Dell™ Color Smart Multifunction Printer | S3845cdn
Dell™ Color Smart Printer | S3840cdn
Supplement Guide

Setup Example for Authentication (Login Method), Authorization (Roles/Permissions), and Accounting (ColorTrack)

Notes

✎ **NOTE:**
  - A NOTE indicates important information that helps you make better use of your printer.

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Use Case Summary

This document will explain how to setup Authentication (Login Method) Authorization (Roles/Permissions) and Accounting (ColorTrack) based on the following use-case. It is not a thorough explanation of all possible settings.

> 📝 **NOTE:**
> - Although the settings and procedures in this document are those for S3845cdn, you can use this document for S3840cdn because the feature concepts are common.

1. Users will be be required to authenticate via Kerberos to an Active Directory$^{®}$ server which will also act as the LDAP server for managing permission groups.

2. The guest user cannot access anything on the local UI.

3. Users who belong to the group "colorusers" has access to all features except setup features. Two users will be created.

4. Users who belong to the group "monousers" can only copy and print in mono and cannot open the Device app. Two users will be created.

5. In the following example, ColorTrack accounting will be enabled to track usage and limit pages. "coloruser1" will be limited to 10 color pages and 10 mono pages. "monouser1" will be limited to 10 mono pages.

The following table is the summary of the users and groups which will be setup.

| Groups	Users	Permissions	ColorTrack limits
colorusers	coloruser1	All features except setup	10 mono pages/10 color pages
	coloruser2		Unlimited mono and color pages
monousers	monouser1	Mono only.	10 mono pages
	monouser2	Cannot open Device App.	Unlimited mono pages

Setup Steps

1. Setup Users and Groups on Active Directory Server

   a. Go to **Start** → **Management Tools** → **Active Directory Users and Computers** on Windows Server$^{®}$. For this document, Windows Server 2008 is used.

   b. Create users and groups. For our example, we will create four users in two groups.

   c. Open the properties of the created group and add members in the members tab.

2. Setup Authentication on Device

   a. Login as Admin on the Web UI and go to → **Permissions** → **Login/Logout Settings**.
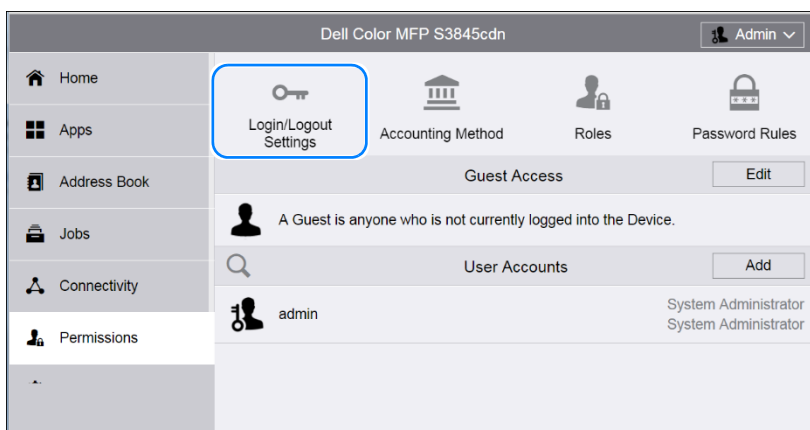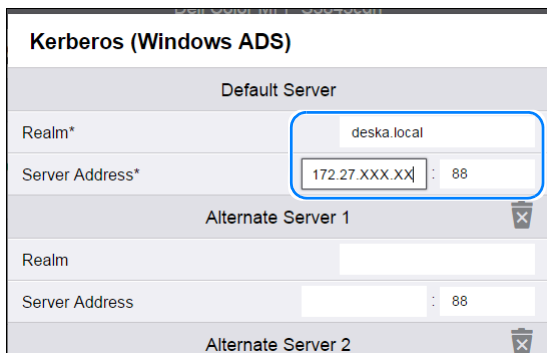
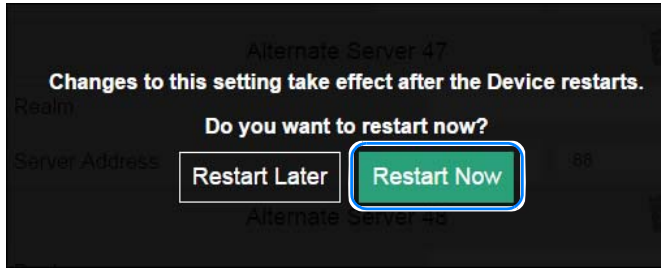**b** Click the **Select** button of the **Network** Login Method.
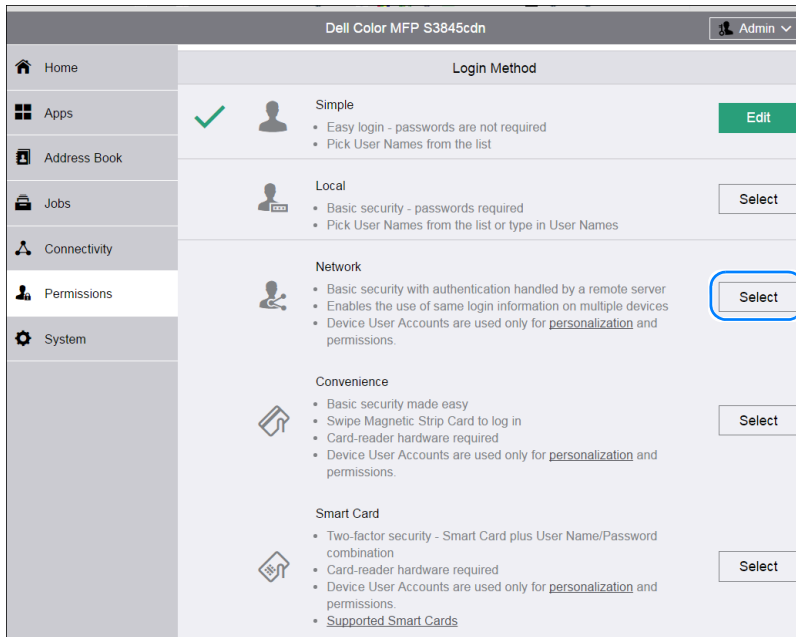
c Select **Kerberos(Windows ADS)** and click **Next**.
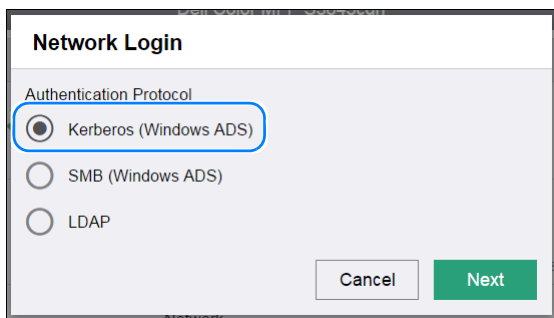
d Enter **Realm** and **Server Address**. Scroll to the bottom and click **DONE**.
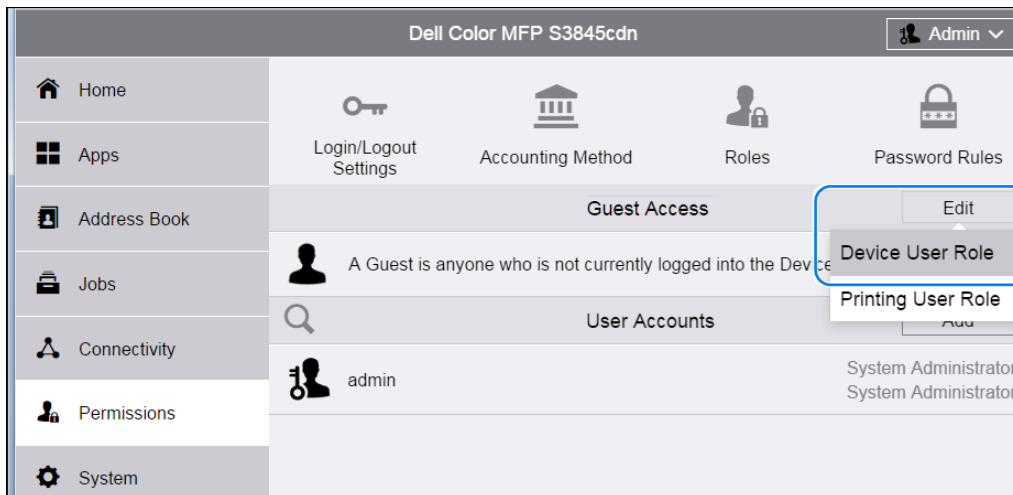
e When prompted, click on **Restart**. The device will restart.

3 Limit Guest Access Role

Because it is not possible to set permissions stricter than guest access (which makes no sense), the guest permissions will be restricted from the default.

a Go to **Permissions** and click **Edit** and select **Device User Role** next to **Guest Access**.

b For the example, we will set **No Access** for **Control Panel Permissions** and **Home Only** for **Website Permissions**. Click **OK** when finished.

4 Set up Roles

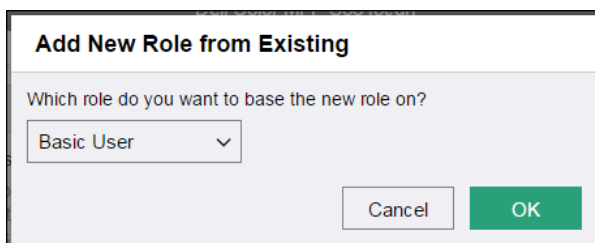**a** As admin, go to **Permissions → Roles → Device User Roles**.

b The predefined roles are displayed. Press the **+** button and **Add New Role from Existing** to add a Device User Role.
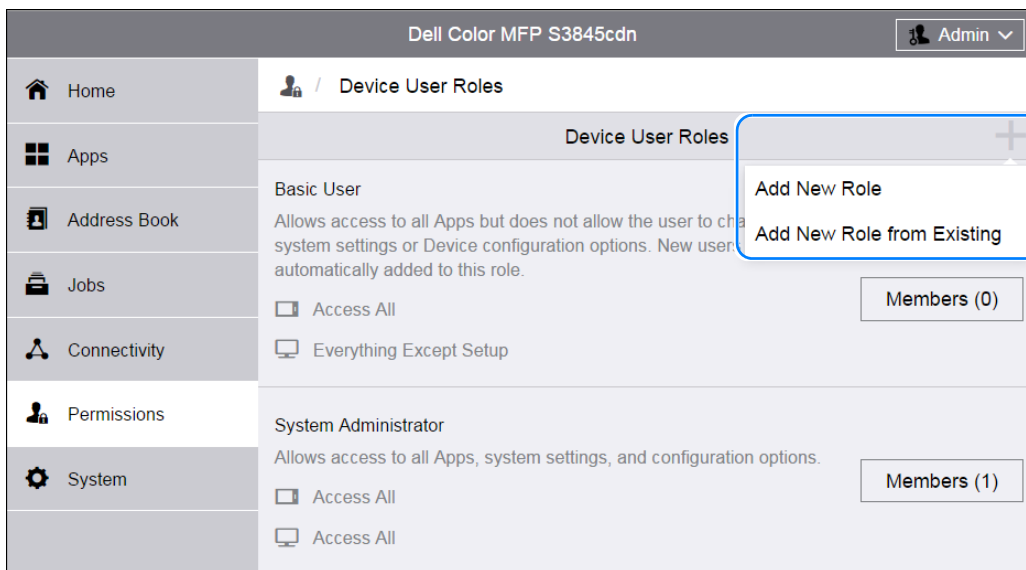
c Select **Basic User** and press **OK**.

d For this example, the Role "Color Users" will be added. Enter the role name and description. The Permission will be changed to **Everything Except Setup** from **Access All** for the **Control Panel Permissions**. Click **OK** when finished.
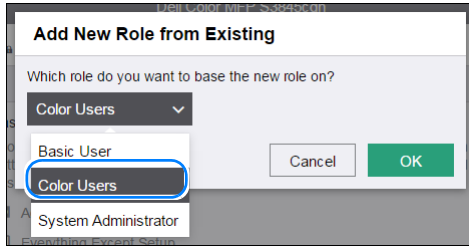

e Confirm the new role "Color Users" is created. Continue to create another group by clicking **+** followed by **Add New Role from Existing**.
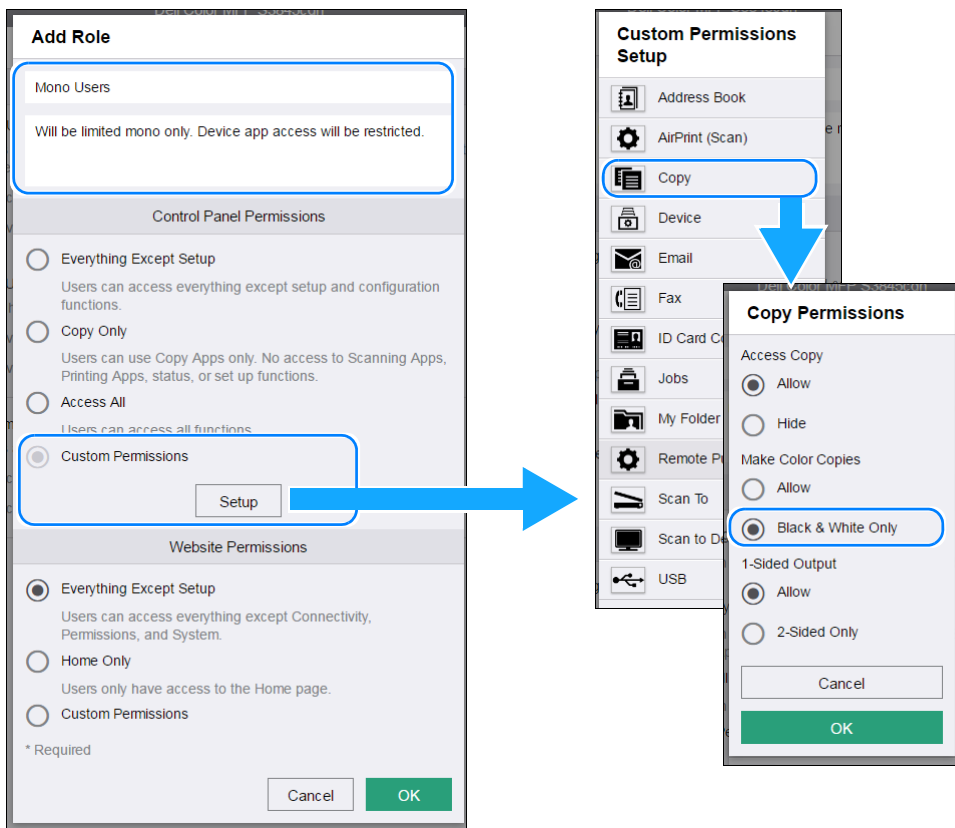
**f** The just created "Color Users" role will be used as the base for the next role.

g The new role "Mono Users" will be created. Custom Permissions will be defined for this role. After entering **Role Name** and **Description**, click **Custom permissions** and click **Setup**. Continue to select **Copy**.
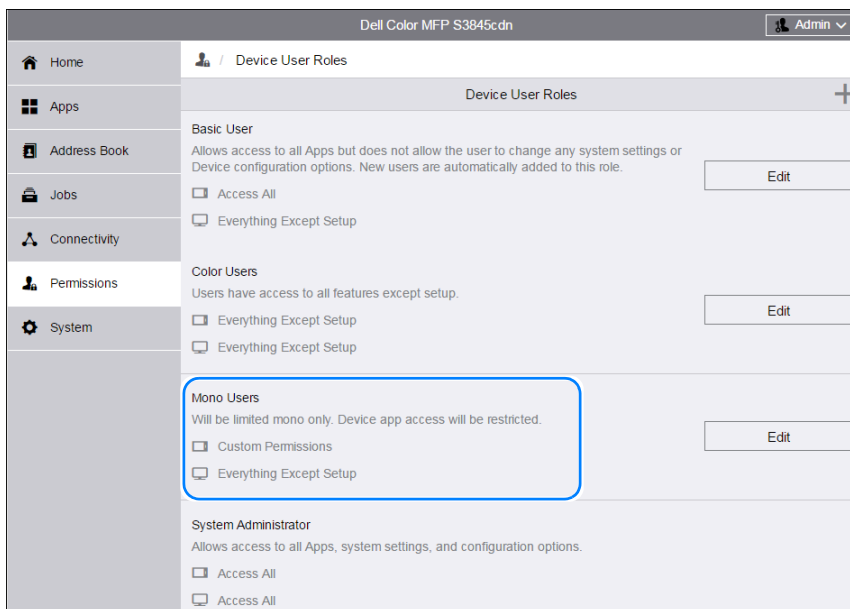

h Select **Black & White Only** under **Make Color Copies** to restrict color usage for this role.

i Next, select **Device** and select **Hide** to restrict access to this app. Click **OK** and then **Close** on the **Custom Permissions Setup** window and **Close** on the **Add Role** menu.
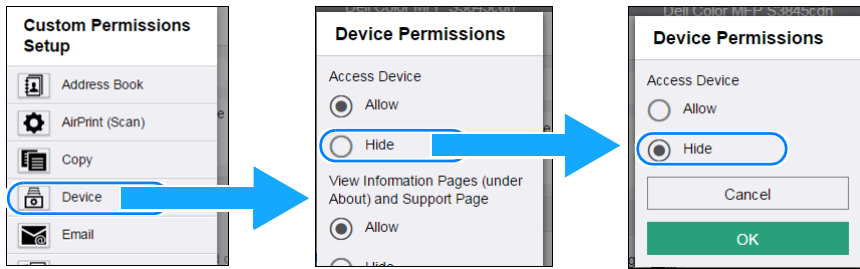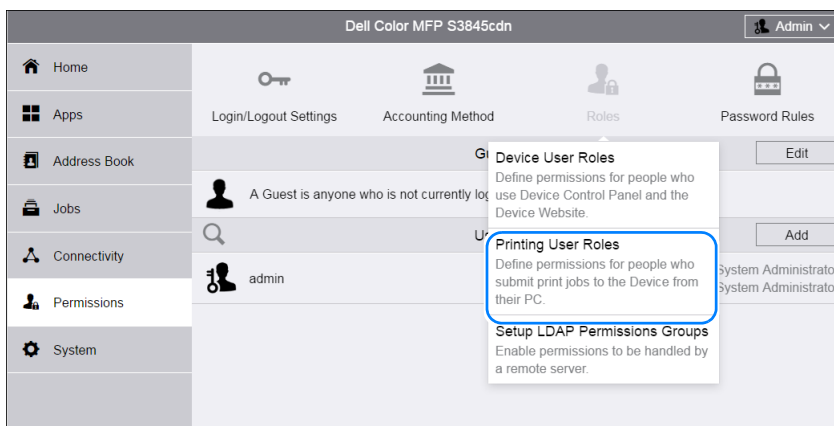

The roles are now created. These roles will be linked to LDAP groups in the next step.
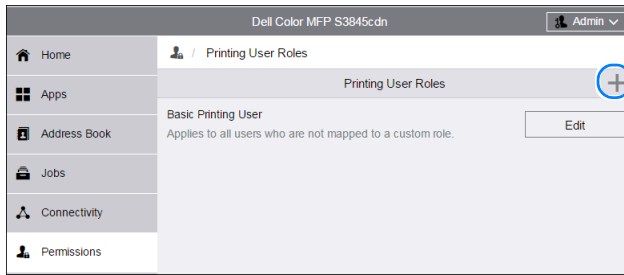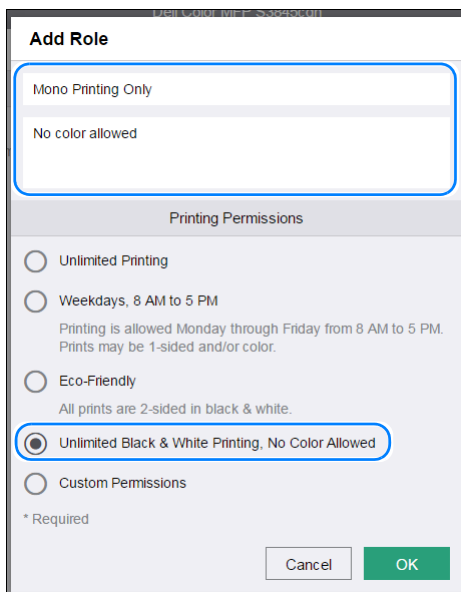

5 Setup Printing User Roles

    a Return to **Permissions** top menu and select **Roles → Printing User Roles**.

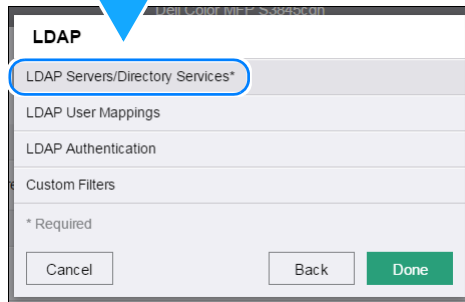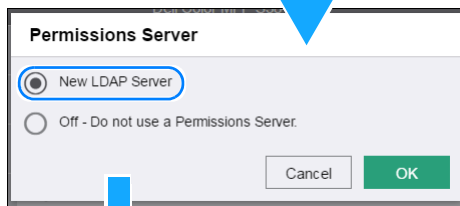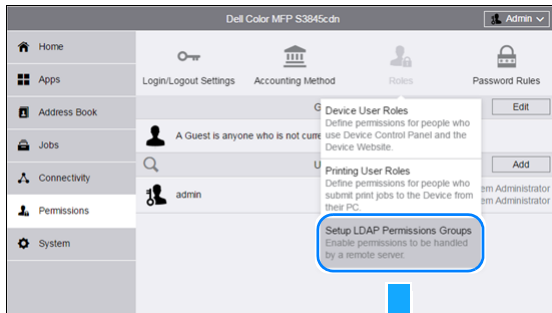**b** Click the **+** mark and add a new printing user role.

c Enter **Role Name**, **Description** and select **Unlimited Black & White Printing, No Color Allowed** as the **Printing Permission**. Click **OK** when finished.

6 Setup LDAP Permissions Groups

    a Go to **Permissions → Roles → Setup LDAP Permissions Groups**. Select **New LDAP Server** followed by **LDAP Servers/Directory Services**.

> ✍ **NOTE:**
> • This LDAP menu is the same menu as Web UI → **Connectivity** → **LDAP**.

b Set **IP Address/Host Name**, **LDAP Server**, **Search Directory Root**, and **Login Name** and **Password** based on the settings of the Active Directory server.

c Click **OK** and reboot the device.

d After rebooting, go to **Permissions** → **Roles** → **Edit LDAP Groups** which is now added to the menu.
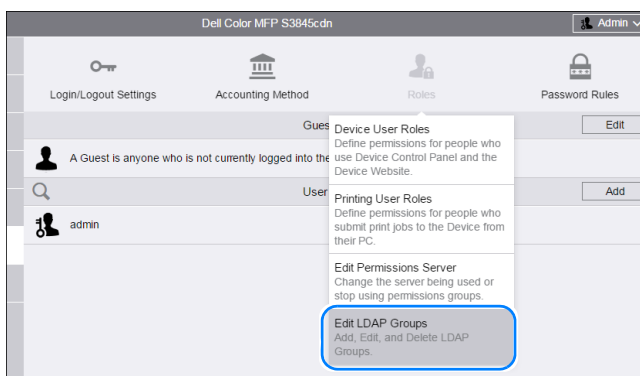
e Click the **+** mark to add an LDAP group.
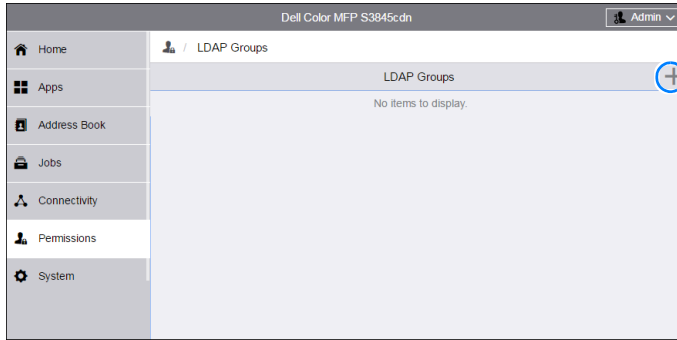
f Type in the name (or part of the name) of the group created in step 1 and click **Next** or the search icon. If LDAP is configured properly it should search and return the LDAP group which matches.
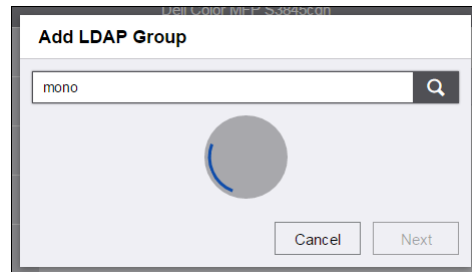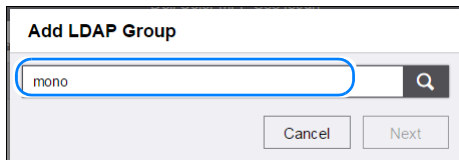
g Select the group and click **Next**.

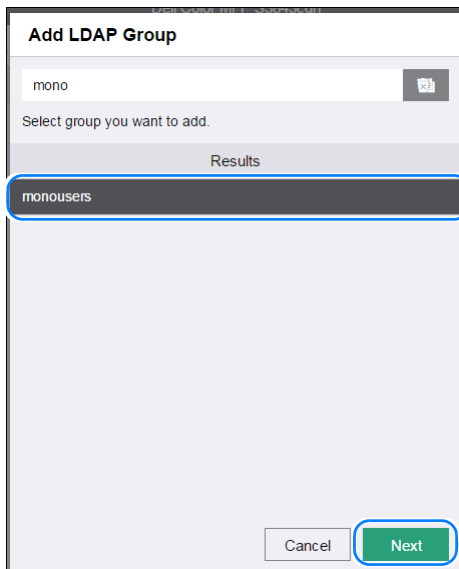**h** Select the **Device User Role**. For this case, the custom created "Mono Users" will be selected. Click **Next**.

i Select the **Printing User Role**. The custom created "Mono Printing Only" will be selected.

j Repeat the steps from e. to i to map the "colorusers" LDAP group to the Device Role "Color Users" and the default "Basic Printing User" printing permission.

k Members can be confirmed by clicking on the group and selecting **View Members**.
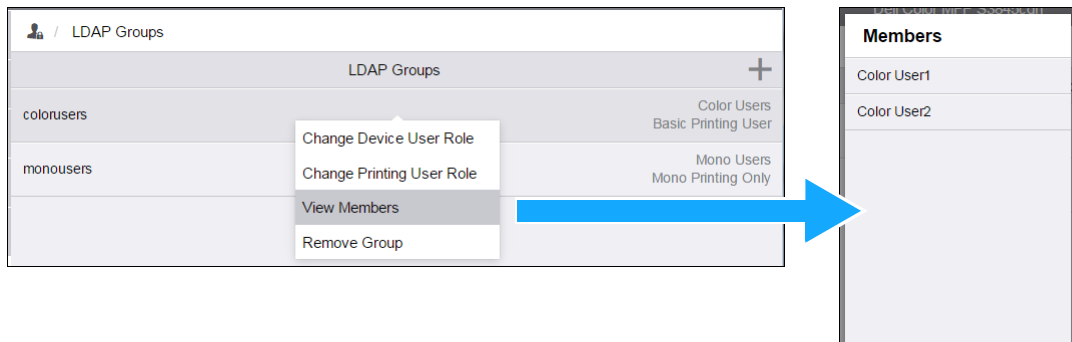
Through the steps up to this point, the four users can login via Active Directory and the users in "monousers" group can be restricted from using color. Setting up ColorTrack in the next step will further enable accounting and limiting number of pages.

7 ColorTrack Setup

a Access **Permissions → Accounting Method** on Web UI.
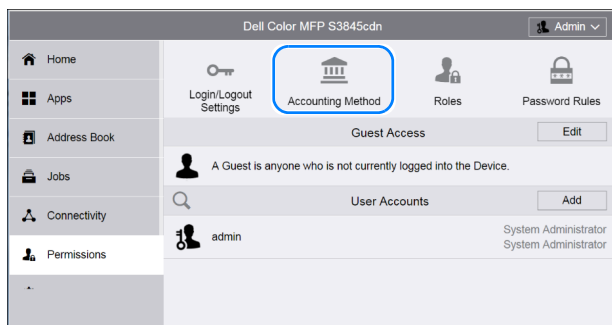
b Click on **Select** button next to **ColorTrack**.

c For this test, select **Track All** and click **OK**.
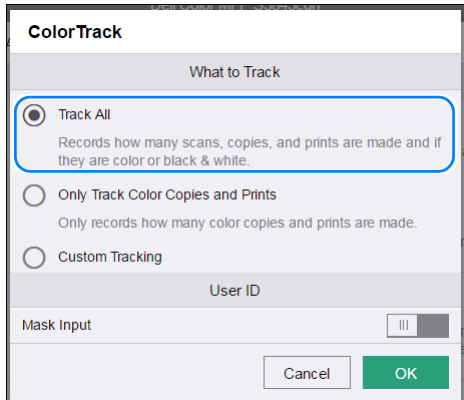
d The following warning message will be displayed. Click **Change** and restart the device.
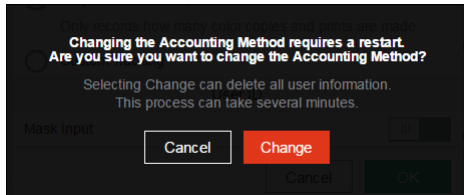
8 Adding ColorTrack Users

📝 **NOTE:**

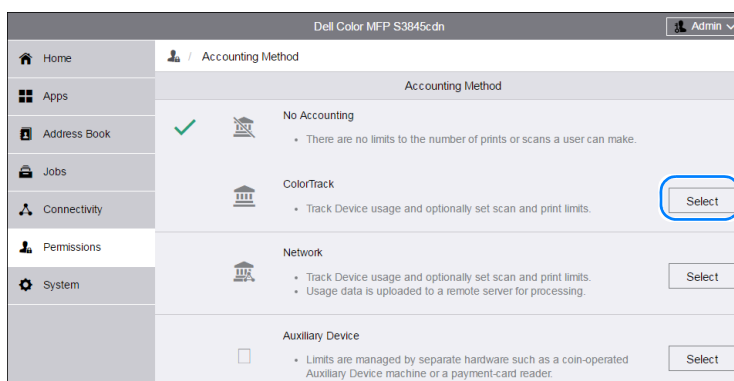- Although users can login via Kerberos, in order to track usage and limit by number of pages, the users need to be manually registered on each device to manage via ColorTrack. The linking with the Kerberos/AD account will happen if the (local) ColorTrack user name is the same as the Kerberos login.

a Add a user account.
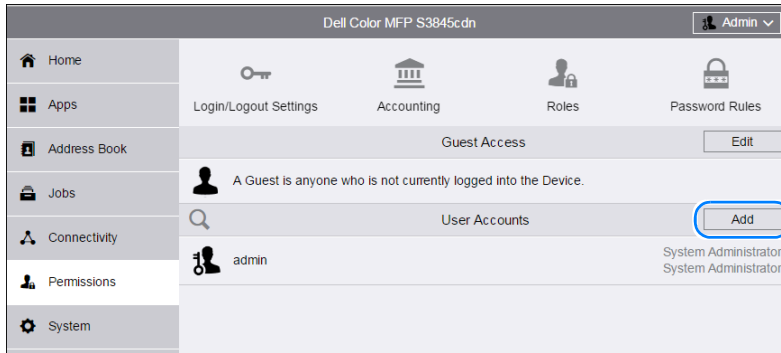
b Enter a user name which matches the Active Directory user account. The password entered here will not be used for Network Authentication so it can be left blank. Click **Add**.

c Select the user just created from the list.
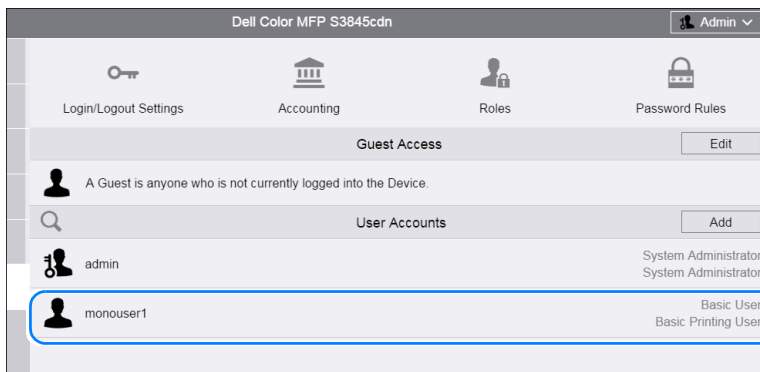
d To edit the ColorTrack settings click on the **Edit** button in the **Accounting** section.
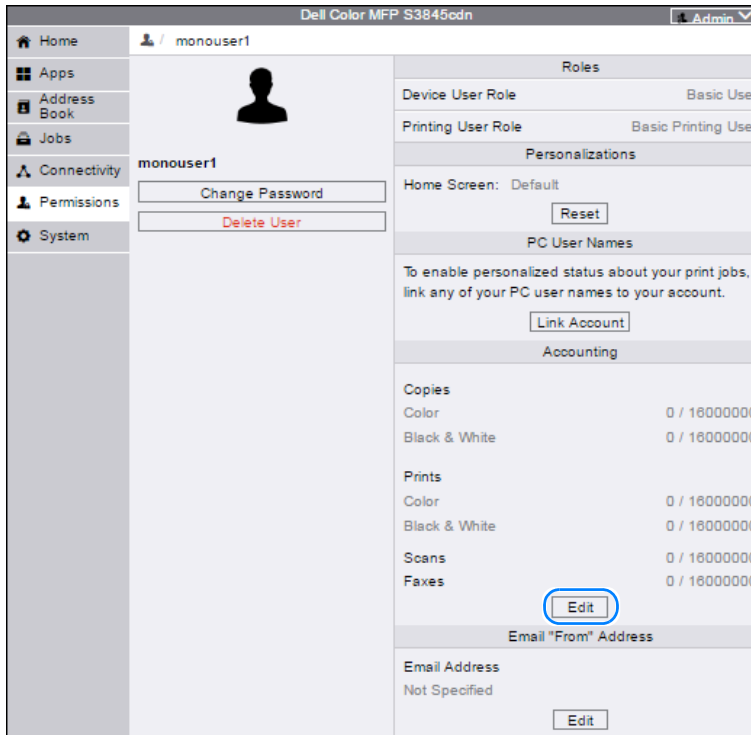
e For our test, we will set a limit of 10 pages for all features. Click **OK**.
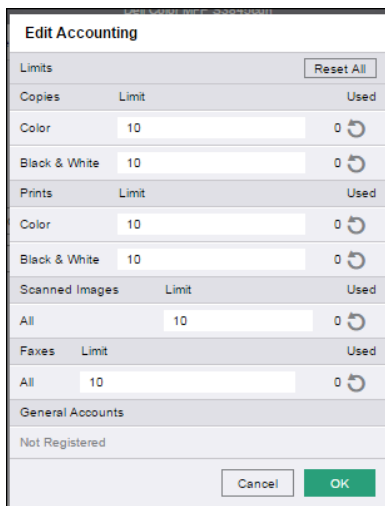
f Repeat the steps a. to e. for the user "coloruser1". For comparison, we will not register "monouser2" and "coloruser2" for now.

9 Testing

    a Logging in

        i. Because we have removed access rights to the guest user, the default screen on the device will become a login screen.

        ii. All four users can login to the Active Directory server. They will need to enter the credentials setup at the Active Directory server:

            1) User name

            2) Realm (domain)

            3) Password

    b Testing permissions

        i. When "monouser1" and "monouser2" logs in, he will not be able to copy in color or open the Device app. When color is selected, an error will appear.

    c Testing ColorTrack

        i. Because, "monouser1" and "coloruser1" are registered with ColorTrack, they will only be able to copy up to 10 pages. After that, an error will be displayed and be prevented from copying.

        ii. After login, if you press the login name on the upper left of the screen, you can view the **Account Summary** and view remaining pages.

        iii. "monouser2" is prevented from copying in color due to the permission setting but can copy limitlessly in mono. In order to set the ColorTrack limits, the "monouser2" ColorTrack account needs to be created (step 8).