



digital nirvana



**Monitor**

(Broadcast Compliance and Monitoring Solution)

## User Manual

Version #: 8.0.34

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## Application Overview

For media companies, monitoring video and audio broadcast quality, complying with regulatory standards, and verifying advertisement placement are critical components to maintaining brand recognition, expanding their customer base, and developing revenue.

Digital Nirvana's AI-empowered MonitorIQ is the media industry's preferred solution, which delivers proven results on these paramount business building blocks. It runs on a feature-rich hardware appliance that accepts multiple inputs in one unit, allowing broadcasters to do more with less hardware.

It natively records and archives multiple live video feeds in original recording and proxy formats. It supports a variety of applications for capturing, editing, sharing, and managing media content. It captures associated metadata from any point in the video distribution chain and delivers the resulting video in real-time through an intuitive, user-friendly web interface.

Primary focus of this version is to enhance the end-user experience and ensure effective monitoring solutions with the latest technologies. Monitor IQ enables schedule, store, perform a smart search, archive, cut clips, and repurpose recordings in full HD or SD resolution.

## System and Browser Requirements

Following are recommended hardware and browser specifications on client systems for a better user experience.

- A dual-core CPU @ 2.3 GHz or higher
- 8 GB RAM or higher
- The bandwidth of at least 4 Mbps for playing 4 live streams encoded at 512 Kbps
- Best viewed at 1920x1080 resolution

OS	Version	Browser
Windows	10	Chrome 80+, Firefox 74+, Edge 80+
OSX	10.6 or Later	Chrome 80+, Safari 13.1
Linux	Any	Chrome 80+, Firefox 74+

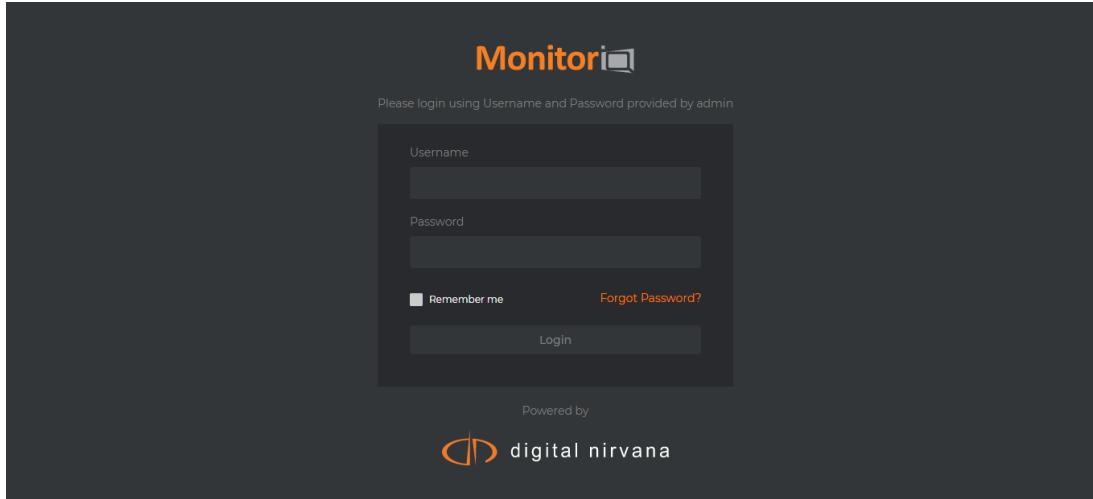
TABLE 1: OS and Web Browser Versions

## Getting Started

This section discusses the procedure to access MonitorIQ using login credentials. It discusses the procedure to log in and other global features.

### Launch the Application

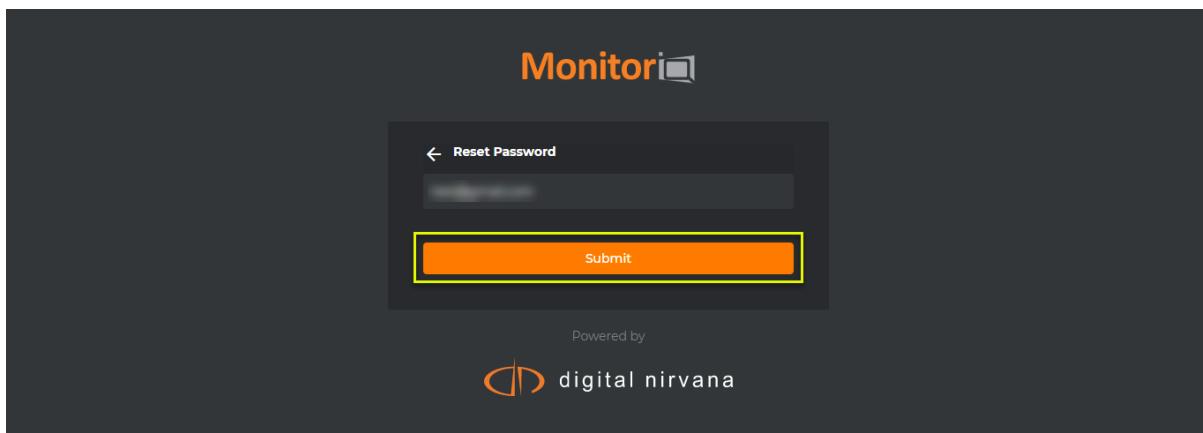
Digital Nirvana support team provides URL(s) to access MonitorIQ web interface. Use that URL in any supported web browser (mentioned in [System and Browser Requirements](#) section) to launch the application.



**FIGURE 1-1:** MonitorIQ Login Screen

### Login

Use login credentials obtained from the Digital Nirvana support team to log in to the application. Type **Username** and **Password** in respective fields and then click on **Login** button. Application supports retrieving missing/forgotten passwords. Click **Forgot Password?** link on login screen to create a new password. Application redirects to following page.



**FIGURE 1-2:** Reset Password Page

Type email address in the field and then click **Submit** button. For recovering username and/or password, configure the details in [Outgoing Email](#) settings.

## Global Search

Users can search for both clips and recordings using Global Search bar at top of the application. Using this function, search for generated clips, various types of content that the system has recorded, and logs that are imported into system.

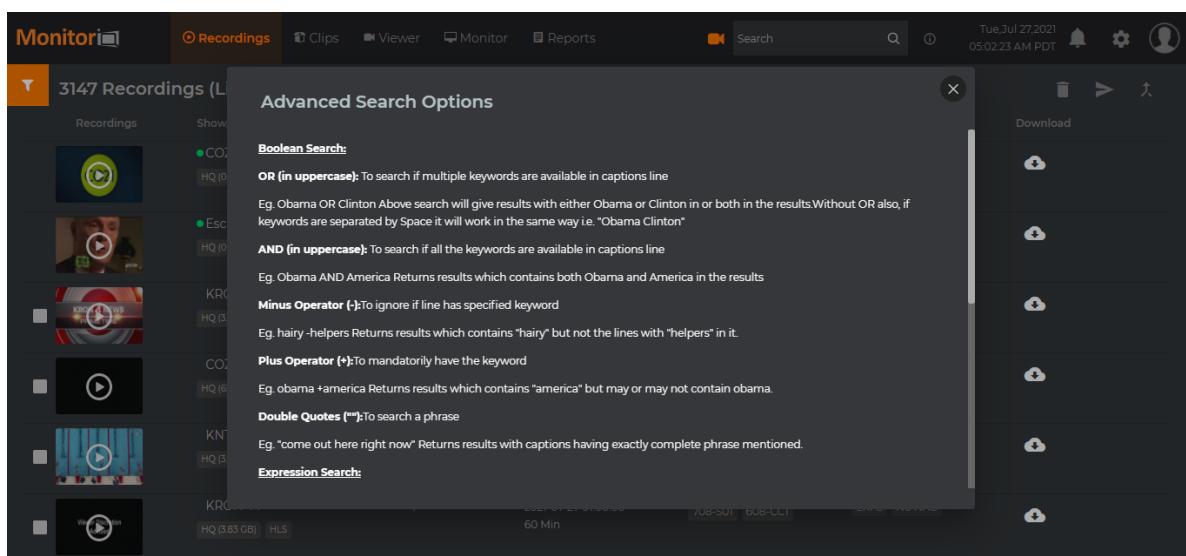


The screenshot shows the MonitorIQ interface with a search bar containing the word "comedy". Below the search bar, a yellow box highlights the "Recordings" and "Clips" checkboxes, which are both checked. The main area displays a list of search results titled "35 Search Results". The results are organized into columns: Show/Channel, Start/Duration, and Metadata. Each result includes a thumbnail, file size, duration, and a brief description. To the right of each result are download and share icons.

Recordings	Show/Channel	Start/Duration	Metadata
KRON-TV HQ (3.83 GB) HLS	KRON-TV   FMT-1005	2021-07-23 09:00:00   60 Min	CAPTIONS 2021-07-23 09:21:50 TOWARDS ROMANTIC COMEDY
KNTV HD HQ (3.95 GB) HLS	KNTV HD   FMT-1005	2021-07-22 14:00:00   60 Min	CAPTIONS 2021-07-22 14:23:47 SHTICKY COMEDY, WE REALLY GO FOR
KNTV HD HQ (1.91 GB) HLS	KNTV HD   FMT-1005	2021-07-22 10:00:00   60 Min	CAPTIONS 2021-07-22 10:17:00 IT'S HARD TO THINK OF A COMEDY
KNTV HD HQ (2.05 GB) HLS	KNTV HD   FMT-1005	2021-07-22 08:00:00   60 Min	CAPTIONS 2021-07-22 08:52:47 MOST NOMINATED FRESHMAN COMEDY

**FIGURE 1-3: Global Search Bar**

Search content based on title of a program, by the keywords in the closed captions, by the description of the program using the advanced Boolean search. Click (①) icon next to search bar to see **Advanced Search Options**. It is used to search require content using multiple keywords in caption line, ignoring a specified keyword, or searching a phrase. Points below discuss how Boolean search works.



The screenshot shows the MonitorIQ interface with the "Recordings" tab selected. A yellow box highlights the search bar, which contains the word "Search". A modal window titled "Advanced Search Options" is open over the main content. This window provides detailed instructions for Boolean search operators:

- Boolean Search:**
  - OR (in uppercase):** To search if multiple keywords are available in captions line. Eg. Obama OR Clinton Above search will give results with either Obama or Clinton in or both in the results. Without OR also, if keywords are separated by Space it will work in the same way i.e. "Obama Clinton"
  - AND (in uppercase):** To search if all the keywords are available in captions line. Eg. Obama AND America Returns results which contains both Obama and America in the results
  - Minus Operator (-):** To ignore if line has specified keyword. Eg. hairy-helpers Returns results which contains "hairy" but not the lines with "helpers" in it.
  - Plus Operator (+):** To mandatorily have the keyword. Eg. obama +america Returns results which contains "america" but may or may not contain obama.
  - Double Quotes (""):** To search a phrase. Eg. "come out here right now" Returns results with captions having exactly complete phrase mentioned.
- Expression Search:**

**FIGURE 1-4: Advanced Search Options Window**

Scroll the bar to see more options which are listed below:

- **OR** – If two keywords are provided that are separated with an **OR** operator, the result could produce either of the keyword or both. For example, typing Boolean expression '**Trump OR Clinton**' in search bar shows results relating to either Trump or Clinton or both. Without **OR** also, if keywords are separated by space it will work in the same way i.e. "**Trump Clinton**".
- **AND** – If two keywords are provided that are separated with an **AND** operator, the result could produce both. For example, typing Boolean expression '**Trump AND Clinton**' in search bar shows results relating to both Trump and Clinton.
- **Minus Operator (-)** – If two keywords are provided separated with a - operator, result could produce content that contains first keyword but not the lines that contain the second keyword. For example, by typing '**hairy -helpers**' in search bar, they could show results that contain 'hairy' but not lines with 'helpers' in them.
- **Plus Operator (+)** – If two keywords are provided separated with a + operator, the result could produce content that contains a second keyword but may or may not contain a second keyword. For example, typing '**Trump + America**' in search bar shows results that contain 'America' but may or may not contain 'Trump'.
- **Double Quotes (" ")** – To search for a complete phrase in search box, keep that phrase in double-quotes (""). For example, the phrase in double-quotes "**come out here right now**" could return results with captions having exactly complete phrase mentioned.

#### ■ Expression Search:

Expressions-based searching can allow users to perform a combination of searches. This kind of searching can be done using different keywords in different metadata, which is discussed below.

To search for a show "**Morning News**" with "**Trump**" in captions, the user can type '**t: "Morning News"; c: Trump**' in the search bar to get desired results.

Following are the list of filters available for **Expression Search**

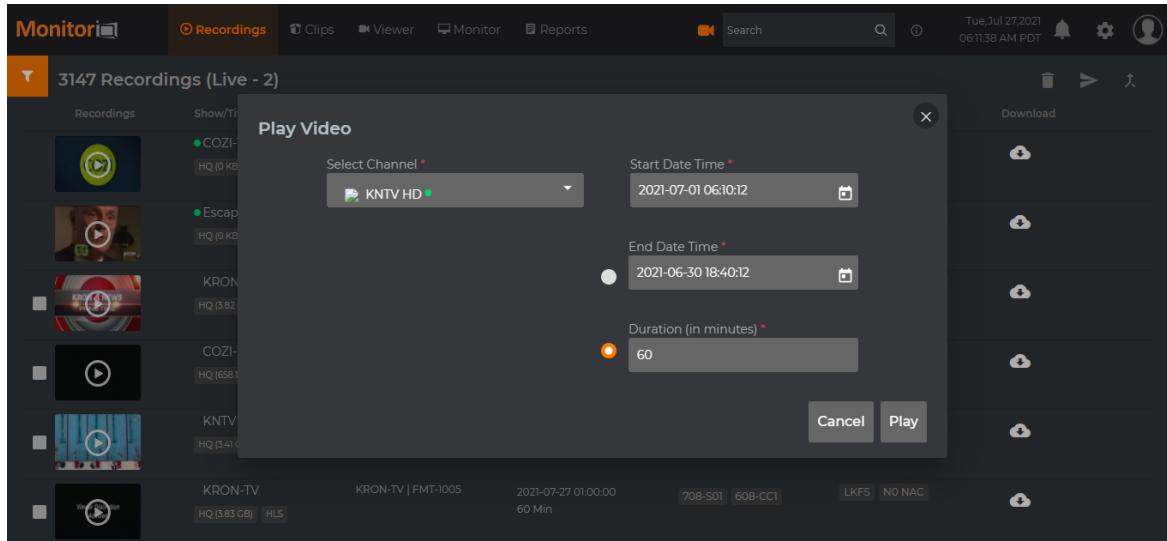
Metadata	Expression
Title	t:
Captions	c:
Description	d:
Category/Tags	cg:
AsRun Logs	as:

<b>Traffic Logs</b>	tr:
<b>Username</b>	u:
<b>Annotations</b>	an:

**TABLE 2: Expression Search Filters**

## Global Play Button

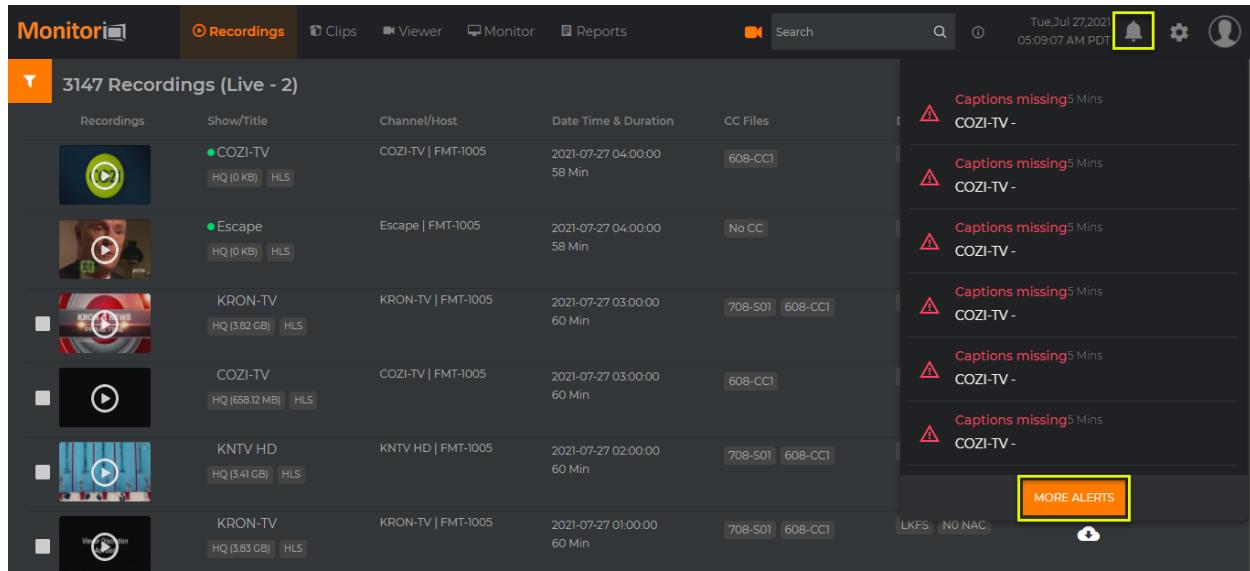
Users can utilize the global play button () at top of the application to play a recording. Application displays **Play Video** window.

**FIGURE 1-5: Play Video Window**

Choose appropriate options in the fields and then click **Play** button to play the recording on Editor page.

## Notifications and System Alerts

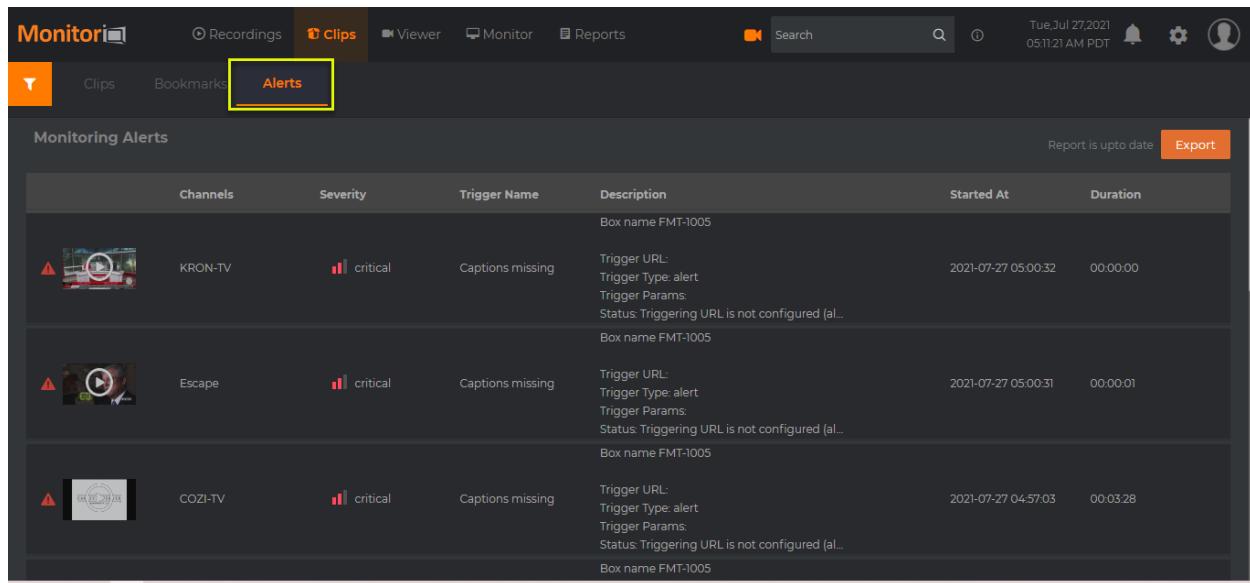
MonitorIQ generates Alerts for unexpected events in Notifications dialog. Click bell icon () at top-right corner to open a small window that appears with recent alerts.



The screenshot shows the MonitorIQ interface. At the top, there are tabs for 'Recordings' (highlighted in orange), 'Clips', 'Viewer', 'Monitor', and 'Reports'. On the right side, there's a search bar, a user icon, and a date/time stamp: 'Tue, Jul 27, 2021 05:09:07 AM PDT'. A yellow box highlights the notification bell icon with a count of '4'. Below the header, a section titled '3147 Recordings (Live - 2)' lists recordings from various channels like COZI-TV, Escape, KRON-TV, and KNTV HD. To the right of the recordings, a vertical column displays several 'Captions missing' alerts for different channels, each with a 5-minute duration. An orange button labeled 'MORE ALERTS' is located at the bottom right of this alert section.

**FIGURE 1-6: Notifications in MonitorIQ**

Click **More Alerts** button to redirect to Alerts page under Clips page to see a long list of alerts for different unexpected events.



The screenshot shows the 'Alerts' tab selected in the MonitorIQ interface. The title is 'Monitoring Alerts'. The table below lists three critical alerts:

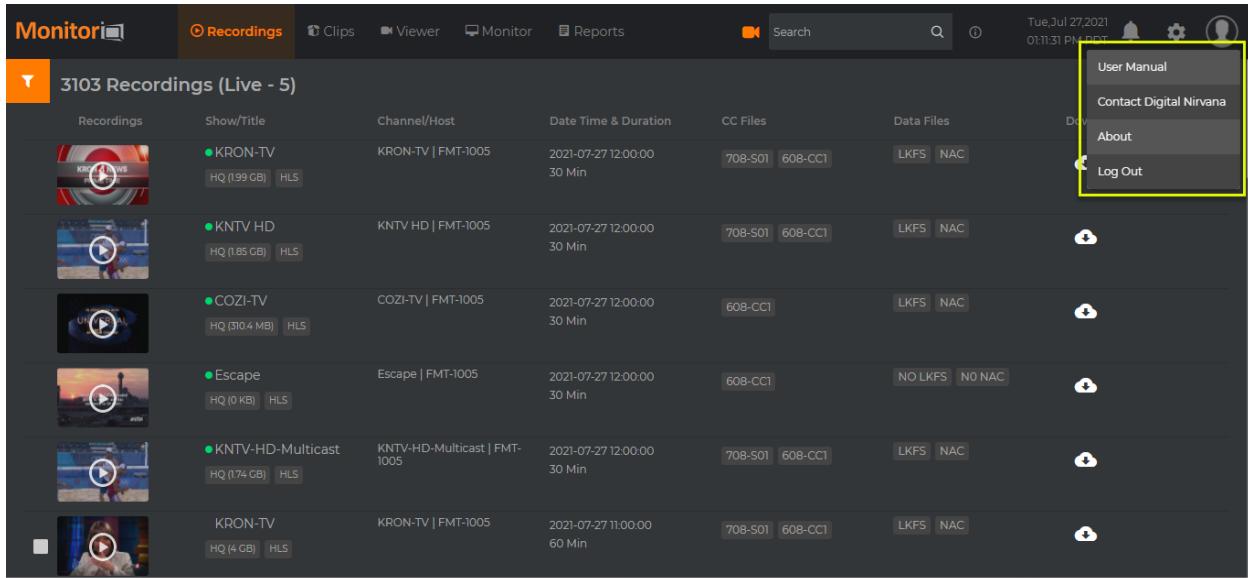
Channels	Severity	Trigger Name	Description	Started At	Duration
KRON-TV	critical	Captions missing	Box name FMT-1005 Trigger URL: Trigger Type: alert Trigger Params: Status: Triggering URL is not configured (al... Box name FMT-1005	2021-07-27 05:00:32	00:00:00
Escape	critical	Captions missing	Trigger URL: Trigger Type: alert Trigger Params: Status: Triggering URL is not configured (al... Box name FMT-1005	2021-07-27 05:00:31	00:00:01
COZI-TV	critical	Captions missing	Trigger URL: Trigger Type: alert Trigger Params: Status: Triggering URL is not configured (al... Box name FMT-1005	2021-07-27 04:57:03	00:03:28

**FIGURE 1-7: Alerts Occurred in MonitorIQ**

More information about this page is discussed in [Alerts Tab](#) section.

## More Options

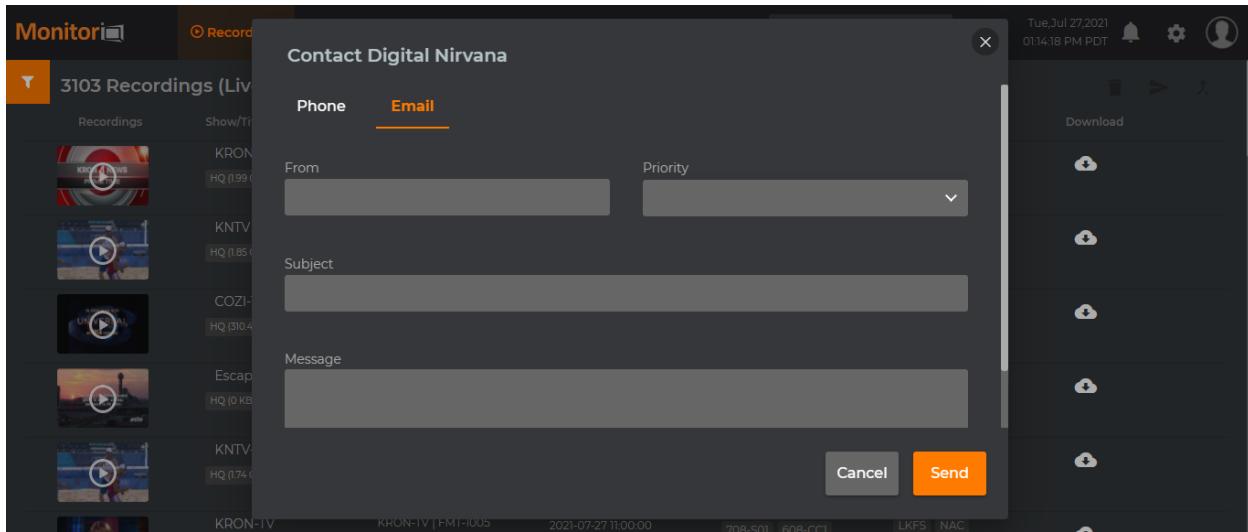
Click user profile drop-down list to access other information.



Recordings	Show/Title	Channel/Host	Date Time & Duration	CC Files	Data Files
	KRON-TV HQ (199 GB) HLS	KRON-TV   FMT-1005	2021-07-27 12:00:00 30 Min	708-S01 608-CCT	LKFS NAC
	KNTV HD HQ (1.85 GB) HLS	KNTV HD   FMT-1005	2021-07-27 12:00:00 30 Min	708-S01 608-CCT	LKFS NAC
	COZI-TV HQ (310.4 MB) HLS	COZI-TV   FMT-1005	2021-07-27 12:00:00 30 Min	608-CCT	LKFS NAC
	Escape HQ (0 KB) HLS	Escape   FMT-1005	2021-07-27 12:00:00 30 Min	608-CCT	NO LKFS NO NAC
	KNTV-HD-Multicast HQ (1.74 GB) HLS	KNTV-HD-Multicast   FMT-1005	2021-07-27 12:00:00 30 Min	708-S01 608-CCT	LKFS NAC
	KRON-TV HQ (4 GB) HLS	KRON-TV   FMT-1005	2021-07-27 11:00:00 60 Min	708-S01 608-CCT	LKFS NAC

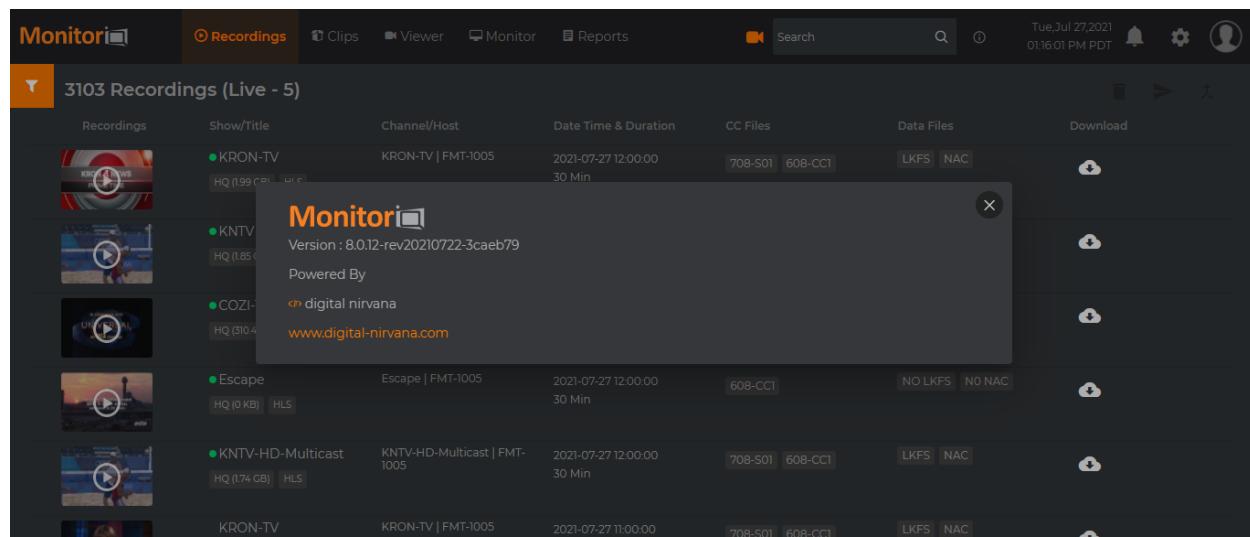
**FIGURE 1-8: Additional Options in User Profile Drop-Down**

Click **User Manual** option to download it to the local machine. Click **Contact Digital Nirvana** to see **Contact Digital Nirvana** window.



**FIGURE 1-9: Contact Digital Nirvana Window**

Provide appropriate details and then click **Send** button. Click **About** button to view following window.



The screenshot shows the MonitorIQ application interface. At the top, there's a navigation bar with tabs: Recordings (which is selected), Clips, Viewer, Monitor, Reports, and a search bar. On the right of the top bar, it shows the date (Tue, Jul 27, 2021) and time (01:16:01 PM PDT), along with icons for notifications, settings, and user profile.

The main content area displays a list of recordings. There are six entries visible:

Recordings	Show/Title	Channel/Host	Date Time & Duration	CC Files	Data Files	Download
	KRON-TV HQ (1.99 GB)	KRON-TV   FMT-1005	2021-07-27 12:00:00 30 Min	708-501   608-CC1	LKFS   NAC	
	KNTV HQ (1.85 GB)					
	COZI HQ (310.4 MB)					
	Escape HQ (0 KB)   HLS	Escape   FMT-1005	2021-07-27 12:00:00 30 Min	608-CC1	NO LKFS   NO NAC	
	KNTV-HD-Multicast HQ (1.74 GB)   HLS	KNTV-HD-Multicast   FMT-1005	2021-07-27 12:00:00 30 Min	708-501   608-CC1	LKFS   NAC	
	KRON-TV	KRON-TV   FMT-1005	2021-07-27 11:00:00	708-501   608-CC1	LKFS   NAC	

A modal dialog box is open in the center of the screen, displaying the following information:

**MonitorIQ**  
Version : 8.0.12-rev20210722-3caeab79  
Powered By  
digital nirvana  
[www.digital-nirvana.com](http://www.digital-nirvana.com)

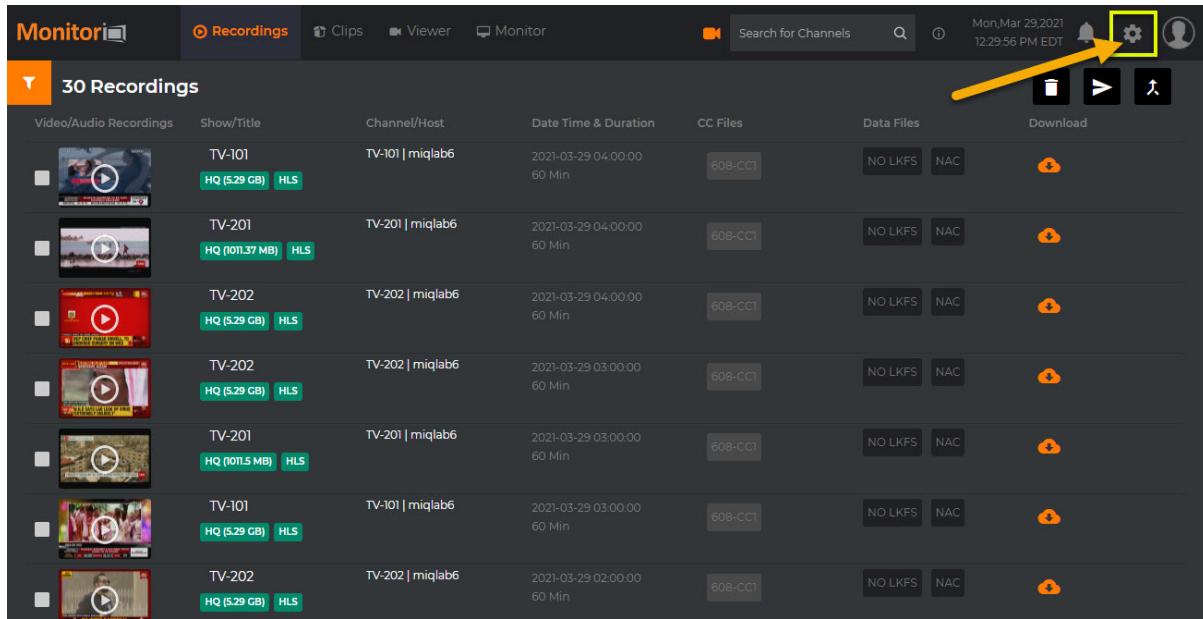
**X**

**FIGURE 1-10: About MonitorIQ Window**

Click **Log Out** button to exit from the application.

## Settings Page – Manage System Configurations

Settings page is one of the main pages of the application. All the key features of MonitorIQ are configured on this page to make them work. Users with administrator-level access to the system can configure the settings as per requirements. To redirect to settings page, click settings icon () at top-right corner. This icon is not visible to users with non-administrative privileges.



**FIGURE 1-11: Redirecting to Admin Settings Page**

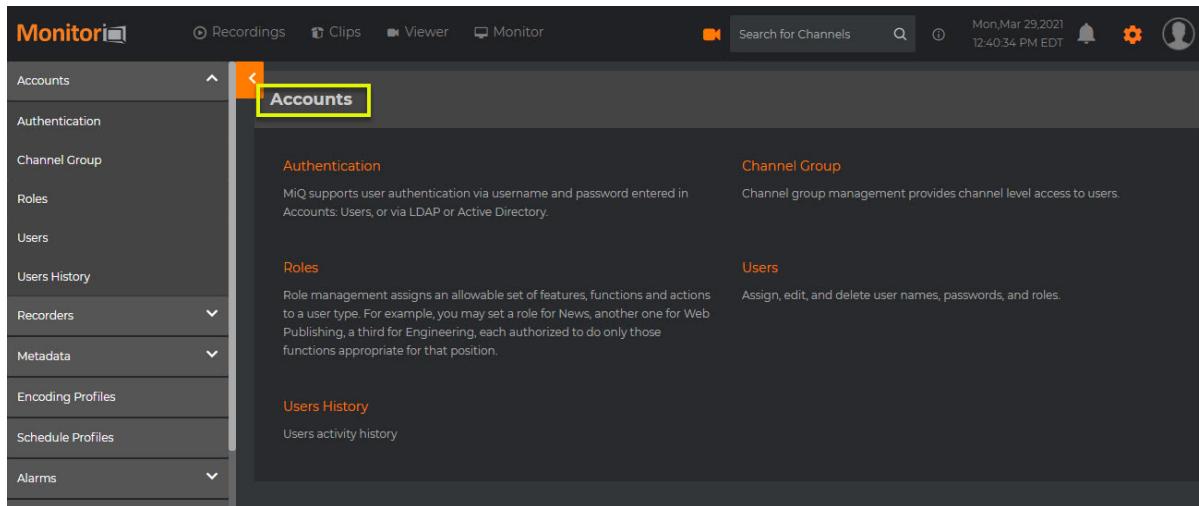
Following are available administrative functions that the administrator needs to configure:

- Accounts
- Recorders
- Metadata
- Encoding Profiles
- Schedule Profiles
- Alarms
- Guide
- Import
- Export
- Archive
- Transport Stream Outage

- Media Service Processes
- Socialize Content
- System
- User Preferences

## Accounts

Accounts section is used to manage user accounts, roles, permissions, authentication schemes, and channel groups.



**FIGURE 1-12: Accounts Section in Settings Page**

Following sub-sections discuss these settings.

### Authentication

Authentication is a process of identifying users of MonitorIQ, based on their login credentials. Through authentication, users are authorized to access MonitorIQ and its services. Users in MonitorIQ are authenticated using the following types:

1. Active Directory Authentication
2. MonitorIQ Login Credentials

From the above, **MonitorIQ Login** authentication is discussed in [Users](#) section. **Active Directory** is discussed in this section.

#### *Active Directory Authentication*

**Active Directory (AD)** is used to manage users, computers, and other devices on a network. MonitorIQ supports AD-based users' authentication. Configuration settings on this page require information.

Monitor

Recordings Clips Viewer Monitor Reports Search

Authentication LDAP

Base DN  ⓘ

AD Host  ⓘ

Search Attribute  ⓘ

Additional User DN  ⓘ

Additional Group DN  ⓘ

Group Name Attribute  ⓘ

User Object Class  ⓘ

User Name Attribute  ⓘ

User Name RDN Attribute  ⓘ

User Last Name Attribute  ⓘ

User First Name Attribute  ⓘ

User Display Name Attribute  ⓘ

User Email Attribute  ⓘ

Account Suffix  ⓘ

AD Port  ⓘ

Account Prefix  ⓘ

Follow Referrals  ⓘ

**Submit**

Accounts Recorders Metadata Encoding Profiles Schedule Profiles Alarms Guide Import Export Archive Transport Stream Outage Recorders Metadata Encoding Profiles Schedule Profiles Alarms Guide Import Export Archive Transport Stream Outage Media Service Processes Socialize Content System Schedule Profiles Alarms Guide Import Export Archive Transport Stream Outage Media Service Processes Socialize Content System User Preferences

**FIGURE 1-13: AD Authentication Configuration Page**

Following are the list of details to be provided in the fields:

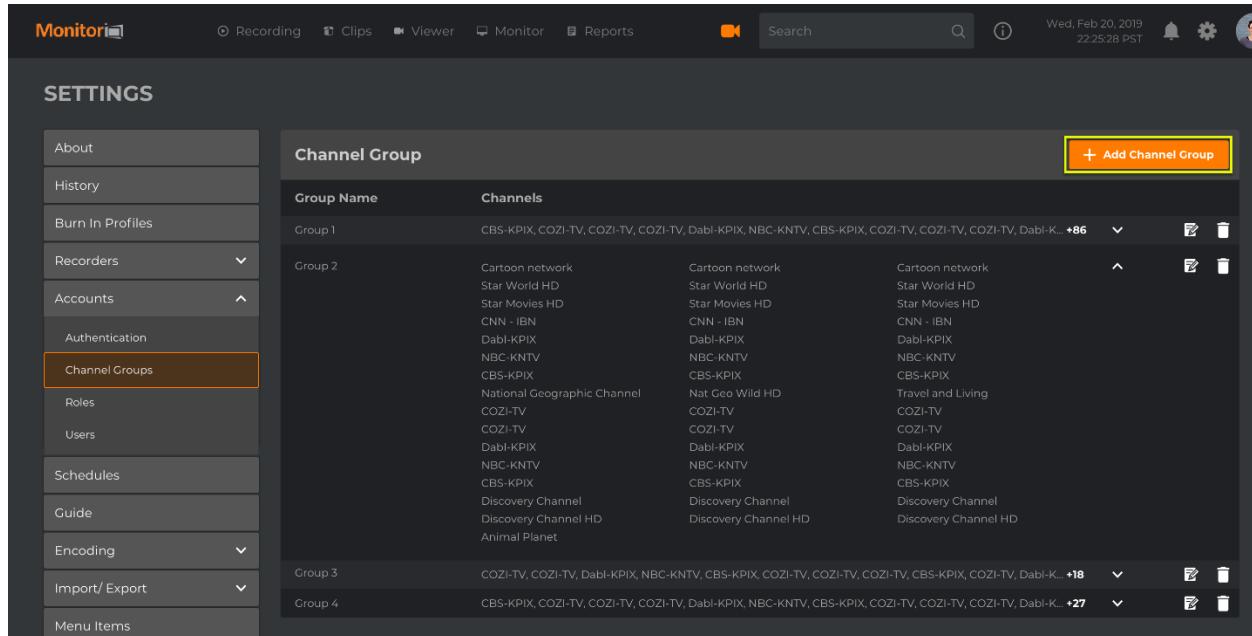
- **Base DN** – Root node used by **AD** server for searching users authentication within the directory (**Example**: DC=example-domain,DC=com)
- **AD Host** – Provide **AD** server URL here
- **Search Attribute** – The attribute in **AD** holding the user's login name
- **Additional User DN** – Used to limit users search to specific **DN** (e.g. ou=People)
- **Additional Group DN** – Used to limit groups search to specific **DN** (e.g. ou=Groups)
- **Group Object Class** – Specifies the **LDAP** object class value that defines groups in the directory service
- **Group Name Attribute** – Attribute in **LDAP** defining the group's name (e.g. name)
- **User Object Class** – Specifies the **LDAP** object class value that defines users in the directory service
- **User Name Attribute** – Attribute of **LDAP** User object that specifies the name of the user. Its default value is "**cn**" which stores a string that is a combination of the user's first name and last name
- **User Name RDN Attribute** – Attribute field to use when loading the user distinguished name (e.g. **cn**)
- **User Last Name Attribute** – Attribute field to use when loading the user last name (e.g. **sn**)
- **User First Name Attribute** – Attribute field to use when loading the user first name (e.g. **givenName**)
- **User Display Name Attribute** – Attribute field to use while loading the user full name
- **User Email Attribute** – Attribute field to use when loading the user email (e.g. **mail**)
- **Account Suffix** – The **Account Suffix** is added to all usernames during the **Active Directory** authentication process. For example, when an account suffix is provided in this field (e.g., **@company-name.com**), users can provide their name in login field (e.g., admin, tom, sophie, matt, etc.) instead of providing a complete username (e.g., **admin@company-name.com**)
- **AD Port** – Type the port number for **AD**. Its default port number is **389**
- **Account Prefix** – If all accounts in your **LDAP/AD** are prefixed with some string, for ease of use you can prefix them here. When logging in your staff will not be required to enter this prefix

- **Follow Referrals** – Specifies that a search for a user or group within the **Active Directory Authentication** provider will follow referrals to other **LDAP** servers or branches within the **LDAP** directory. By default, this attribute is enabled.

Provide details of a user in all the required fields and then click **Submit** button to give **AD-based authentication**.

### Channel Group

Channels can be grouped by genre, location, client, feed type, etc. All the channels that are grouped can be viewed on Viewer page. After creating the groups, administrator assigns access rights to users based on their role. Channel Group setting page.

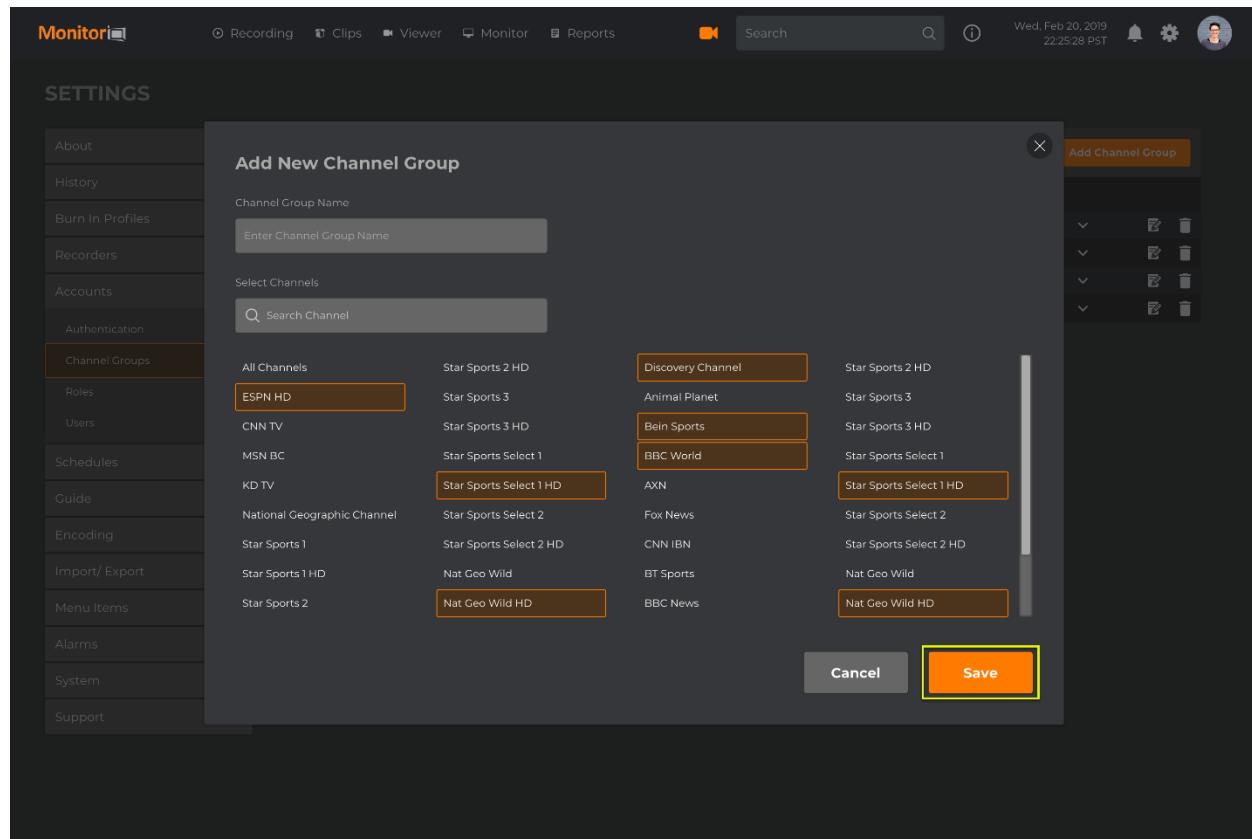


Group Name	Channels		
Group 1	CBS-KPIX, COZI-TV, COZI-TV, COZI-TV, Dabl-KPIX, NBC-KNTV, CBS-KPIX, COZI-TV, COZI-TV, COZI-TV, Dabl-K... +86		
Group 2	Cartoon network Star World HD Star Movies HD CNN - IBN Dabl-KPIX NBC-KNTV CBS-KPIX National Geographic Channel COZI-TV COZI-TV Dabl-KPIX NBC-KNTV CBS-KPIX Discovery Channel Discovery Channel HD Animal Planet	Cartoon network Star World HD Star Movies HD CNN - IBN Dabl-KPIX NBC-KNTV CBS-KPIX Nat Geo Wild HD COZI-TV COZI-TV Dabl-KPIX NBC-KNTV CBS-KPIX Discovery Channel Discovery Channel HD	Cartoon network Star World HD Star Movies HD CNN - IBN Dabl-KPIX NBC-KNTV CBS-KPIX Travel and Living COZI-TV COZI-TV Dabl-KPIX NBC-KNTV CBS-KPIX Discovery Channel Discovery Channel HD
Group 3	COZI-TV, COZI-TV, Dabl-KPIX, NBC-KNTV, CBS-KPIX, COZI-TV, COZI-TV, COZI-TV, CBS-KPIX, COZI-TV, Dabl-k... +18		
Group 4	CBS-KPIX, COZI-TV, COZI-TV, COZI-TV, Dabl-KPIX, NBC-KNTV, CBS-KPIX, COZI-TV, COZI-TV, COZI-TV, Dabl-k... +27		

**FIGURE 1-15: Channel Group Page**

#### Add New Channel Group

Click **+ Add New Channel Group** button on top-right corner to add a new group. Up on clicking the button, application displays **Add New Channel Group** window.



**FIGURE 1-16: Add New Channel Group Window**

Provide details in the fields as shown below:

- **Channel Group Name** – Give a name to the channel group in the field
- **Search Channels** – Type channels' names in this field to search for the channels with similar names. Click on them or click on the channel names at bottom of the window (ESPN HD, BBC World, etc.) to add channels to this group.

Finally, click **Save** button to add the new channel group or **Cancel** to terminate this action.

Use edit (>Edit) or delete (>Delete) icons against a channel group to modify or remove that it respectively.

## Roles

Roles define the permissions assigned to users to access MonitorIQ services. Using roles, administrators can restrict users from performing unauthorized actions. Users are allowed to perform the tasks that are defined in their roles. Users can have more than one role as per requirement. Users with administrator roles can have full access to the system.