

**SETUP GUIDE
FOR THE**

DXassistant™

**Version 2.0
SOFTWARE**

**Manual Version 6
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1 System Requirements

1. Operating System:

- a. Linux - Ubuntu 16.04, Xenial
 - i. Command to verify Ubuntu version:
 1. `lsb_release -a`

```
m@DXAssistant:~$ lsb_release -a
No LSB modules are available.
Distributor ID: Ubuntu
Description:    Ubuntu 16.04.5 LTS
Release:       16.04
Codename:      xenial
```

- ii. Command to prepare for package installation
 1. `sudo apt-get update`

2. Pre-Installed and Configured Packages

- a. LAMP
 - i. Apache 2 (Tested with v. 2.4.18) (`apache2 -v`)
 1. Install commands:
 - a. `sudo apt-get install apache2=2.4.18-2ubuntu3.8`
 - ii. MySQL (Tested with v. 14.14)
 1. Install commands:
 - a. `sudo apt-get install -y mysql-server-5.7`
 - iii. PHP (Tested with v. 7.0.433) (`php -v`)
 1. Install command:
 - a. `sudo apt-get install -y php7.0-common libapache2-mod-php php-mcrypt php-mysql`
- b. ACL(Access Control Lists)
 - i. ACL is used to help define rights and permissions for files and directories.
 - ii. It can be installed with: `sudo apt-get install acl`
- c. Mail client (nullmailer, sendmail, etc.)

3. 3CPU: 2.50+ GHz Dual core

4. RAM: 2 GB

5. Disk Space (typical 60 GB, but depends on number of devices – see below):

- a. 40 GB – Linux Server
- b. 5 GB - Base Installation + 2 GB per device.

6. Ethernet or Wi-Fi Network Connection

2 Overview

DX Assistant is a web application that consists of a website client called the DX Dashboard and a server back-end that interfaces with a database. The Dashboard is accessed from a web browser to manage and monitor a network of deployed DX-family devices. The DX devices communicate with the server to report device events and poll for new device settings. Device events and settings are stored in the database.

3 Installation Instructions

It is recommended (though not necessary) that a trained IT professional with server configuration experience perform the DX Assistant setup process.

3.1 Installing the DX Assistant Server

Prior to installation, it is necessary to configure a static IP Address on the DX Assistant server machine or use DHCP reservation. Note IP address, as it will be the website address for browsing to the DX Dashboard site.

1. Copy the V037329_####_DxAssistant.deb file to the DX Assistant server machine. Be sure to replace the #### with the actual version number.
 - a. See Appendix A for additional information about copying files between Linux and Windows
 - b. Login to the DX Assistant server machine
2. Navigate to the directory containing the V037329_####_DxAssistant.deb file.
3. Install the package using the following command. Be sure to replace the #### with the actual version number.
 - a. `sudo dpkg -i V037329_####_DxAssistant.deb`
4. During the install process, you will be prompted to enter the root password for your MySQL installation as shown in Figure 1. Enter the password and then hit the Enter key to proceed.

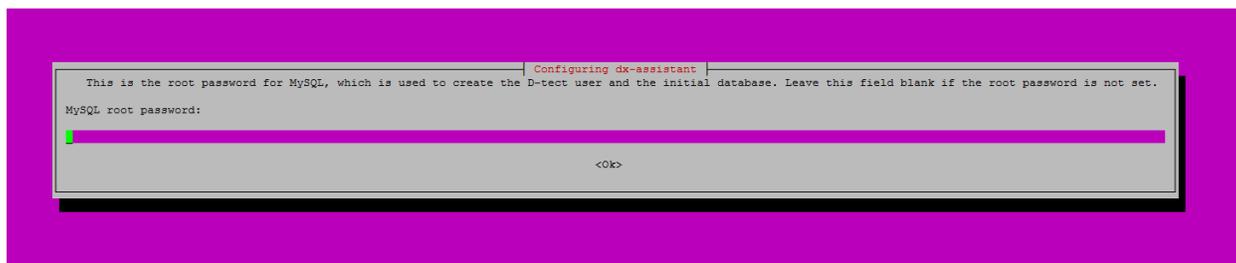


Figure 1: Database Password Prompt

5. Upon successful completion, the script will terminate and then return to a prompt as shown in Figure 2.

```
.....+
.....+
.....+
.....+
Done
root@ubuntu:~#
```

Figure 2: Successful Install

6. DX Assistant is now installed on the server.

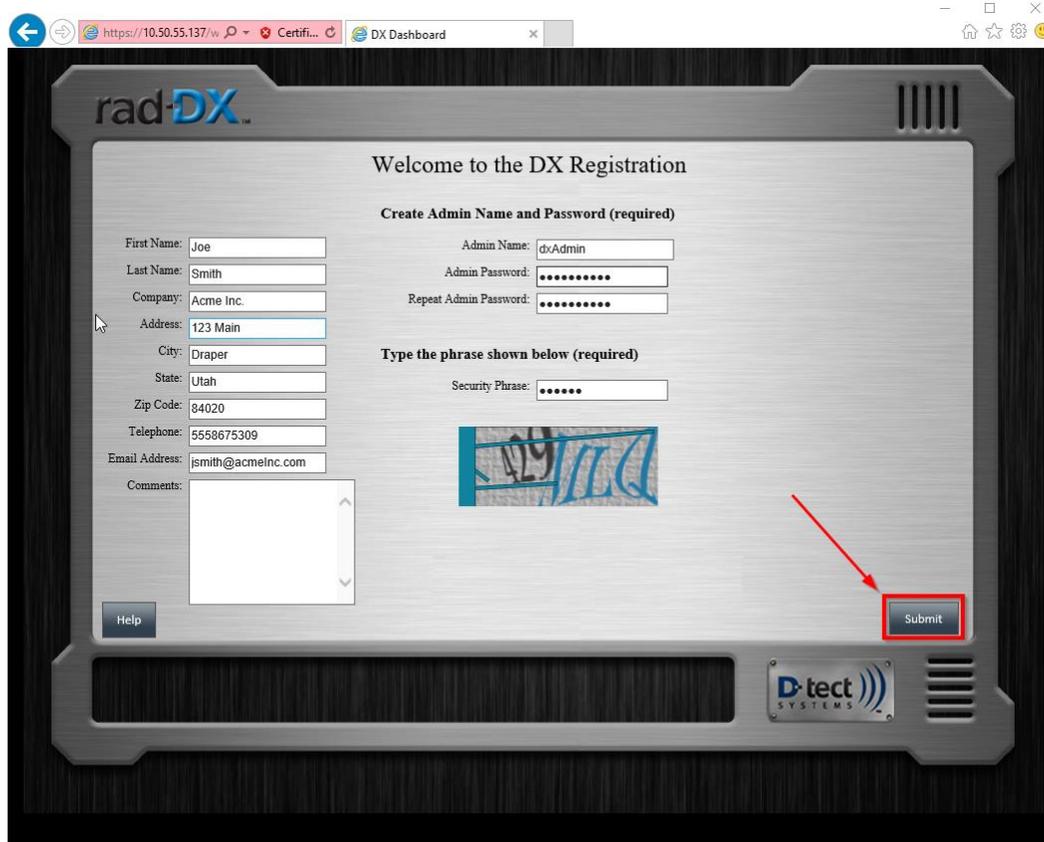
3.2 Creating an Account on the Dashboard

1. Open a web browser and navigate to the DX Dashboard by entering the IP address of the DX Assistant server.
 - a. Command to display DX Assistant server IP address:
 - i. `ifconfig`
2. You will be presented with the login screen shown in Figure 3. Click the Register button.



Figure 3: Register Button

3. On the next form, fill out the registration information, then click the Submit button.



rad-DX

Welcome to the DX Registration

Create Admin Name and Password (required)

First Name: Admin Name:

Last Name: Admin Password:

Company: Repeat Admin Password:

Address:

City:

State:

Zip Code:

Telephone:

Email Address:

Comments:

Type the phrase shown below (required)

Security Phrase:



Figure 4: Submit Registration Information

4. You will then be presented with a success message indicating that the new account has been created. Click the Ok button.

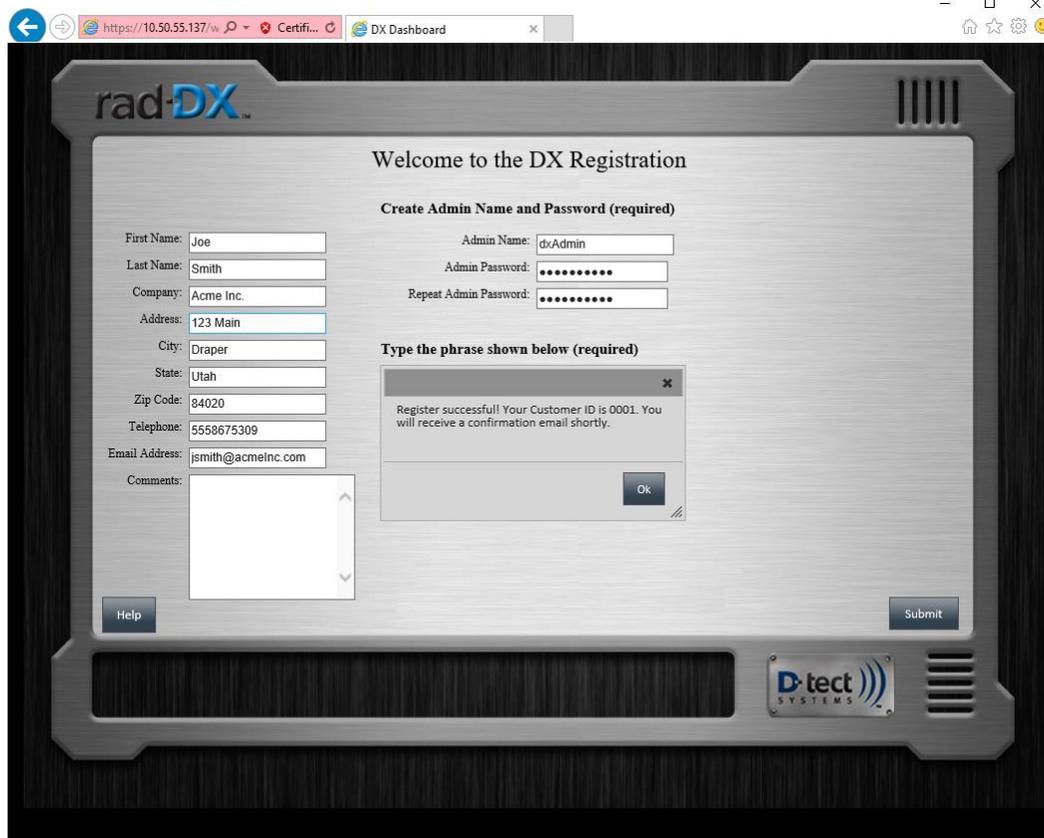


Figure 5: Successful Registration

3.3 Adding DX Devices to the Dashboard

DX devices need to be initially configured to communicate with the Dashboard using the DX Dashboard Setup Tool, which is a Windows application that configures DX devices through the USB interface. The DX Dashboard Setup Tool can be downloaded from the Dashboard.

1. From the Windows PC where the DX Dashboard Setup Tool will be installed, login to the Dashboard and select the Software Download tab. The Setup Tool installer may be downloaded at this time and moved to another Windows PC for installation.
2. Click the Download button, to download the Setup Tool installer.
3. Click the Quick Start Guide button to download the Dashboard Setup Tool Quick Start Guide.
4. Refer to the Dashboard Setup Tool Quick Start Guide for installing the Setup Tool and to finish adding DX devices to the Dashboard.

3.4 Email Configuration

The Dashboard can be configured to use an SMTP server (not provided) to send device event emails.

1. Login to the Dashboard and select the Settings tab.

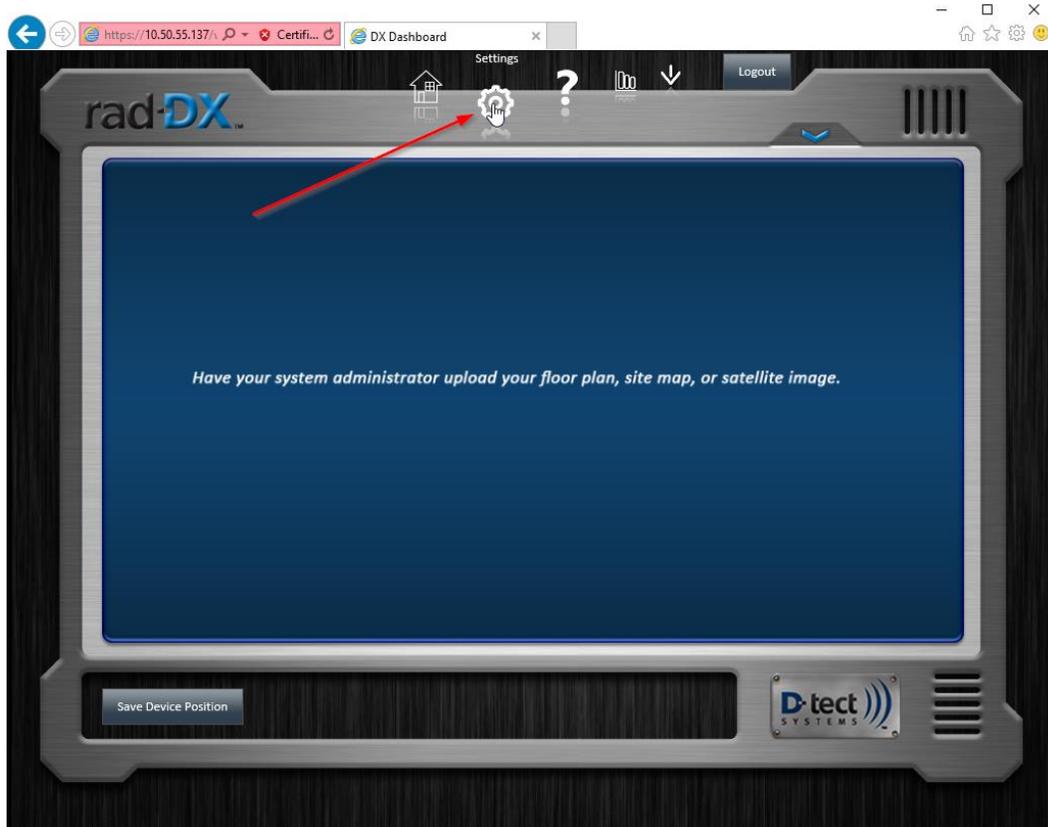


Figure 6: Settings

2. On the Settings tab, you can configure the SMTP server settings by entering the server IP address or host name and port. If the SMTP server requires authentication credentials, click Use Authentication and enter the SMTP credentials. (See Figure 8)

NOTE: If the DX Assistant server is using a static IP address, the SMTP server host name may not resolve correctly unless a static DNS server is also configured on the DX Assistant server.

3. After the SMTP server settings have been configured, a test email can be sent to validate that the settings are correct. Click the Test Email button and provide an email address. Click the Send Test Email button to send the test email.

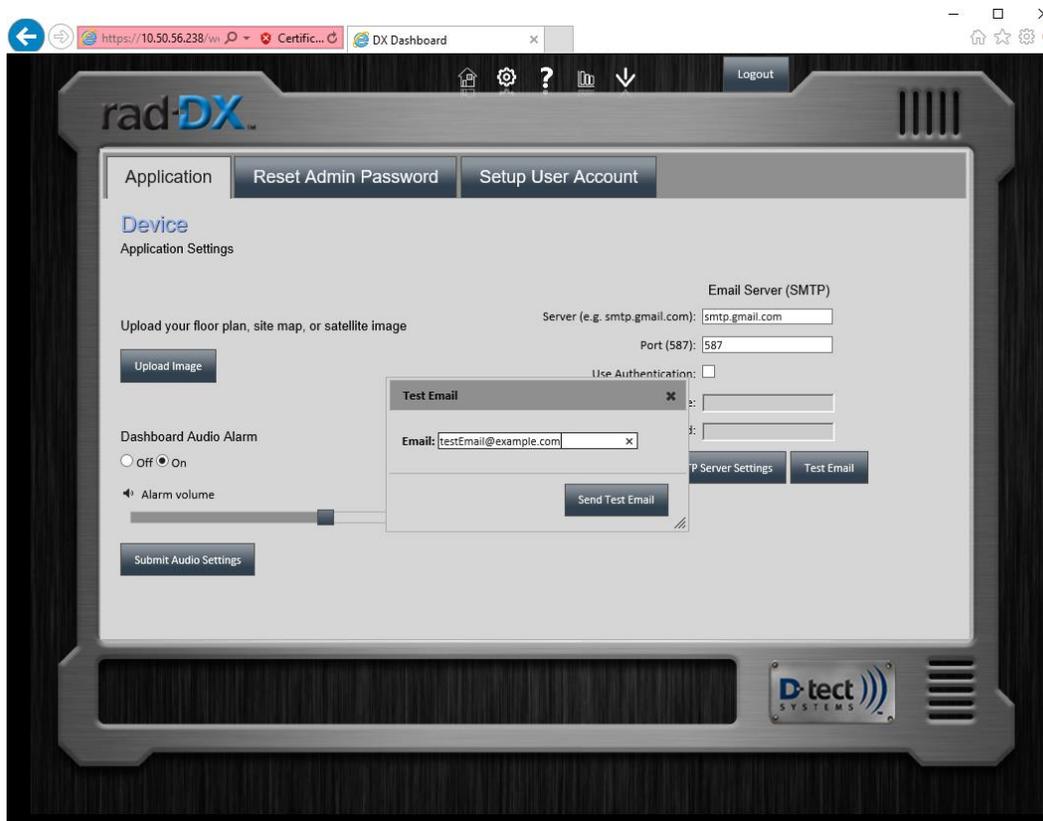


Figure 7: Test Email

4. Once the SMTP server settings have been configured/validated, click the Submit SMTP Server Settings button to save the settings.

- To configure the DX devices so that they send device event emails, refer to the 'Alarm Screen' section of the DX Dashboard Manual (see 'Downloading the DX Dashboard User Manual' below).

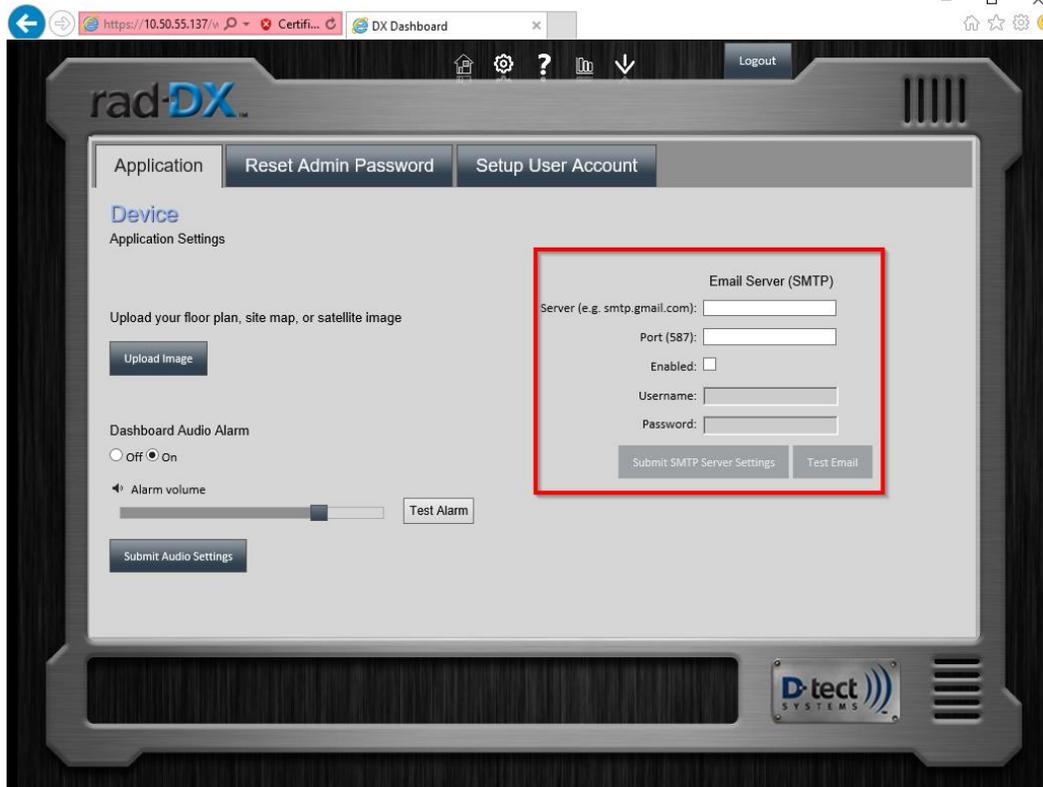


Figure 8: Email server settings

3.5 Downloading the DX Dashboard User Manual

A detailed manual on how to use the Dashboard and its features can be downloaded from the Dashboard.

1. Login to the Dashboard and select the Help tab.

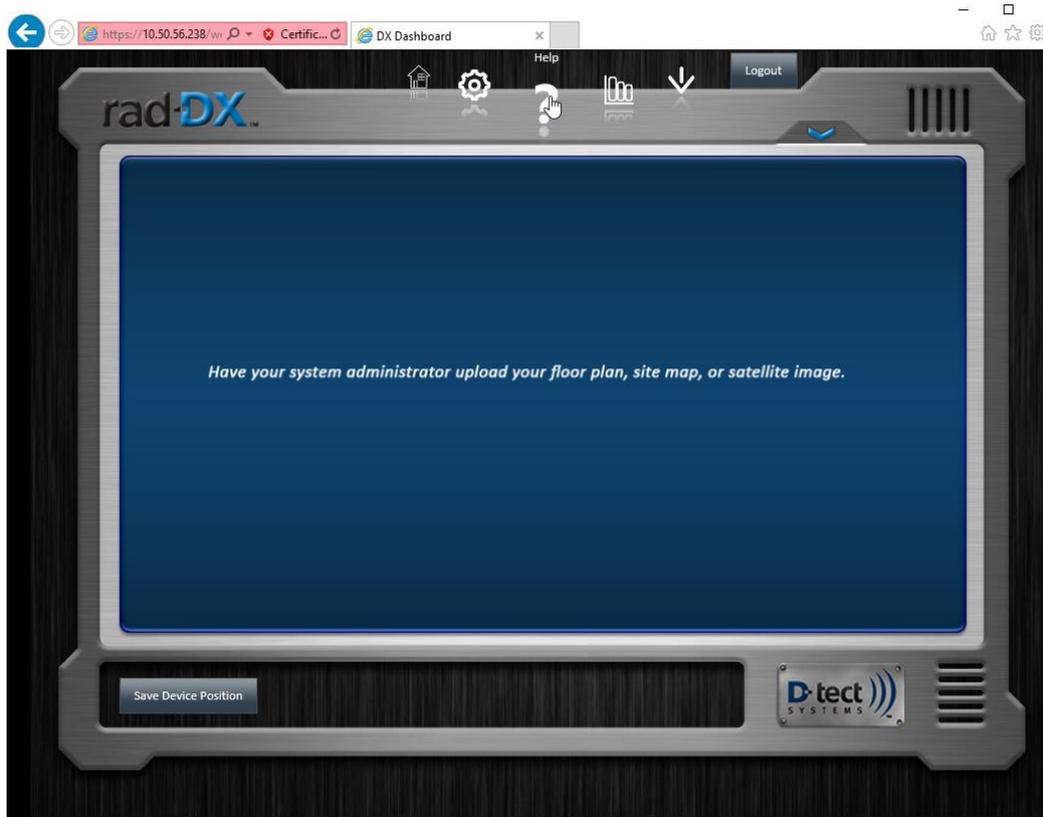


Figure 9: Help section

2. Click the User Manual tab.

3. Click the User Manual button to download a PDF copy of the DX Dashboard User Manual.

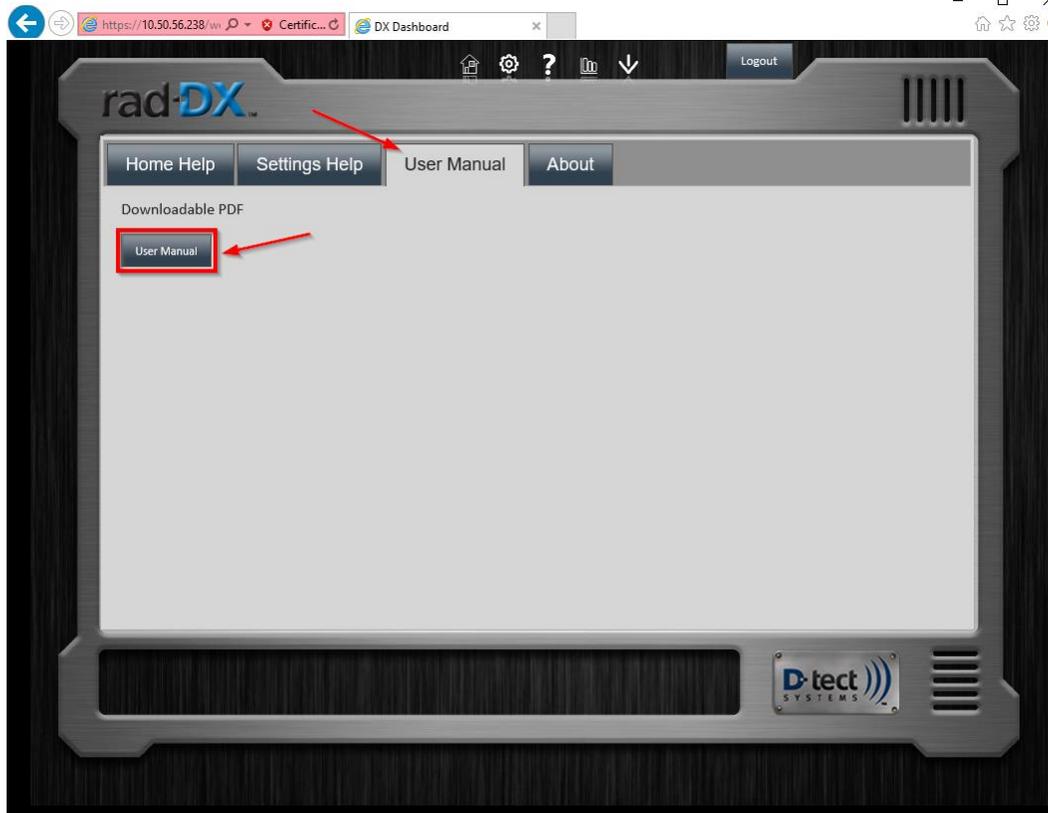


Figure 10: User manual

3.6 Uninstalling DX Assistant

The DX Assistant software including the Dashboard may be removed from the server using the uninstall procedure.

1. Log in to the DX Assistant server console.
2. Type the following command to uninstall DX Assistant:
`sudo apt-get remove --purge dx-assistant`

NOTE: The uninstaller does not modify or remove database entries and device events created by DX Assistant. To delete this data, the `dtect_` databases must be manually removed from MySQL, as well as the `'dxdashboard'` user that is no longer needed.

Appendix A: Copying Files between Linux and Windows

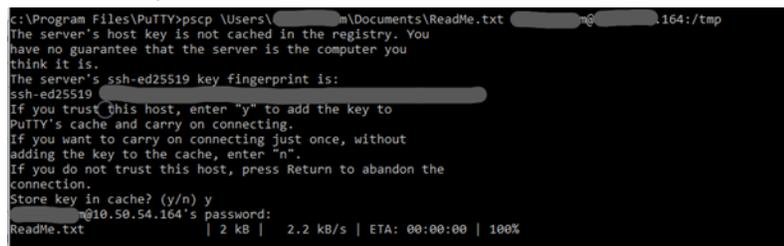
To transfer files from Windows to Linux using SSH, do the following:

On the Linux server receiving the files:

1. Install SSH Server:
 - a. `sudo apt-get update`
 - b. `sudo apt-get install openssh-server`
 - c. `sudo systemctl start sshd`
 - d. Enter user's password

On the Window's machine sending the files:

1. Download PuTTY on the Windows machine where the DX Assistant installer is saved <http://www.chiark.greenend.org.uk/~sgtatham/putty.html>.
2. Open a Windows Command Prompt window
3. Change directories to the directory where PuTTY is installed. For example, if PuTTY is installed in the Program Files directory on the C drive, type:
 - a. `cd c:\Program Files\PuTTY`
 - b. Remove any quotation marks that might be automatically added as you type
4. As shown in Figure 3 below, use the following command to copy the installer to the Linux server:
 - a. `pscp [path of file to be copied] [user@LinuxServerIPaddress:targetDirectory]`
 - b. Example: `pscp \Users\WinUsername\Documents\ReadMe.txt LinuxUsername@10.10.10.10:/tmp`
 - c. Enter "y" to store key in cache
 - d. Enter user's password



```
c:\Program Files\PuTTY>pscp \Users\WinUsername\Documents\ReadMe.txt LinuxUsername@10.10.10.10:/tmp
The server's host key is not cached in the registry. You
have no guarantee that the server is the computer you
think it is.
The server's ssh-ed25519 key fingerprint is:
ssh-ed25519 [redacted]
If you trust this host, enter "y" to add the key to
PuTTY's cache and carry on connecting.
If you want to carry on connecting just once, without
adding the key to the cache, enter "n".
If you do not trust this host, press Return to abandon the
connection.
Store key in cache? (y/n) y
LinuxUsername@10.50.54.104's password:
ReadMe.txt | 2 kB | 2.2 kB/s | ETA: 00:00:00 | 100%
```

Figure 3: Successful PSCP Transfer of file from Windows to Linux

If you have additional questions about using PuTTY's PSCP for transferring files, see the PSCP section in the PuTTY User Manual. It can be accessed from the PuTTY directory in the Start menu.