Configuring Advanced Security in Asset Manager

Creating a **Group** allows the segmentation of the user data space allowing users to only view the appropriate information for which they are allowed. This in essence gives the Administrator the ability to provide varying degrees of "access control" to different groups of users. The controllable sections of the Asset Manager software include:

- Alert Actions
- Alert Thresholds
- Asset Builder Jobs
- Assets
- BIRT Templates
- Custom Types
- Event Actions
- Event Triggers
- Graphs
- Locations
- Maps
- Map Views
- Reader Serial Devices
- Reports
- Report & Graph Actions
- Report & Graph Output
- Templates
- Tag Groups
- Views
- Unassigned Tags
- User Dashboards

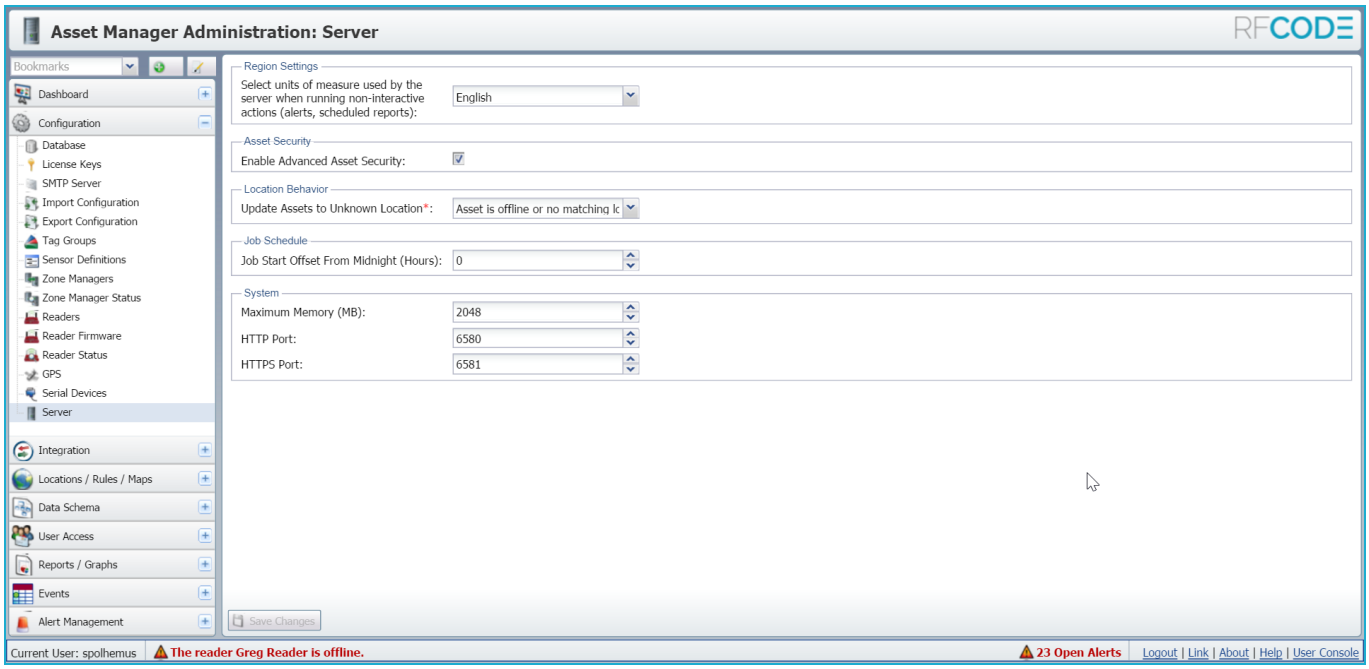
To begin setting up this configuration, there are a couple of settings that must be enabled in Asset Manager: **Advanced Asset Security** and **Location Restrictions**

1. Enable Advanced Asset Security

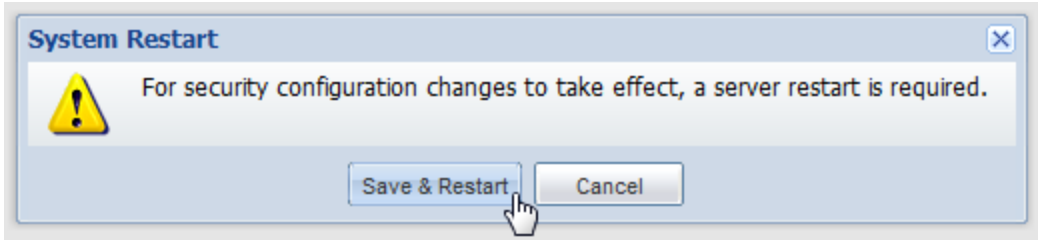
Go to **Admin Console > Configuration > Server > Asset Security**

> **NOTE:** Enabling this setting will require a restart of your Asset Manager service (meaning the application, not the entire computer/server where it resides), so be sure you want to do this before clicking the Save Changes button.

To **Enable Advanced Asset Security**, click the checkbox and click the **Save Changes** button.



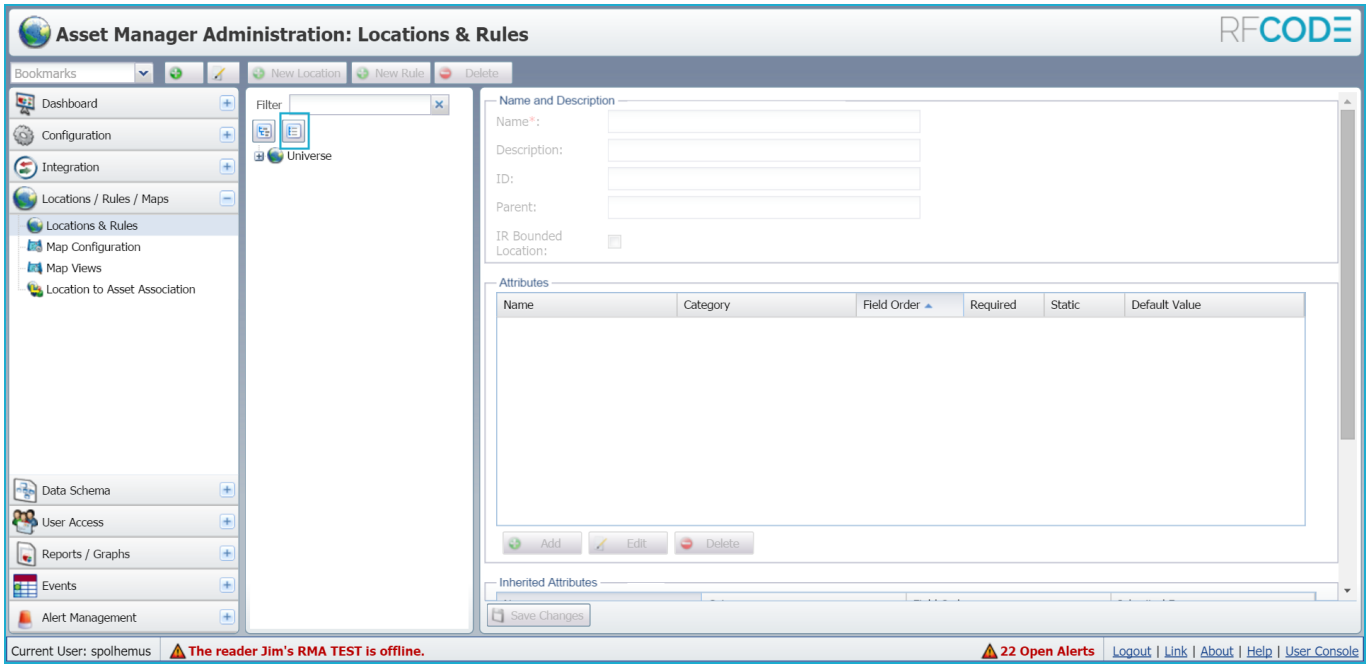
Here is the required restart dialog box:



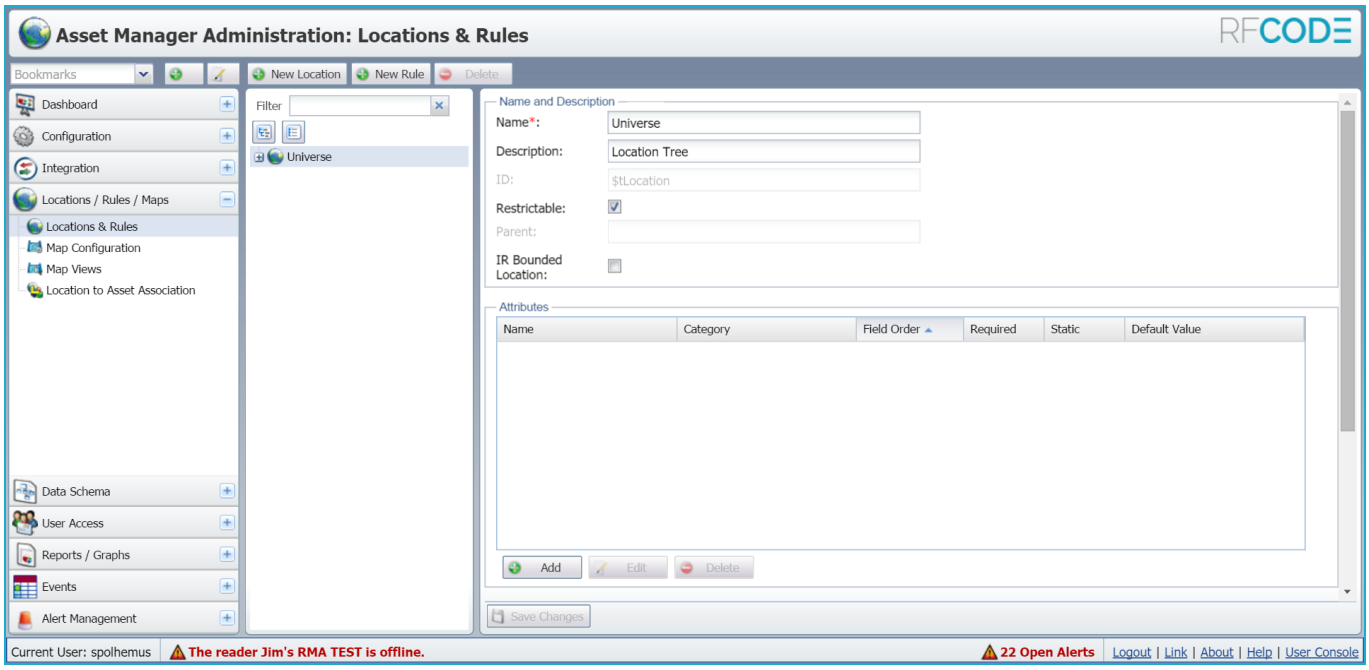
2. Enable Location Restrictions

Go to **Admin Console > Locations / Rules / Maps > Locations & Rules**

Then click the **Collapse All** button in the middle box to ensure you are at the top (root) location.



Select the top Universe location. In the **Edit Location** box (the right box), under **Name and Description**, click the **Restrictable:** checkbox, and then click the **Save Changes** button.



Now that those two settings are set, there are three places to go to setup the new user with a role for a specific location: **Users, Groups**, and **Access Control**.

3. Users Setup

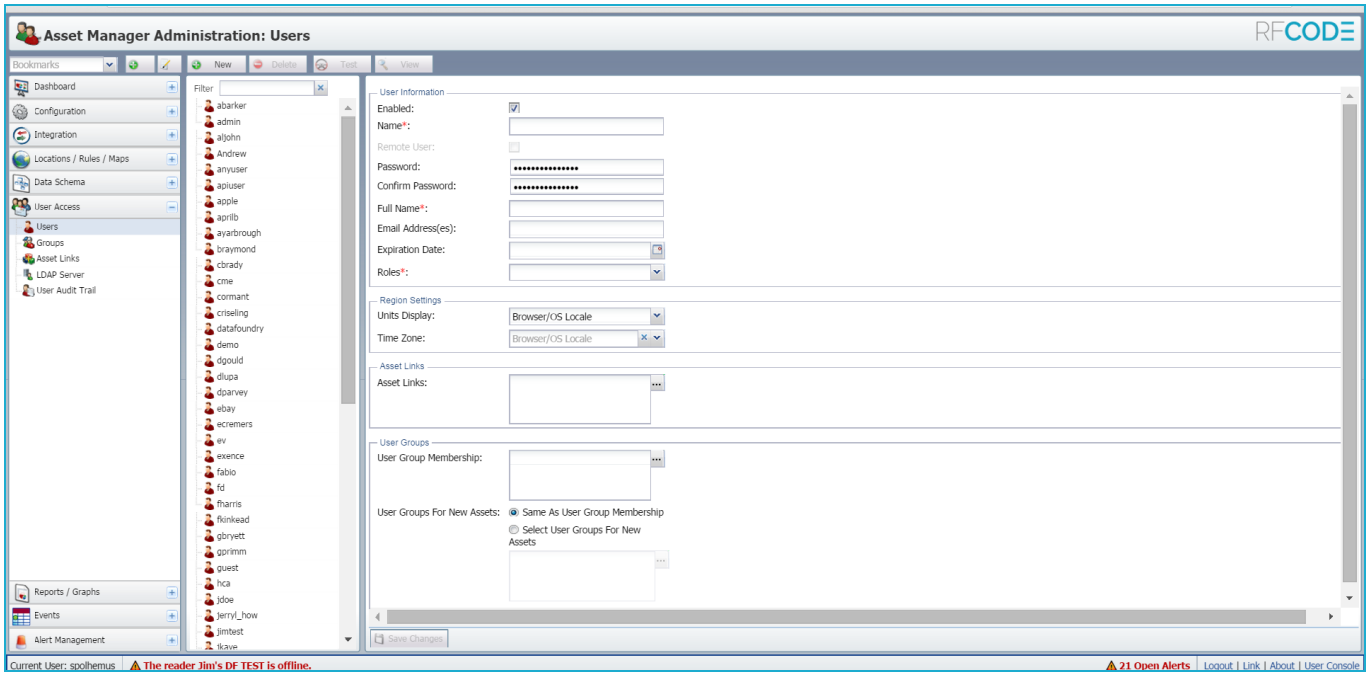
This allows administrators to create users and assign a role to that user. The user is granted varying permissions within the Asset Manager system based on the type of user role they are given. The following table shows the features available to the different user levels that an administrator can assign.

Task	Manager	Editor	Reporter with Alerts & Events	Reporter	Viewer
Dashboards - View	Yes	Yes	Yes	Yes	Yes
Dashboards - Create	Yes	Yes	No	No	No
Dashboards - Edit	Yes	Yes	No	No	No
Dashboards - Copy	Yes	Yes	No	No	No
Dashboards - Delete	Yes	Yes	No	No	No
Tag Management - Manage Tags	Yes	No	No	No	No
Assets - Access Manage Assets View	Yes	Yes	Yes	Yes	Yes
Assets - Access Manage Assets by Location View	Yes	Yes	Yes	Yes	Yes
Assets - Access Manage Assets by Type View	Yes	Yes	Yes	Yes	Yes
Assets - Add/Edit Assets	Yes	Yes	No	No	No
Assets - View Asset Details	Yes	Yes	Yes	Yes	Yes
Assets - Retire/Unretired Assets	Yes	No	No	No	No
Assets - Delete Assets	Yes	No	No	No	No
Assets - Export Asset Data	Yes	Yes	Yes	Yes	Yes
Assets - Pause Updates	Yes	Yes	Yes	Yes	Yes
Assets - Change Views	Yes	Yes	Yes	Yes	Yes
Assets - Import Asset Data	Yes	Yes	No	No	No
Maps - View Map Details	Yes	Yes	Yes	Yes	Yes

Task	Manager	Editor	Reporter with Alerts & Events	Reporter	Viewer
Reports/Graphs - Custom and Simple ETL Reports	Yes	Yes	Yes	Yes	No
Reports/Graphs - Add/Edit Report/Graph Definition	Yes	Yes	Yes	Yes	No
Reports/Graphs - Run a Report or Graph	Yes	Yes	Yes	Yes	No
Reports/Graphs - View and Export Reports and Graphs	Yes	Yes	Yes	Yes	Yes
Report/Graph Actions - Create, Copy and Test	Yes	Yes	Yes	Yes	No
Report/Graph Actions - Delete	Yes	Yes	Yes	Yes	No
Report/Graph BIRT Templates - Create	Yes	Yes	Yes	Yes	No
Report/Graph BIRT Templates - Delete	Yes	Yes	No	No	No
Events Actions - Create, Copy and Test	Yes	No	No	No	No
Events Actions - Delete	Yes	No	No	No	No
Events Triggers - Create and Copy	Yes	No	No	No	No
Event Triggers - Delete	Yes	No	No	No	No
Alerts - View Alerts	Yes	Yes	Yes	No	No
Alerts - Delete Alerts	Yes	Yes	Yes	No	No
Alerts - Pause Updates	Yes	Yes	Yes	No	No
Alerts - Acknowledge Alerts	Yes	Yes	Yes	No	No

Task	Manager	Editor	Reporter with Alerts & Events	Reporter	Viewer
Alerts - Manage Alert Actions	Yes	No	No	No	No
Alerts - Manage Thresholds	Yes	No	No	No	No
Status Bar - Logout	Yes	Yes	Yes	Yes	Yes
Status Bar - Link	Yes	Yes	Yes	Yes	Yes
Status Bar - About/Help	Yes	Yes	Yes	Yes	Yes
Status Bar - Switch Console Link	Yes	No	No	No	No
Status Bar - Display Open Alerts Information	Yes	Yes	Yes	No	No

Click the **New** button, and below you will see this User Information form in the right box:



Fill in the required information and any additional information and click the **Save Changes** button.

- **Enabled:** You must check the "enabled" box to make this user active within the system.
- **Name:** Enter a user name for the user you are creating (If you are creating and LDAP user, then the name of the user must match the username in the LDAP server. Since the LDAP server performs the authentication, no password is required).
- **LDAP User:** Check this box if the user you are creating is a user in your LDAP system. In order for this feature to work, you must first configure Asset Manager to work with your LDAP server. Please see the LDAP Configuration sub-task section of this document for information on how to do this.
- **Full Name:** You may enter a full name to associate with the user that you are creating.
- **Email Address(es):** You may enter an email address(es) to associate with this user.
- **Expiration Date:** In this field you can choose to allow this user account to remain active until a certain date. If you leave this field blank, this user will never expire. In order to remove a user that you have setup without specifying an expiration date, you will have to manually delete the user from your system.
- **Roles:** This is the field where you assign a user one of the user roles (Editor, Manager, Reporter, Reporter – Alerts & Events, Viewer, or Administrator). The Asset Manager designates six types of roles: Asset Administrator, Asset Manager, Asset Editor, Asset Reporter with Events & Alerts, Asset Reporter and Asset Viewer. The six roles have different levels of access to features of Asset Manager. A description of the roles and their accessible features are outlined below:
- **Asset Administrator:** Users with Administrator Role have access to all functions in the Administrator and User Consoles.
- **Asset Viewer:** Viewers have the ability to view asset information, run reports, export data and execute searches.
- **Asset Reporter:** Reporters have all of the abilities of Viewers and also have the to ability create, edit, run and delete reports and graphs.
- **Asset Reporter with Events & Alerts:** Asset Reporters with Events & Alerts have all of the abilities of Reporters and also have the to ability to view and acknowledge alerts.
- **Asset Editor:** Editors have all of the abilities of Reporters and also have the ability to add and edit assets, create and edit dashboards and associate assets to tags.
- **Asset Manager:** Managers have all of the abilities of Editors and also have the ability to edit the asset data.
- **Unit Display:** Choose your preference of units of display for each user in this field. The choices are English, Metric or Browser/OS Locale
- **User Group Membership:** Clicking the ... button will produce a selection box. This box will allow you to select the groups to assign the current user to. Assigning this user to a specific group (s) will give them the access privileges that are defined for that group(s). The access privileges for a particular group are assigned in the Groups sub-task and are only enforced if Security is turned on using the System sub-task.
- **User Groups for New Assets:** Specify the User Groups that will have access to a new asset when it is created in the User Console. This is done by clicking the ... button to produce a selection box and selecting the groups from the list. Click **OK** when finished.

For our Example, we will choose the ***Asset Manager*** role.

4. Groups Setup

Now create a **Group** to put that **User** into.

This allows the segmentation of the user data space allowing users to only view the appropriate information for which they are allowed. This in essence gives the Administrator the ability to provide varying degrees of "access control" to different groups of users. The controllable sections of the Asset Manager software include:

- Alert Actions
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- Report & Graph Output
- Templates
- Event Triggers
- Graphs
- Locations
- Tag Groups
- Views
- Unassigned Tags
- User Dashboards

To define and assign User Groups for Users, follow these steps:

1. To create a new Group, click the **New** button.
2. Enter a name for the new Group that you are creating. (Note that the "Everyone" Group is the default Group in the list tree on the left. The everyone group encompasses all Users that have been established in the system. The purpose of the "Everyone" group is to provide a single common Group available to all Users.)
3. Fill in the rest of the required information and click the Save Changes button.

   - **Description:** Enter a description of the Group.
   - **Asset And User Console Object Access:** Determines if the Group has visibility to all assets. If the checkbox is selected, the User can see all assets regardless of Group membership. If the box

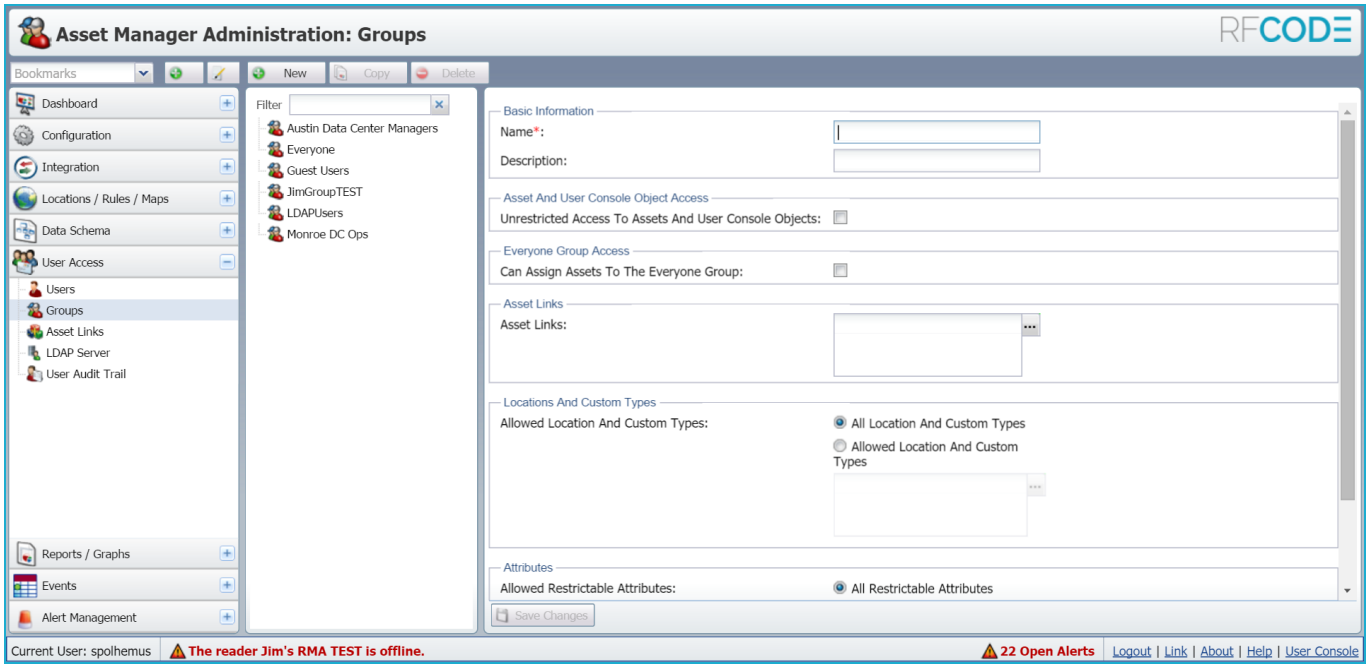
is *not* checked, the User can only access assets that have the Group name associated with the assets.

- **Everyone Group Access:** Specifies whether or not the User can create assets that everyone can access.
- **Restricted Locations And Custom Types Access:** Determines if the Users can see all Locations and Custom Types or only selected Locations and Custom Types.
- **Restricted Attributes Access:** Determines if the User can see all attributes of an asset or not. If the User is not granted access to all attributes, then the User can see all non-restricted attributes and only the restricted attributes that are granted to this User. All other restricted attributes are hidden.

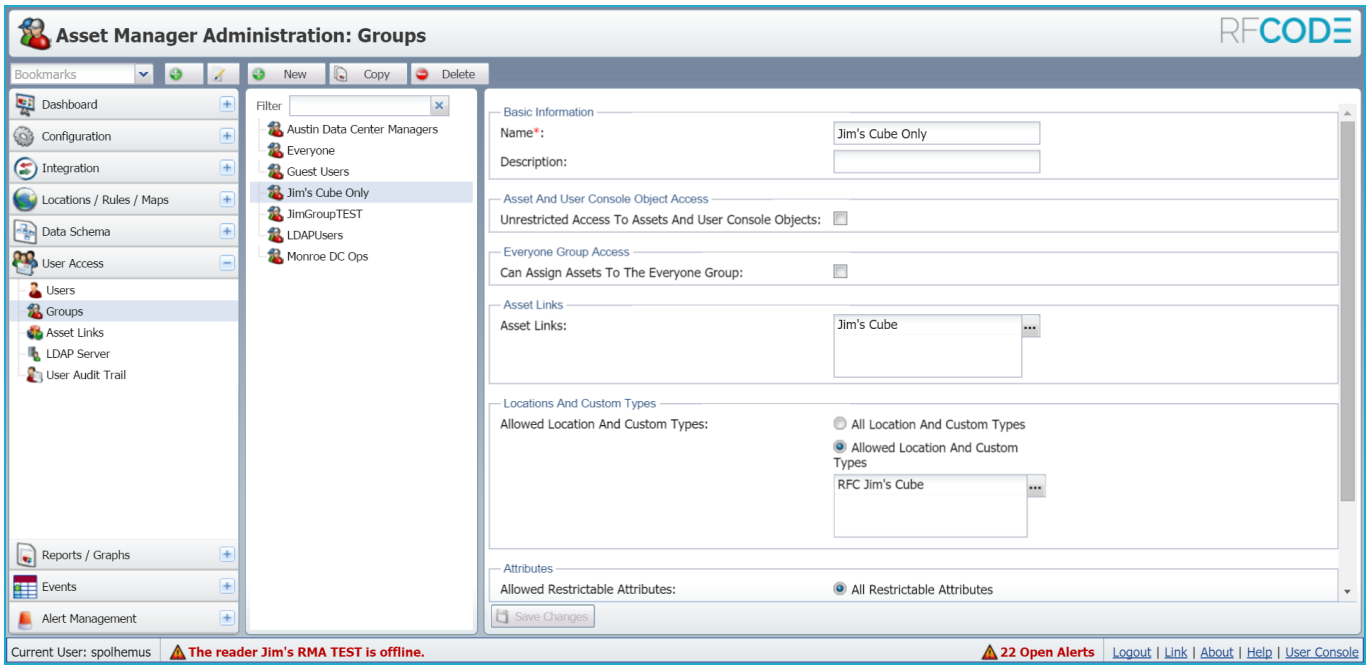
4. The new Group will now appear in the left hand column and any User assigned to this Group will be allowed access to all things that the Group has access to in addition to the access that the User is granted through any other Group memberships.

   NOTE: If a User is granted access to something through one Group membership and denied access to that same thing through another Group membership then access to it will be allowed.

The empty **Groups** form is in the below screenshot:

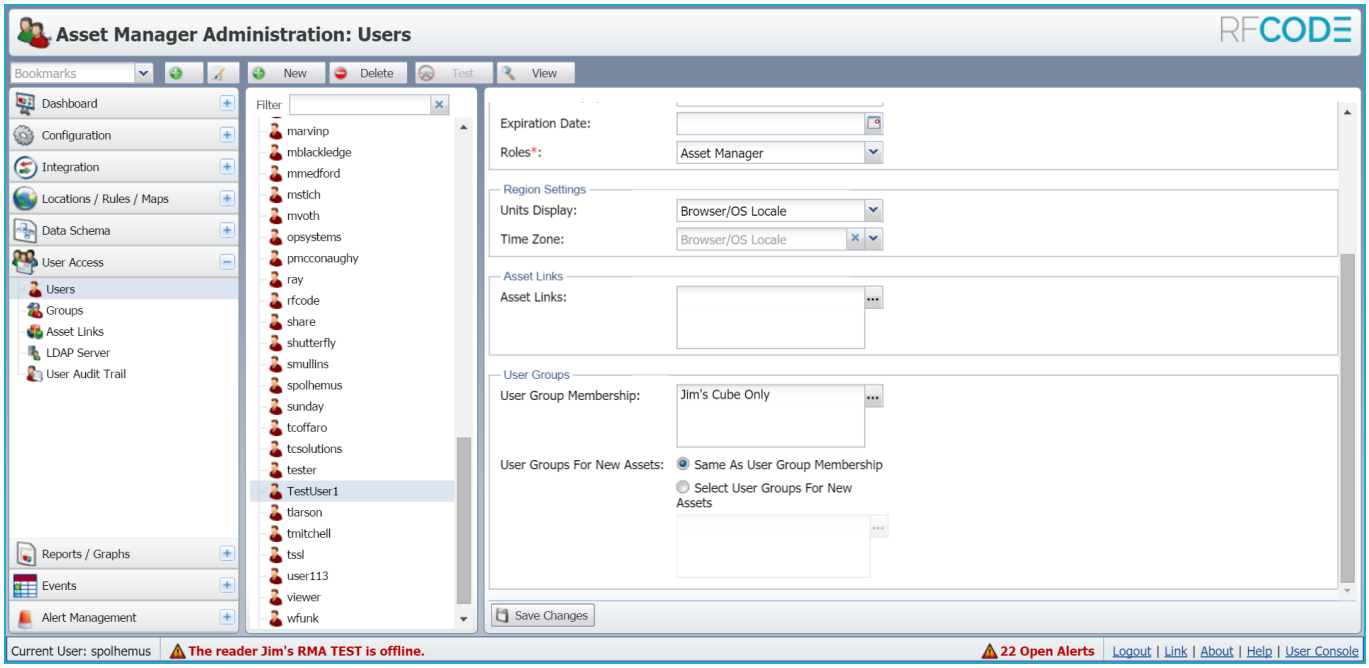


Below is a screenshot of an Example **Group** named "Jim's Cube Only", and notice for the **Restricted Locations And Custom Types Access**, the Example location "RFC Jim's Cube" was selected.



5. Associate User with The New Group

Now, go back to the User you created to add it to the new Group you created. For our example, we went back to the "Test User 1" User and under User Groups in the User Group Membership field we added the "Jim's Cube Only" Group that we just created, as in the below screenshot:



6. Access Control Setup

To further restrict visibility of assets and sensors, you can go to the Access Control feature to limit what assets/sensors are seen by Groups.

Access Control allows users who are assigned a Manager or Editor role in the Asset Manager system to change user access to an asset/sensor after it is created. Access Control allows Managers and Editors to assign the appropriate Groups to assets and other "User Console objects" in the system such as reports, graphs, alerts, thresholds, views, maps, etc.

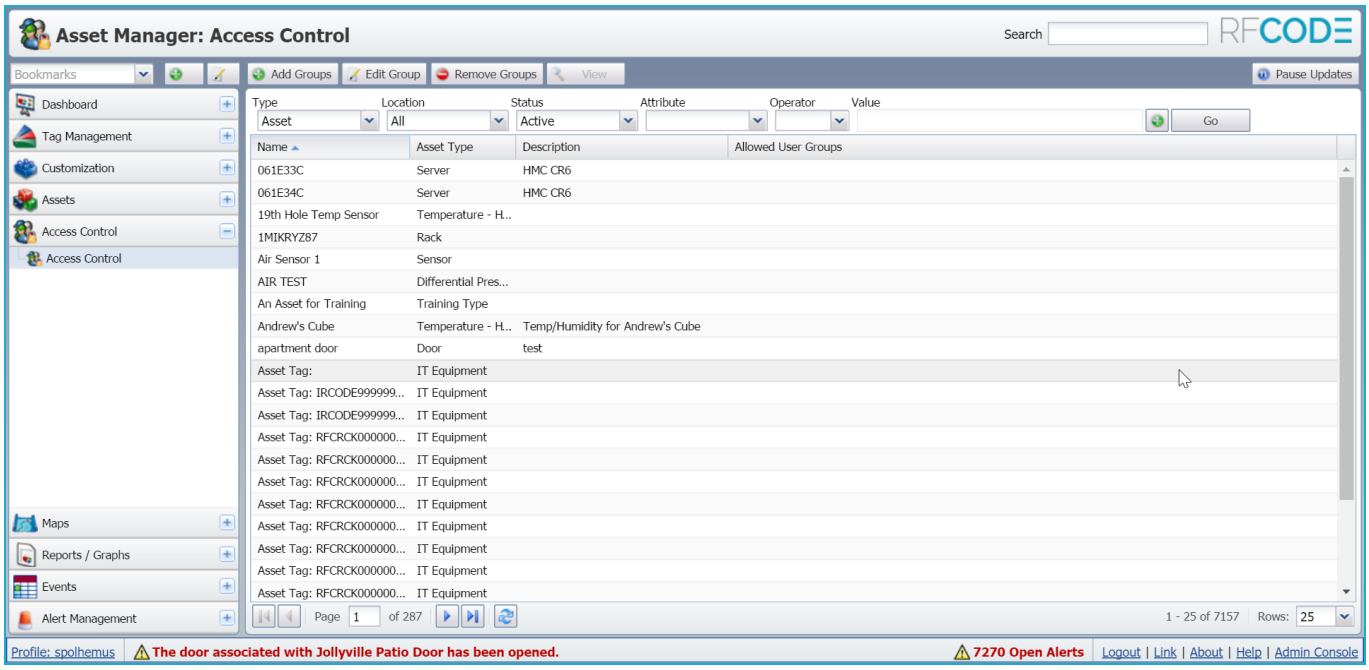
> **NOTE:** Access Control does not appear in the task list of Managers and Editors if Security is enabled and if they are assigned membership of only one Group and the Group cannot assign assets to the Everyone Group (the default group where its member can see all assets/sensors).

Information presented in **Access Control** is reported in real-time, all tag sensor and location data changes automatically as soon as Asset Manager receives any updates from the tags. A user can select the **Pause Updates** button to stop the view from being dynamically updated if a current snapshot of asset state is needed. The **Resume** button will be presented to enable automatic updating again. The dynamic Asset Manager filter allows users to narrow the list of assets/objects by Type, Location, Status, Attribute, Attribute Value, or any combination of these. There are four ways to manipulate assets within the Access Control panel: Edit Groups, Add Groups, Remove Groups, and View functions.

Access Control is located at **User Console > Access Control**

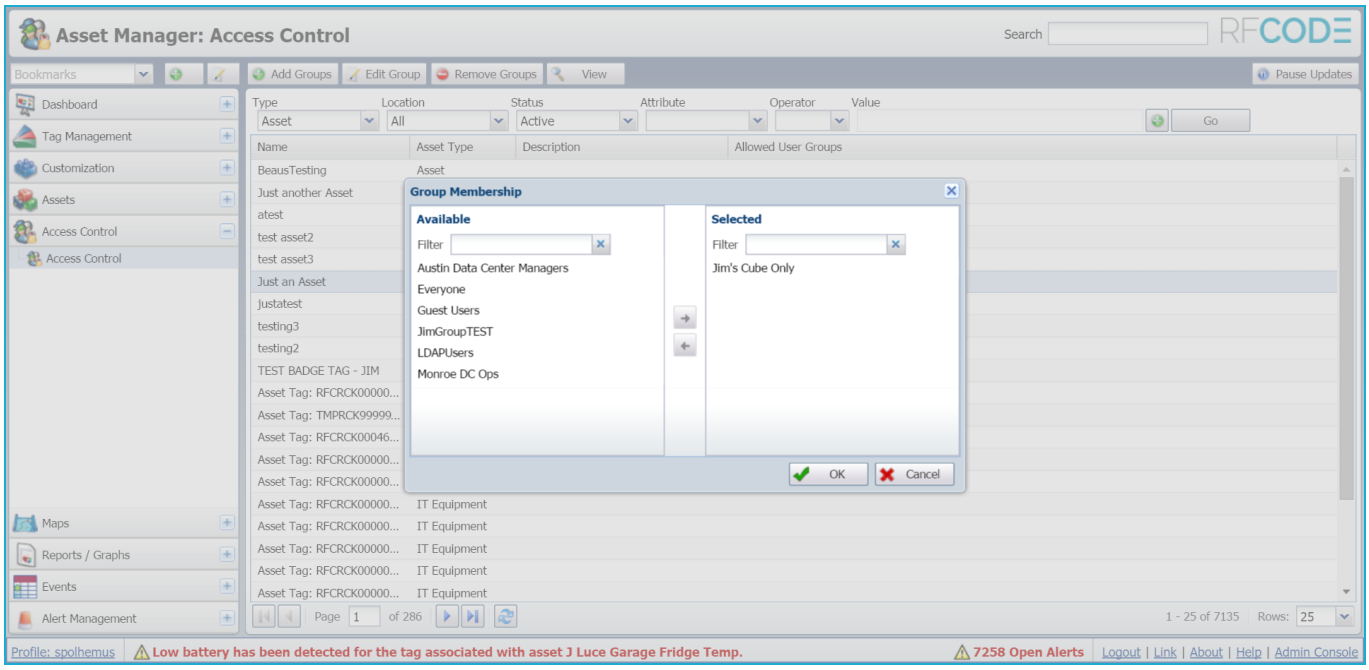
****After showing the basic function screens, we will resume with the Example we have been using for this document.****

The **Access Control** screen will look similar to the screenshot on the next page:



Edit Groups

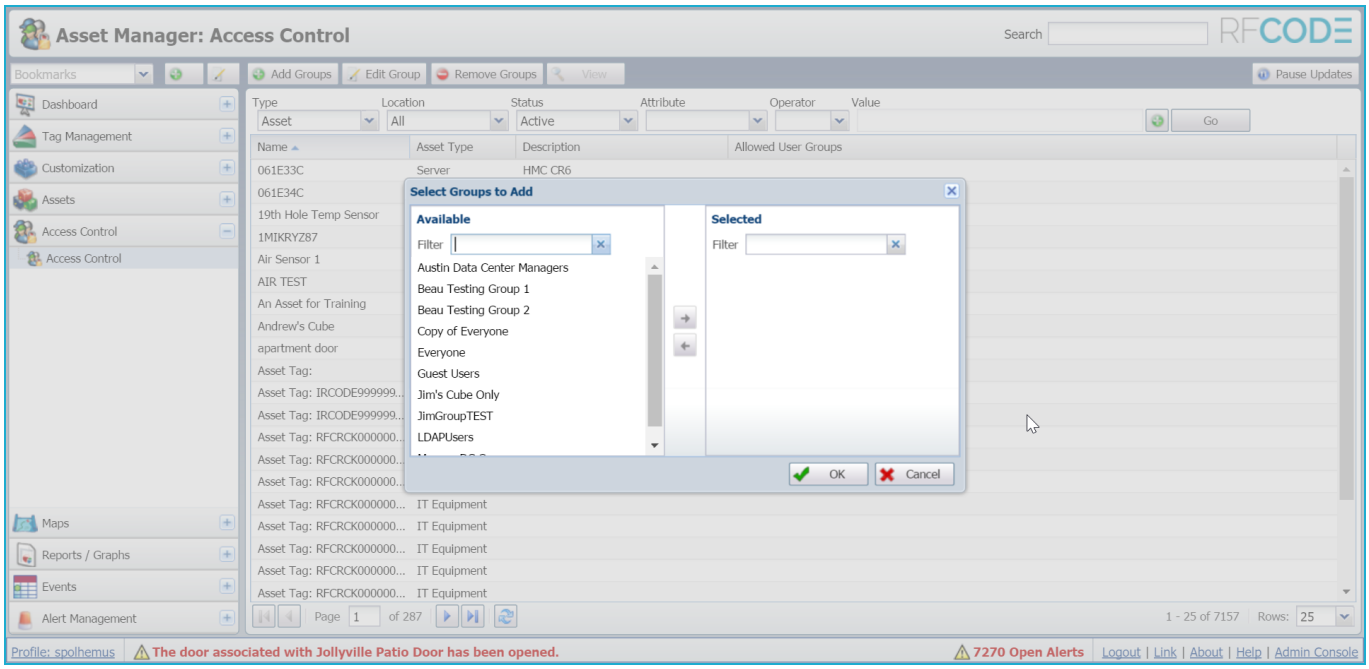
To Edit the Groups that have access to an asset and the asset's information and status, click the Edit Groups button. You will be prompted with the Group Membership box. Select the Groups to grant access to Asset information and click the Right Arrow and Left Arrow buttons to move Groups from the Available side to the Selected side or vice versa. Click **OK** when finished:



Add Groups

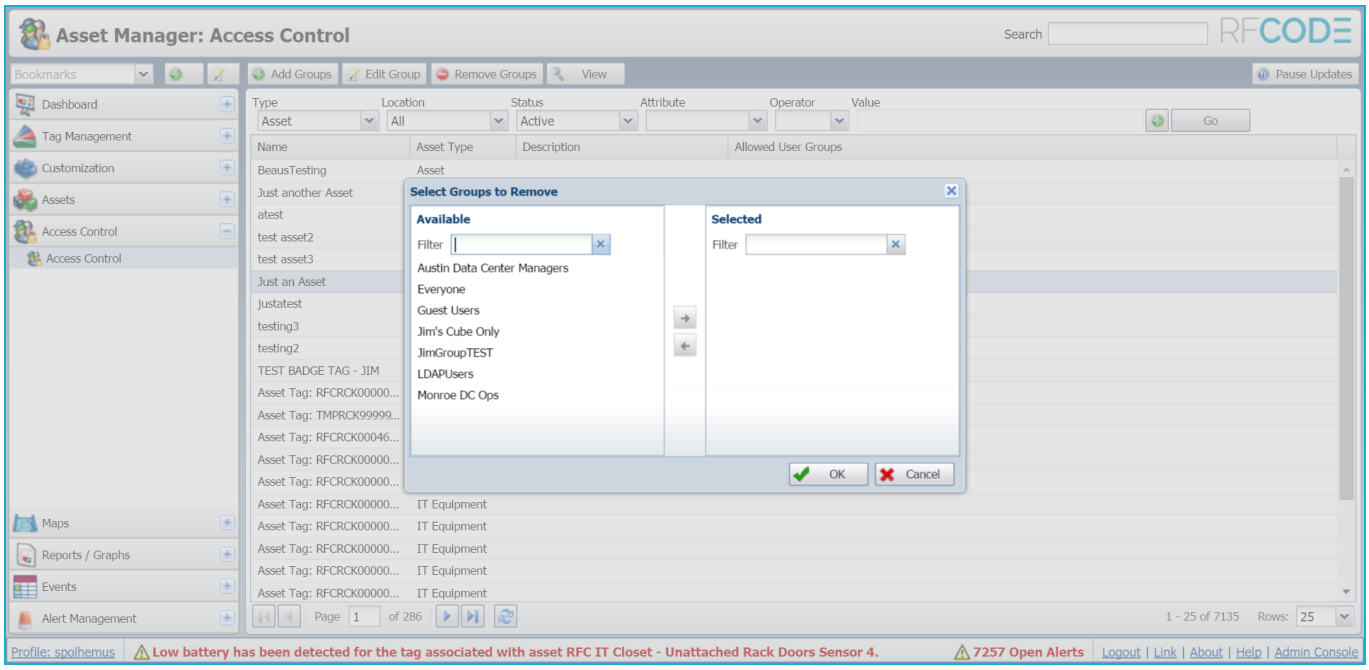
To Add Groups that have access to an asset and the asset's information and status, click the

Add Groups button. You will be prompted with the Groups to Add Selection box. Select the Groups to add access to Asset information and click the Right Arrow button to move the selected Group from the Available side to the Selected side. Click **OK** when finished.



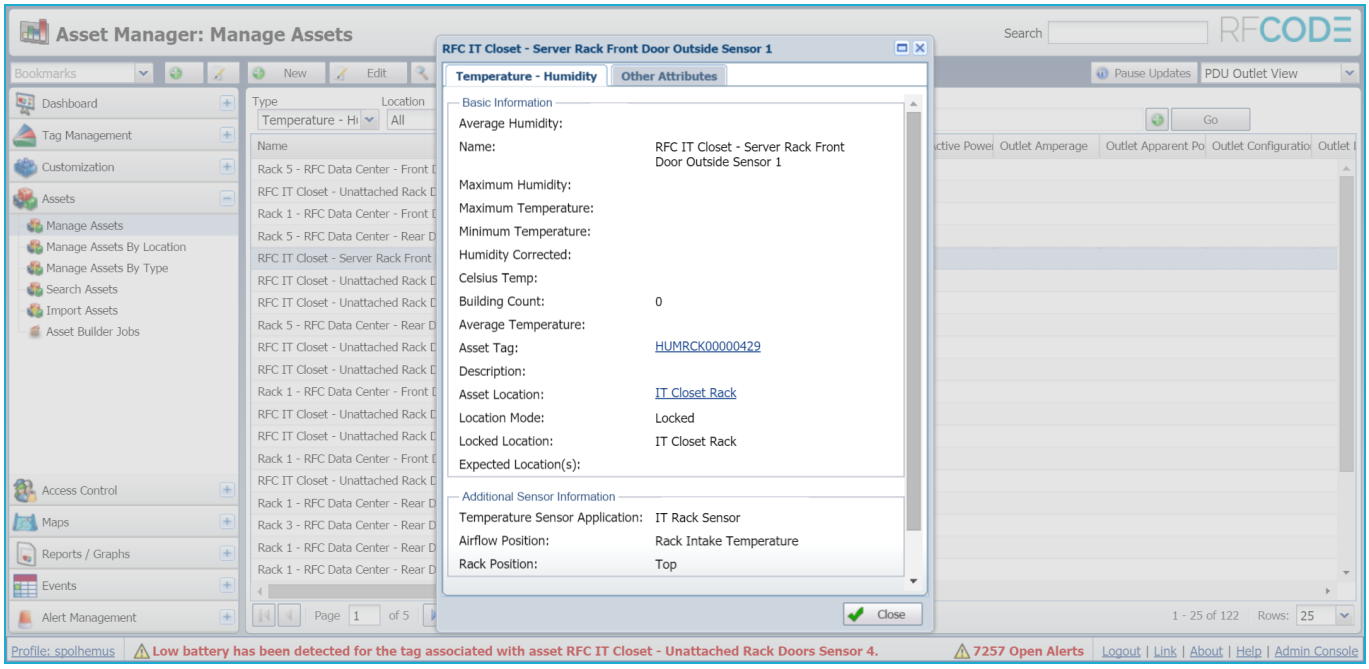
Remove Groups

To Remove Groups that have access to an asset and the asset's information and status, click the Remove Groups button. You will be prompted with the Group Membership box. Select the Groups to remove access to Asset information and click the **Left Arrow** button to move the Group from the Selected to the Available side. Click **OK** when finished.



View Asset Information

To View Asset information, select an asset from the filter list and click the **View** button. The Asset Information Box will appear.

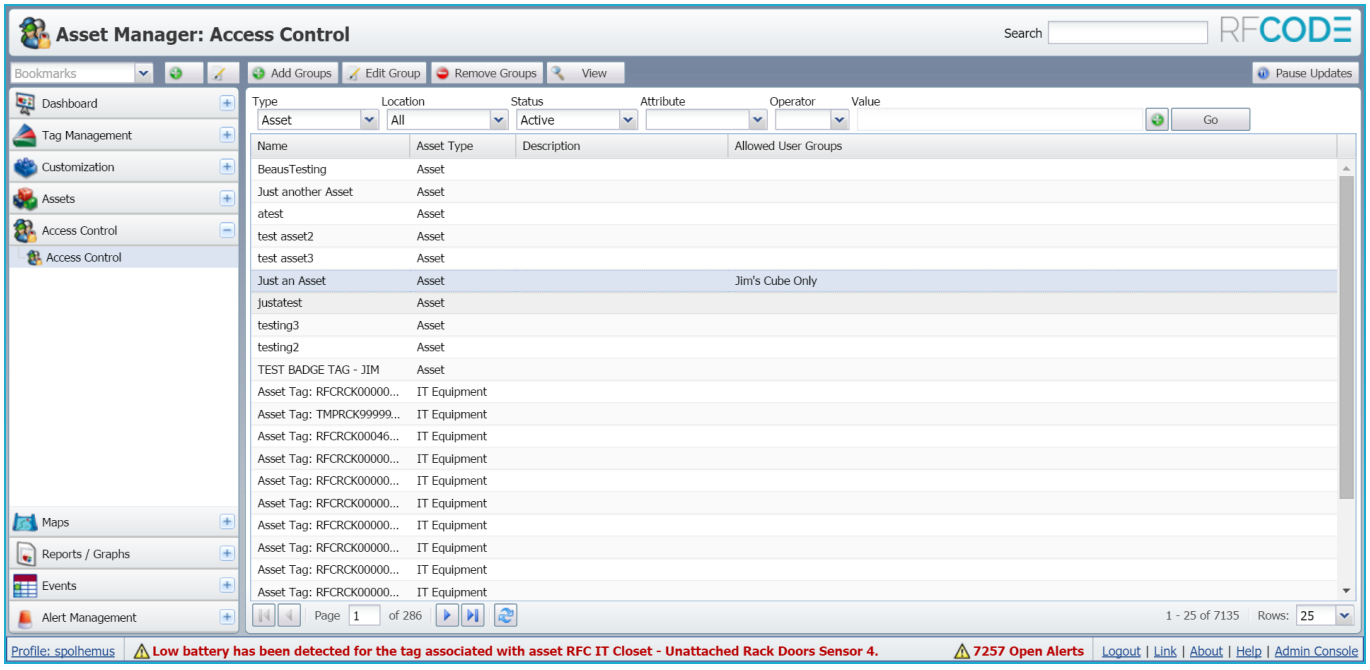


Continuing The Example Setup

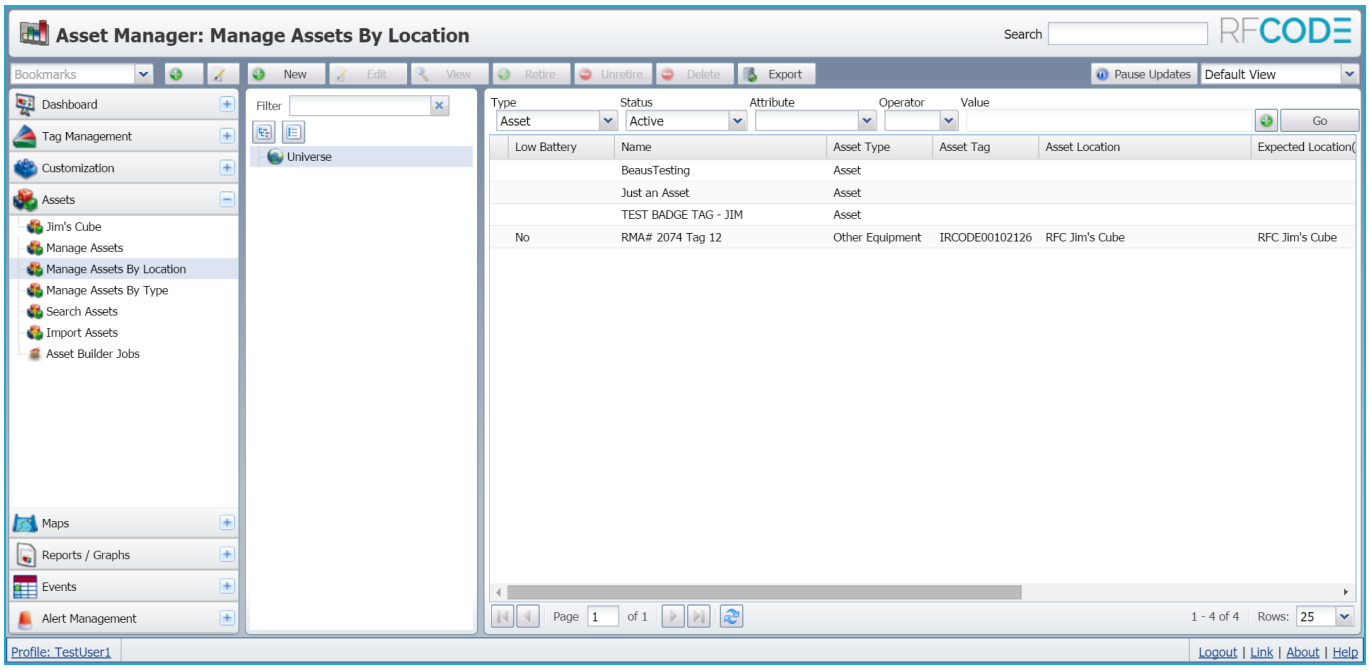
Continuing the Example for using the Group, “Jim’s Cube Only”, we have the choice to restrict the Users in that Group “Jim’s Cube Only” from being able to view assets/sensors for the Location (“Jim’s Cube”). Remember that we defined the **Location** of “Jim’s Cube” in the **Group** settings of the Group “Jim’s Cube Only”.

So here we selected individual assets/sensors to add this Group “Jim’s Cube Only”

You can see the additions here:



As a result for this Example, the below screenshot is what the User “Test User 1” will see when he goes to look at assets in the User Console (User Console > Assets > Manage Assets By Location):



Even though the **UNIVERSE (for all locations) filter is selected in the middle box, User "Test User 1" can only see (and edit, etc.) the assets/sensors that we decided to let him see. We know that other assets/sensors exist at other Locations, but this is all that he can see (and nothing else). This is the functionality that the Access Control feature gives to administrators.**

Important: **PLEASE NOTE: Using this feature also means you would have to manually update these settings on ALL new assets/sensors that come into this location, as there is not a setup to automatically update new assets/sensors to inherit this configuration.**

----There are a couple more settings to consider as a consequence of the advanced Security

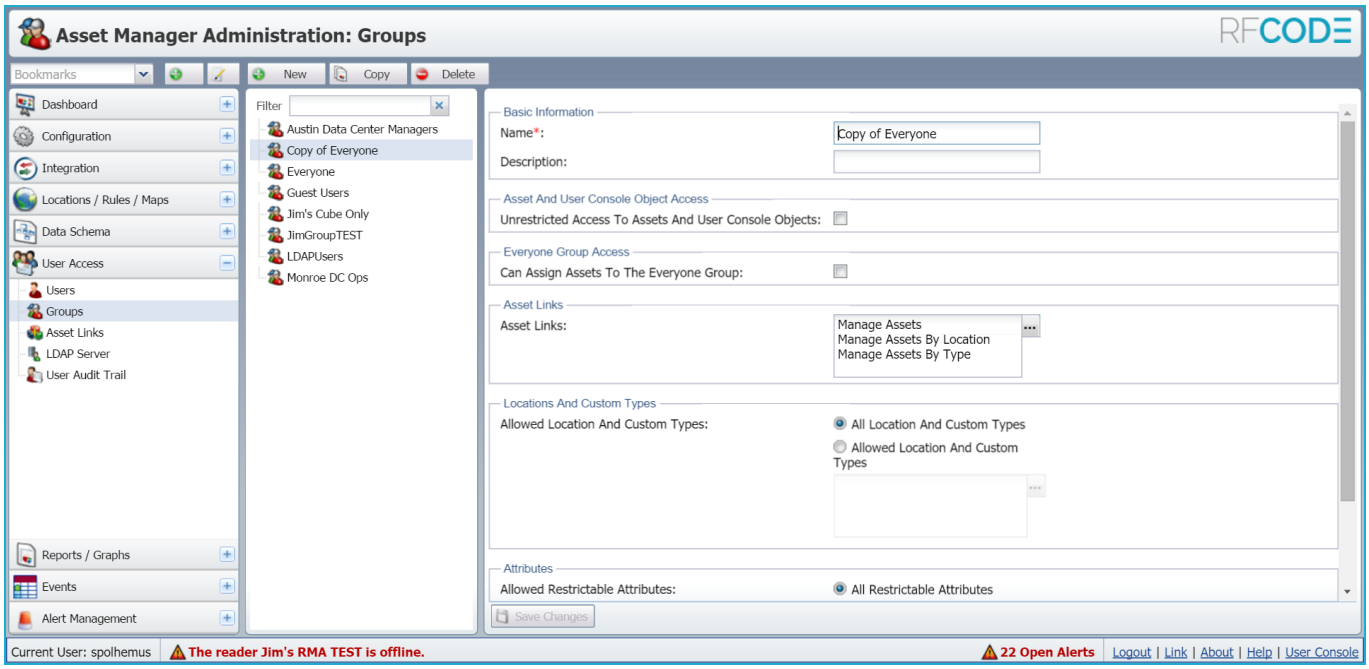
setup:

7. All Users Must Be In Groups When Security Is Enabled

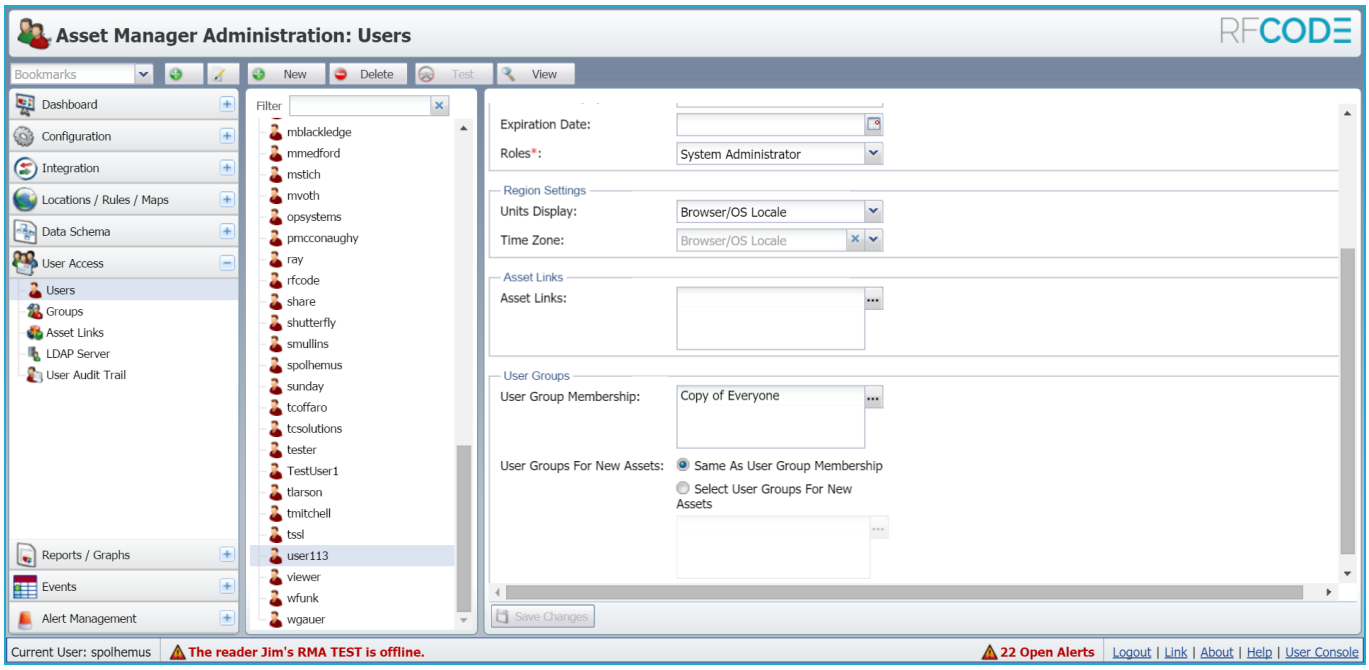
When the Security feature is Enabled (in Step 1), all users must be part of a created Group (not just the "Everyone" group), or they will not be allowed to login to Asset Manager. (Instead they will receive a login error message that their "account is locked.")

If you have users that have not been previously part of any created group, they now ***must*** become part of a group.

Anyone that is not in a group previously can be moved to a “copy of Everyone” group instead of the “Everyone” group. All you need to do here is to make a copy of the “Everyone” group when you are on the Groups screen using the **Copy** button as in the screenshot below:

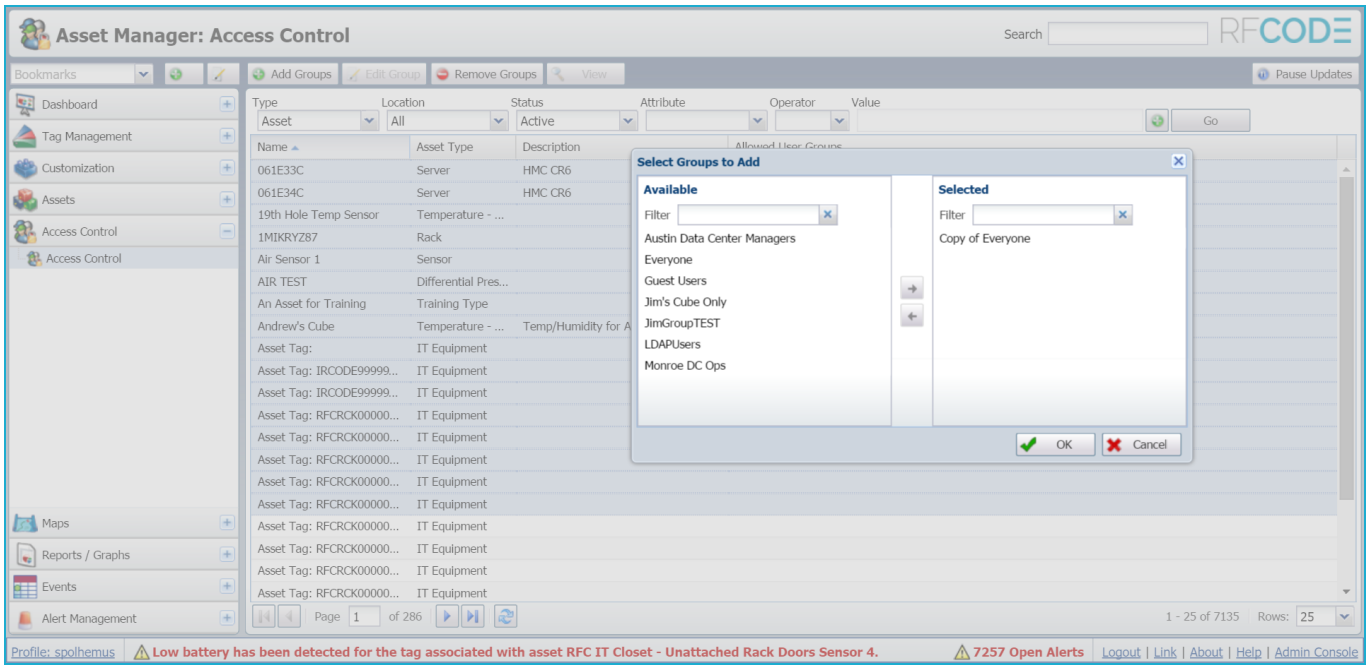


Then, you can put Users in this new “copy of Everyone” group like in this screenshot below where it was done for the Example User “user113”:



8. Access Control Modifications For The “copy of Everyone” Group

For those users that you added to the “copy of Everyone” group to be able to see all the assets that they had previously, you will need to go back over to the Access Control feature (Location: User Console > Access Control) and highlight all your assets and using the Add Groups button add the “Everyone” group (or add the “copy of Everyone” group—though you can add both if you want also):


Asset Manager: Access Control
Search
RFCODE
Bookmarks
Add Groups
Edit Group
Remove Groups
View
Pause Updates
Dashboard
Tag Management
Customization
Assets
Access Control
Access Control
Maps
Reports / Graphs
Events
Alert Management
Type
Location
Status
Attribute
Operator
Value
Asset
All
Active
Go
Name
Asset Type
Description
061E33C
Server
HMC CR6
061E34C
Server
HMC CR6
19th Hole Temp Sensor
Temperature - ...
1MIKRYZ87
Rack
Air Sensor 1
Sensor
AIR TEST
Differential Pres...
An Asset for Training
Training Type
Andrew's Cube
Temperature - ...
Temp/Humidity for A
Asset Tag:
IT Equipment
Asset Tag: IRCODE99999...
IT Equipment
Asset Tag: IRCODE99999...
IT Equipment
Asset Tag: RFCRCK00000...
IT Equipment
Asset Tag: RFCRCK00000...
IT Equipment
Asset Tag: RFCRCK00000...
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Asset Tag: RFCRCK00000...
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Asset Tag: RFCRCK00000...
IT Equipment
Page 1 of 286
1 - 25 of 7135
Rows: 25
Select Groups to Add
Available
Filter
Austin Data Center Managers
Everyone
Guest Users
Jim's Cube Only
JimGroupTEST
LDAPUsers
Monroe DC Ops
Selected
Filter
Copy of Everyone
OK
Cancel
Profile: spolhemus
Low battery has been detected for the tag associated with asset RFC IT Closet - Unattached Rack Doors Sensor 4.
7257 Open Alerts
Logout | Link | About | Help | Admin Console