User Manual

Imbio Core Computing Platform 2.3.0.154

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Installation

If a French translation of this user manual is required by Health practitioner from Canada, Imbio shall provide it within 30 business days.

Introduction

The hardware specifications below will provide enough resources to run a single algorithm at a time. If additional jobs are submitted while one is running, those jobs will be queued. If customer requires a higher number of concurrent jobs, additional VMs will need to be obtained.

The application is deployed as two or more VMware vSphere-compatible OVA "appliance" files, one "core" VM, which provides Imbio's core automation functions and one or more "compute" VMs, on which the actual image processing is performed.

Imbio Core Computing Platform (ICCP) v2.3.0.154 is intended for use in Enterprise installation configuration only. ICCP v2.3.0.154 does not support either the Bridge+Cloud or Cloud installation configuration.

Requirements

Hardware Requirements

Imbio Core Computing Platform (ICCP) is deployed into a VMware vSphere environment. As such, all of the below hardware specifications assume that they are assigned to the ESXi guests, and are reserved for their use.

CCP Core VM Requirements

- Quad-core, 64-bit capable CPU, 2.0GHz minimum
- 32GB RAM
- 200GB Disk Storage minimum (more may be required depending on usage[1])
- 1 GigE Virtual NIC

CCP Compute VM Requirements

- Quad-core, 64-bit capable CPU, 2.0GHz minimum
- 32GB RAM (more may be needed depending on use case and algorithms needed)
- 200GB Disk Storage
- 1 GigE Virtual NIC

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[1] Dependent on volume and SET configuration

Firewall Requirements

These firewall rules (if required by customer's network policy) need to be applied to the customer's network equipment. It is assumed that the core and compute VMs reside on the same layer 2 network and as such, have no restrictions on communication between them. If this is not the case, please contact Imbio support.

Egress Rules

- 443/tcp to mc.scripzo.com (Package and license updates)
- 443/tcp to sumologic.com (logging manager)
- 443/tcp to sqs.us-west-1.amazonaws.com (logging / monitoring)
- 123/udp and 123/tcp to local NTP server
- 53/udp and 53/tcp to local DNS resolvers
- 25/tcp or 587/tcp to local SMTP server
- 80/tcp and 443/tcp to *.imbio.com (operating system updates)
- 80/tcp and 443/tcp to mirrors.syringanetworks.net
- 443/tcp to sqs.us-east-1.amazonaws.com
- 443/tcp to s3.amazonaws.com
- 443/tcp to scripzo-mission-control.s3.amazonaws.com
- 80/tcp and 443/tcp to *.ecr.us-east-1.amazonaws.com (container registry)
- Misc. ports as needed for DICOM network transfers

Ingress Rules

- 8443/tcp from administrative subnet (Imbio CCP management interface)
- Misc. ports as needed for DICOM network transfers

Network Service Requirements

- SMTP server that will relay mail from Imbio CCP
- DNS resolvers
- NTP Server or Servers (if these cannot be provided, then Imbio CCP will require access to a set of external NTP servers)
- 1 static IPv4 address for each VM (1 for CCP Core and 1 each for CCP Compute instances)
- A VPN tunnel to the Imbio Core server and Imbio Compute servers.

Installation Procedure

Overview

The installation of Imbio CCP involves downloading the Imbio CCP OVA. Imbio support will work with you to either provide download links for the OVA images or to upload them to a customer-owned file transfer service.

Generally speaking, both components (CCP Core and CCP Compute) follow a similar installation path:

1. Download and import the OVA into the vSphere environment. This will be the Core VM.
2. Clone the instance once; this will be the first Compute VM.
3. Add DHCP reservation(s) for the two VMs.
4. Power on each instance.
5. Grant remote access to the Imbio support team for completion of installation by setting up VPN access to the machine.
6. Imbio support staff will complete the installation.

Installation of Imbio CCP Core

The Imbio CCP Core service needs to be installed first. The process is as follows:

1. Import the Imbio CCP OVA.
2. Create a DHCP reservation for Imbio Core's MAC address.
3. Power on Imbio Core VM. The IP address is printed to the console's login screen after boot up. Inspect the console output to verify that the correct IP address is assigned.
4. Grant Imbio support VPN access to the machine.
5. Imbio support will finish the configuration.

Imbio Core is now configured. Proceed to "Installation of Imbio Compute" to complete the installation.

Installation of Imbio CCP Compute

Your site may be licensed for a number of Imbio CCP Compute instances. The configuration of the Imbio Compute software is identical on all instances. The installation procedure involves installing and validating the first instance, then cloning to the licensed number instances.

1. Clone the Imbio CCP Core VM.
2. Create a DHCP reservation for Imbio Compute's MAC address.
3. Power on Imbio Compute VM. The IP address is printed to the console's login screen after boot up. Inspect the console output to verify that the correct IP address is assigned.
4. Grant Imbio support VPN access to the machine.
5. Imbio support staff will finish the configuration.

If multiple compute instances are warranted in this installation, the CCP Compute VM can be shut down at this point, and cloned as many times as needed. Steps 2-4 above will need to be completed for each CCP Compute VM.

At this point, Imbio support will validate that the CCP application is fully functional and will work with you to ensure proper integration with your existing DICOM tools.

Imbio Admin Interface

The Admin Interface is a web application provided by the Imbio Core Computing Platform (ICCP) that enables the end user to check job statuses without the assistance of Imbio Support staff.

Accessing Imbio Admin Interface

Type https://<Host IP Address>:7443/ in your browser address bar and press enter to gain access to the Admin page of the ICCP platform. The Host IP Address is the address of the VM that is running the Core component as detailed in the Installation section. An initial administrative username and password will be delivered by Imbio Support staff upon installation of the system.

The following is the login page you should see:

NOTE: Upon first login, immediately change the password, by clicking the "Change Password" link in the upper right and following the online instructions.

Admin user role

As an Admin user, you can add or remove other users. You can also perform activities that a user with the 'default' role would be able to do, such as access the Jobs page to check job statuses and download PDF reports of the job output. The following shows you how to manage users. Proceed to the "Jobs Page" section to learn about how to check the statuses of jobs.

Viewing users

To check all registered and available users, navigate to the "Users Page". This can be done by clicking the menu shown in the image below.

In the "Users Page", you can check registered users, if they have been activated or not, create a
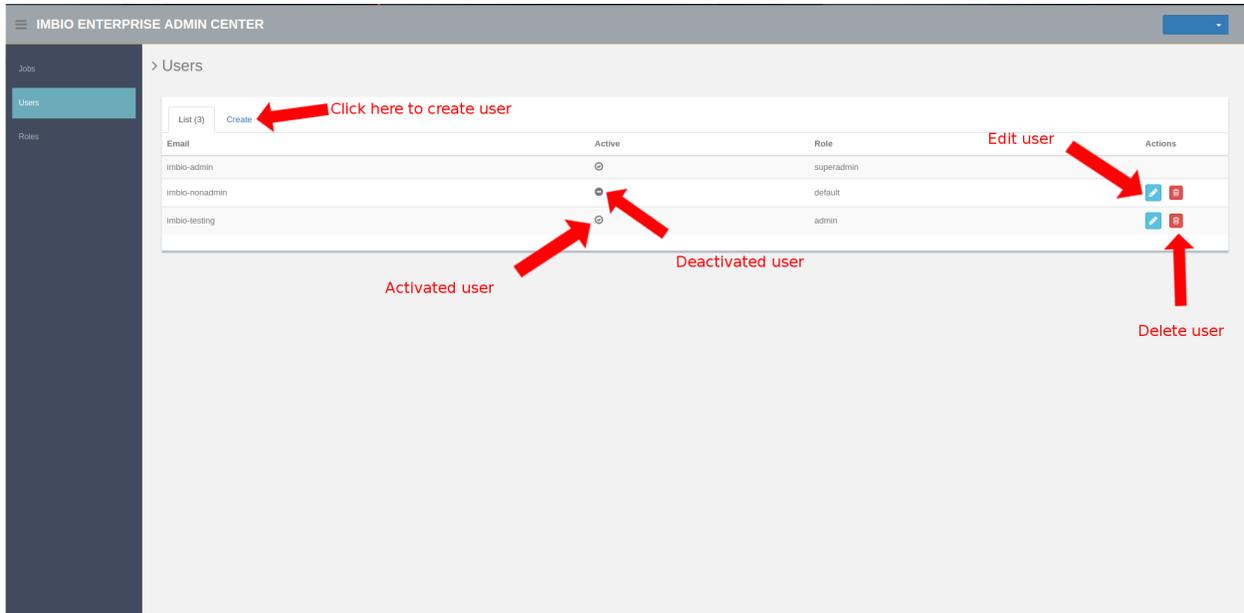
new user, delete an existing user and edit user details.

Creating new users

To create a new user, click the create button on the user page shown in the image above. This will redirect you to the new page shown below.
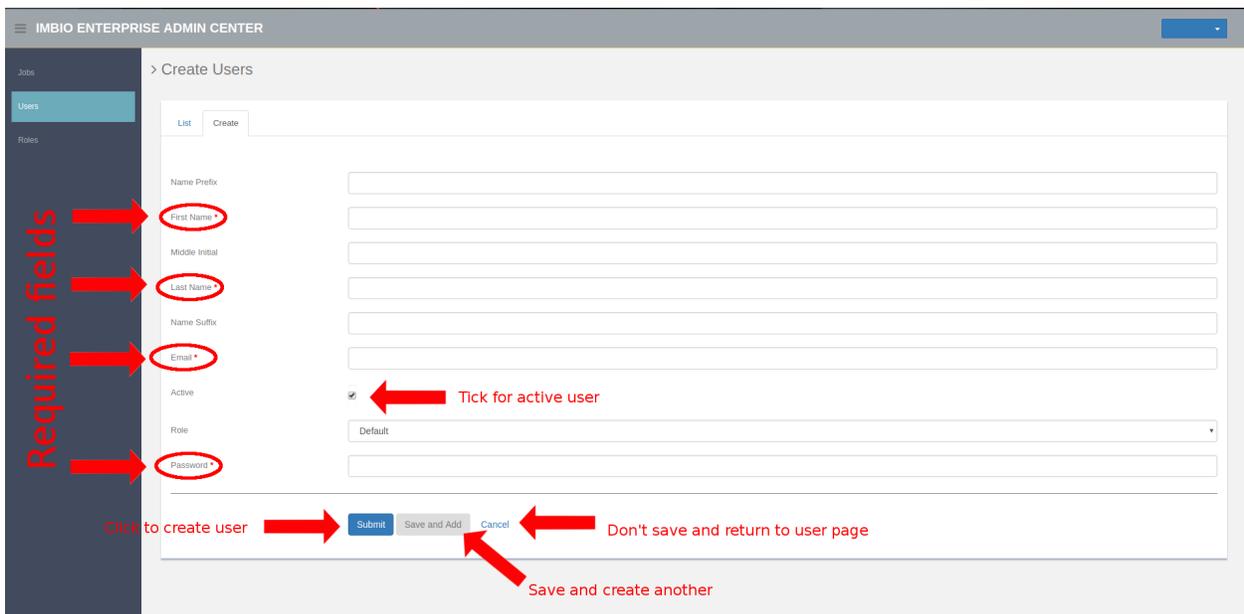
The circled fields are required to be filled. If active is checked then the user will be activated automatically, if not then user activation is required. When all fields are filled, click the submit button to create user, or save and add to create another user as well. Cancel cancels all fields entered and returns you the the "Users Page".

Editing an existing user

To edit a user, click the blue pencil icon next to the user you wish to edit, on the user page shown in the image below.
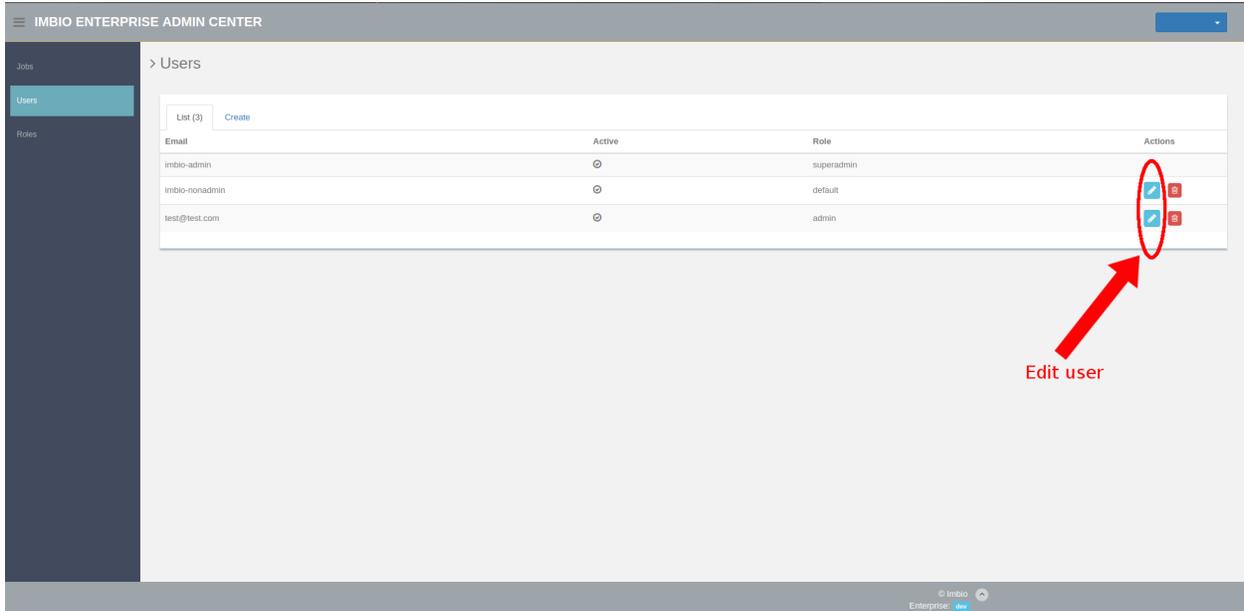
This will redirect you to the page shown below. The image also shows all available features for
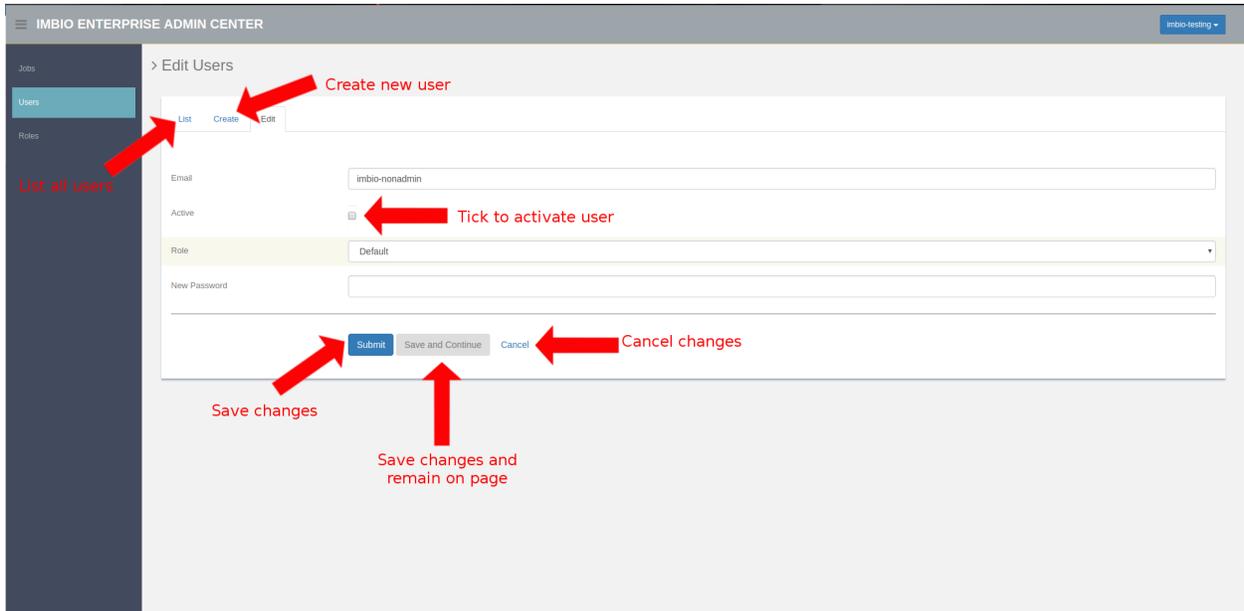
that page.

User roles

To check which user levels (roles) are available, click the roles menu located under users menu. This will take you to the roles page shown in the image below.

Jobs

Users

Roles

› Roles

List (3)		
Name	Description	Actions
admin	Admin	
default	Default	
superadmin	Super Admin	

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Enterprise: dev
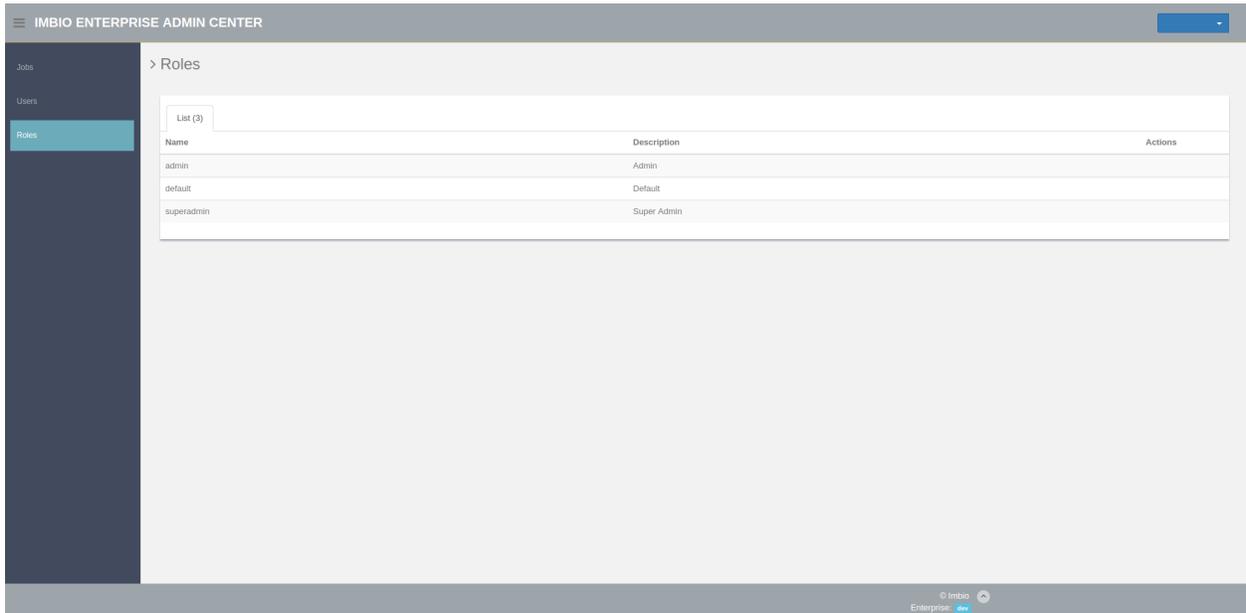
The Super Admin role is reserved for Imbio Staff. The Admin role should be used for staff on site who are responsible for managing other user accounts. The Default role should be used for everyone else. Users with the default role can only view the Jobs page and perform rudimentary account maintenance for their account (ex: change password).

General Activities

Viewing Jobs

Click on the Jobs link in the menu to open the Jobs page. This is also the home screen. This page will be the first thing you see after logging in.
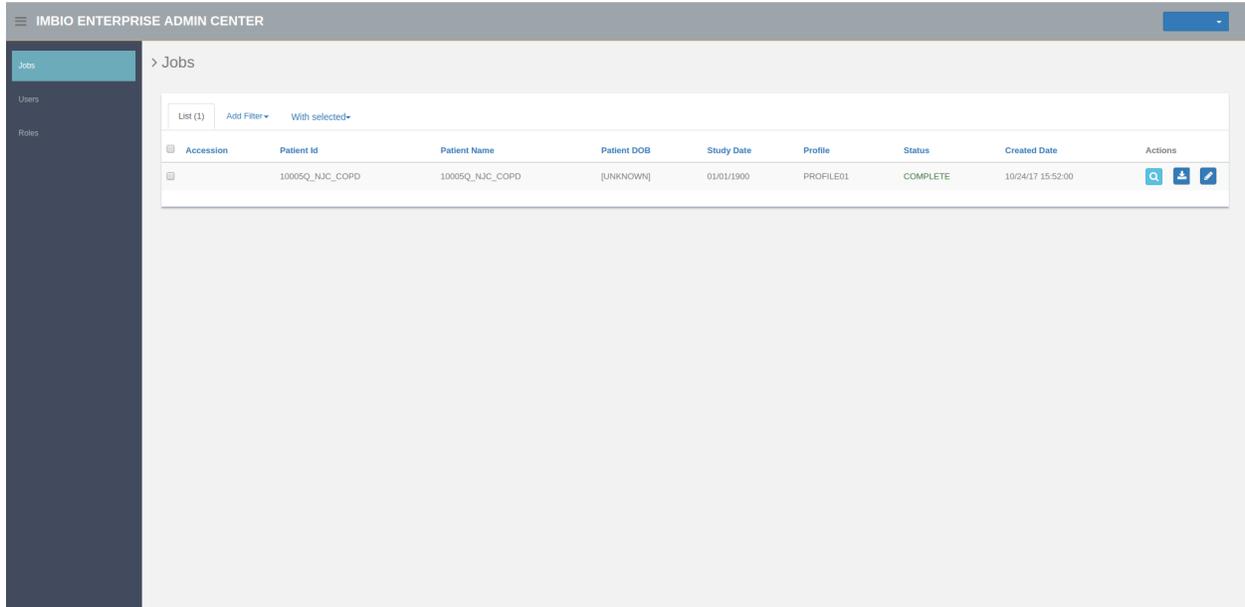
The image below shows all features available on the jobs page. All columns can be sorted that are blue in color. Only active pencil icons can be clicked for use of the SET.
NOTE: SET is not active for your installation.
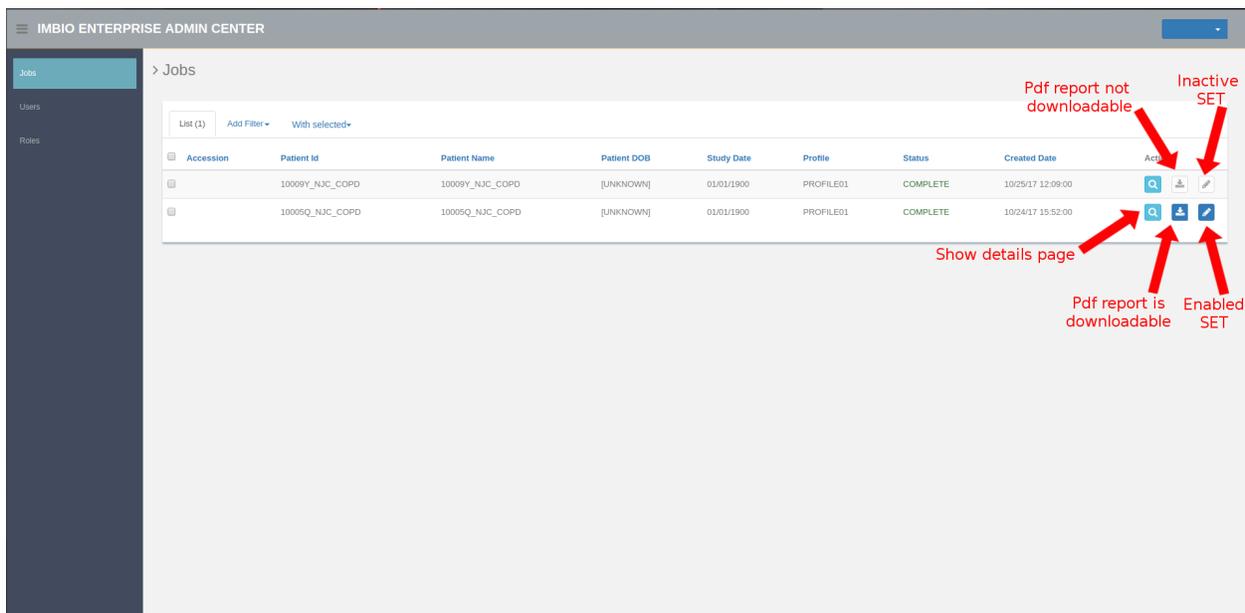
Downloading CSV report

In addition to downloading a PDF report of the job, the output can be downloaded in CSV format for one or more jobs. This can be done by selecting the desired jobs with the checkboxes found in the first column on the jobs page, clicking the "With Selected" menu and selecting "Download Aggregated CSV".

Details Page

For viewing a job in greater detail, click the magnifying glass icon labeled show details in this image. This will redirect you to a different page which should look similar to the image below. From here you can view the PDF report without downloading, Download the PDF report for later viewing, navigate to the bridge profile of the job, open SET and view the previous actions taken in the SET for this job.

Adding filters

You can create job filters, to filter the amount of jobs listed, by clicking the Add filter button shown in the image below and selecting the column to filter content of.
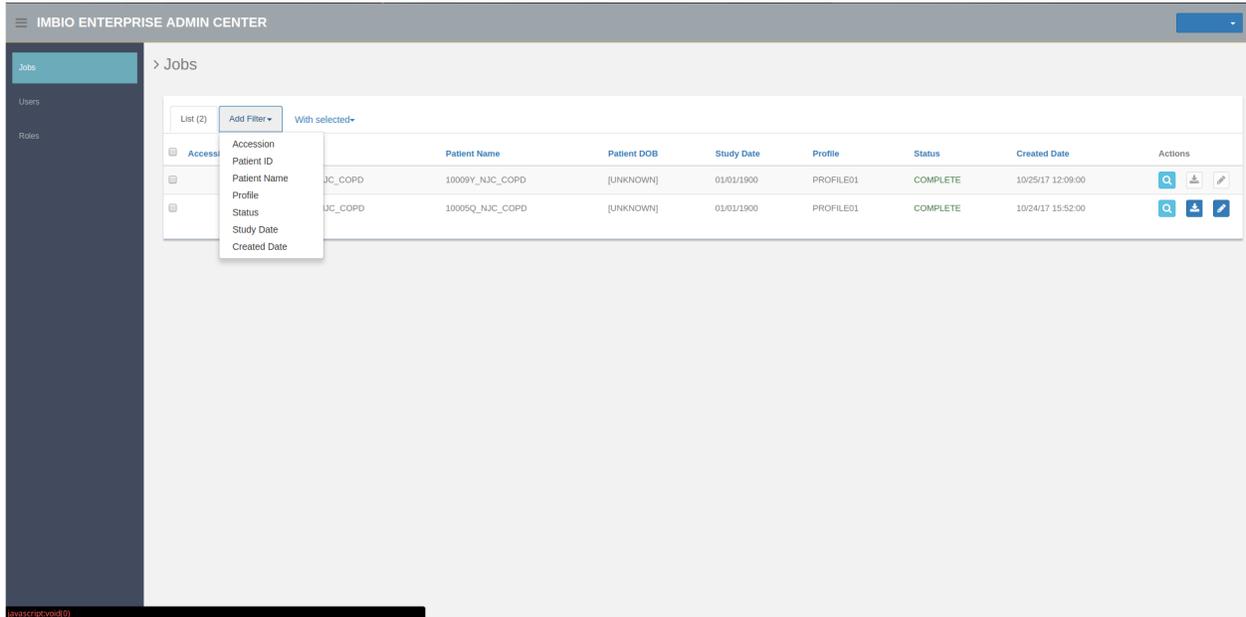
After selecting the filter field the following screen will appear. The image below shows the button functions in detail.
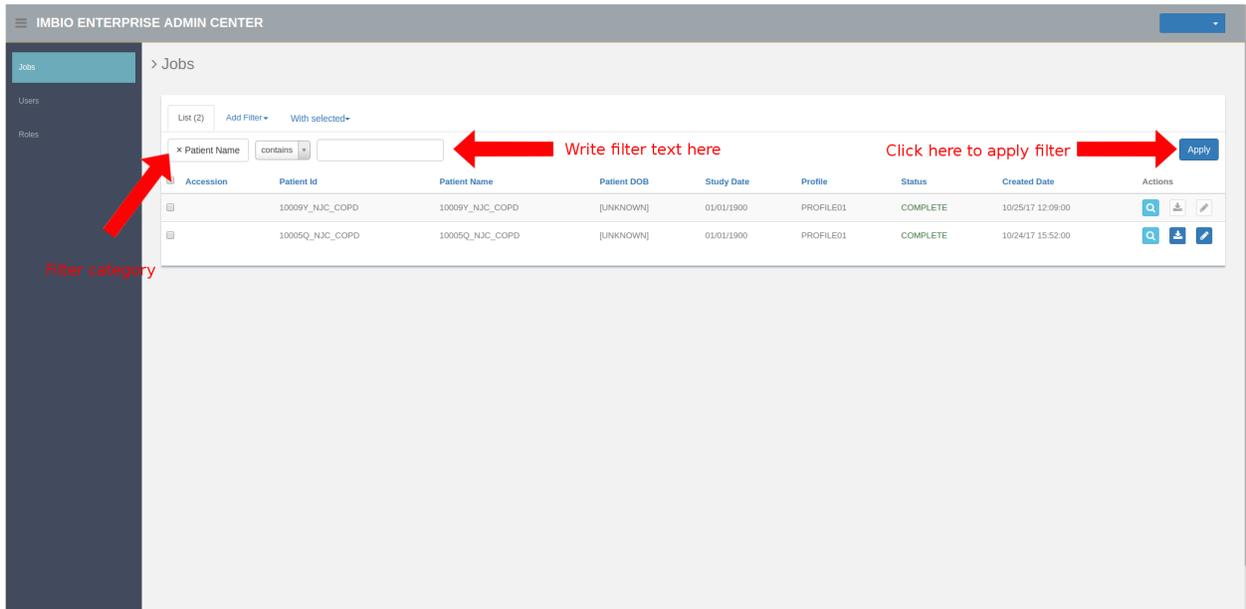
Registering a new account

Clicking the "Register for an Account" link on the login page should bring you to a page that looks similar to the image below. This feature allows new users to request an account from their administrator. The user will not be able to login until the account has been approved and activated by the administrator.

To register, fIll in all fields and click the register button.

If the registration was successful, you will be redirected back to the login screen with a message telling you to wait for activation.

Modifying password

To change the password click the blue icon with your username, this has been circled in the image below, and click change password from the dropdown.
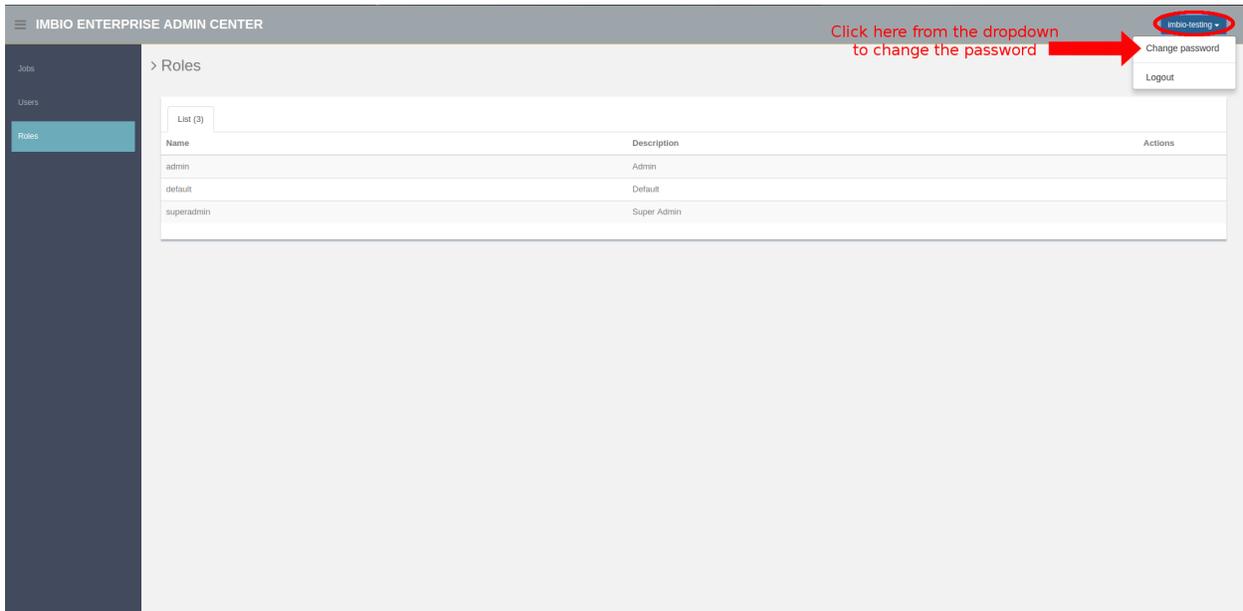
You will be redirected to a different screen. Here it will ask you to enter your previous password and the new password you wish to change to. Your new password will have to be entered in two separate fields as to make sure you didn't make any typos. Then click the Change password icon shown below.
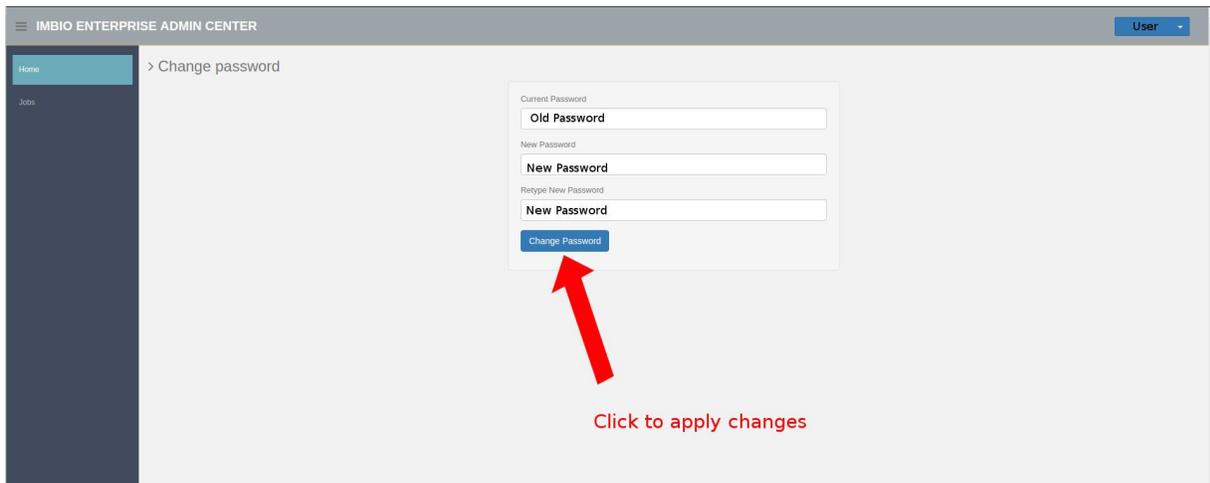
Logging out

To logout of the current user, click the blue user icon found in the top right corner of the screen (shown in [this image](#)) and from the dropdown select logout. This will redirect you to the page shown in [this image](#). If you see that page you have successfully logged out. Please note that logging out will negate the "remember me" option that can be used at login.