=sample,dc=com
objectClass: groupOfNames
cn: mobileUsers
member: cn=user,dc=sample,dc=com
description: Mobile User Group
```

#### **Assign.LDIF**

Putting all together with the *assign.ldif* file. Use this file to put users into the Admin group or User group.

```
dn: cn=mobileAdmins,ou=Groups,dc=sample,dc=com
changetype: modify
add: member
member: cn=admin,ou=Users,dc=sample,dc=com
dn: cn=mobileUsers,ou=Groups,dc=sample,dc=com
changetype: modify
add: member
member: cn=user,ou=Users,dc=sample,dc=com
```



"cn" in the assign.ldif must match those defined in the groups.ldif.



## **LDAP Server Integration**

OpenLDAP is one of several tools for populating the LDAP server; you may choose one that works for your environment. The OpenLDAP utilities include tools for importing data from LDIF content records to the LDAP server using the **ldapadd** command.



Replace red text entries with your environment.

- 1 Connect to the LDAP server with the following connect string: cn=admin,dc=sample,dc=com
  - Where this connect string is the same as that defined in the *Groups.ldif*.
- Import the users\_groups.ldif to the LDAP server with the following command:
  ldapadd -x -W -D "cn=admin,dc=sample,dc=com" -f
  users\_groups.ldif
- 3 Import the *user.ldif* to the LDAP server with the following command: ldapadd -x -W -D "cn=admin,dc=sample,dc=com" -f users.ldif
- 4 Import the *groups.ldif* to the LDAP server with the following command: ldapadd -x -W -D "cn=admin,dc=sample,dc=com" -f groups.ldif
- 5 Import the *assign.ldif* to the LDAP server with the following command: ldapadd -x -W -D "cn=admin,dc=sample,dc=com" -f assign.ldif



LDAP Server Integration





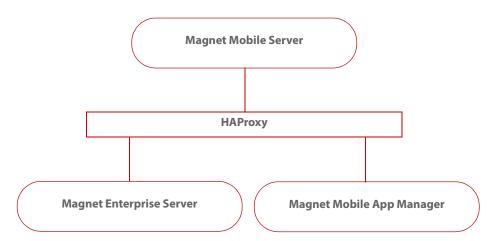
# **B. Setting up HAProxy**

HAProxy is an open source TCP/HTTP load balancer, commonly used to improve the performance of Web sites and services by spreading requests across multiple servers. HAProxy handles all requests from the Magnet Mobile Server and proxies the request to the appropriate servers. For performance and security reasons, it is advisable to set up a reverse proxy server that stands between clients and your Magnet servers.

All Magnet server instances run on virtual machines in the cloud, and they are running on the Ubuntu 12.04 LTS operating system. The Magnet servers are only accessible from HAProxy.

## **Installing an HAProxy Instance**

HAProxy requires the latest operating system patches and HAProxy 1.5. The following diagram shows a typical HAProxy setup, in which an HAProxy instance stands in front of two running Magnet server instances.



## **Configuring HAProxy**

The configuration file consists of sections that begins with a keyword, for example, **global**, **defaults**, **frontend**, and so forth. Some parameters involve values representing time, such as timeouts. These values are generally expressed in milliseconds (ms). The following file shows a sample content of HAProxy configuration. Numbers on the left indicate explanation that follows the sample.

```
global
                daemon
                maxconn 256
            defaults
                mode http
                balance roundrobin
                timeout connect 5000ms
                timeout client 50000ms
                timeout server 50000ms
3
            #port 443 https frontend
            frontend fe_https
                mode http
                bind 0.0.0.0:443 ssl ./sample.pem
                default_backend be_https
            #sample redirect based on path
                acl path test acl path beg /public.dir/test
                use_backend be_path_test if path_test_acl
            #port 80 http frontend
            frontend fe_http
                bind 0.0.0.0:80
                default_backend be_http
            #default https backend
            backend be_https
                mode http
                cookie JSESSIONID prefix
                server server1 10.1.2.3:8080 maxconn 32
                server server2 10.1.2.4:8080 maxconn 32
            #default http backend
            backend be http
                server server1 10.1.2.3:8080 maxconn 32
                server server2 10.1.2.4:8080 maxconn 32
            #path_test backend
            backend be_path_test
                server server1 10.1.2.3:8080 maxconn 32
```



- 1 The *global* section sets process-wide parameters.
- 2 This configuration specifies a round robin load balancing scheme, which alternates the order of servers on record. For other options, see http://cbonte.github.io/haproxy-dconv/configuration-1.5.html#4-balance}documentation.
- **3** Port **443** is specified as listening port on all interfaces and forwards requests to backend **server1** listening on 10.1.2.3:8080 and **server2** listening on 10.1.2.4:8080.
- **4** Redirect to server1 10.1.0.3:8080 when performing path switching tests.
- 5 Port **80** is specified as listening port on all interfaces and forwards requests to backend **server1** listening on 10.1.2.3:8080 and **server2** listening on 10.1.2.4:8080.
- Used in a secured back-end. JSESSIONID cookie is used at initial connection time that tracks authentication, past activity, provide caching, and so forth. In effect this tells the proxy server that this application instance needs to always talk to the same instance during this session.
- **7** Used in a non-secured back-end.
- 8 Identify the path to where the test will be redirected.



Configuring HAProxy

