

LANTRONIX®



xPrintServer™
User Guide

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Disclaimer & Revisions

The information in this guide may change without notice. The manufacturer assumes no responsibility for any errors that may appear in this guide.

Revision History

Date	Rev.	Comments
January 2012	A	Initial Document.

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1: Introduction

The xPrintServer™ is a patent-pending AirPrint® print server which provides wireless printing capabilities for iPad®, iPhone® and other devices with iOS®-enabled AirPrint applications. Simply plug an xPrintServer to a wired network with WIFI local subnet access and all network-connected printers are auto-discovered and made available to any iOS AirPrint-enabled application on your iOS device.

Figure 1-1 xPrintServer



Key Features

- ◆ No additional software is needed on the iOS device
- ◆ Simple configuration
- ◆ Support for an unlimited number of network attached printers

Note: *Print jobs process one at a time regardless of the number of configured printers.*

- ◆ Automatic printer discovery and configuration (for supported printers)
- ◆ Security features
- ◆ External LED status indicator
- ◆ Configuration via browser (HTTP)

Supported iOS Devices

xPrintServer supports all iOS-enabled AirPrint applications. AirPrint is included in all newer generation Apple® devices with iOS 4.2 and later. These include:

- ◆ iOS 4.2 or later
- ◆ iPad and iPad2
- ◆ iPhone (3GS or later)
- ◆ iPod Touch (3rd generation or later)

Supported Printers and Printer Protocols

Note: Supported printers should be directly attached to the network (wired or wirelessly).

The xPrintServer supports printers that support one of the following transport protocols and Page Description Language (PDL):

- ◆ JetDirect (also known as AppSocket)
- ◆ LPD
- ◆ LPR
- ◆ IPP
- ◆ HTTP

The following PDL is supported:

- ◆ PCL 4, 5 and 6
- ◆ Postscript

See <http://www.lantronix.com/it-management/mobile-print-servers/supported-printer-list.html> for the latest list of all supported printers. This list is periodically updated with new printers.

Supported DHCP Configuration

xPrintServer supports DHCP-assigned IP Addresses. The following items are configured via DHCP.

- ◆ IP Address
- ◆ Subnet Mask
- ◆ Default Gateway
- ◆ DNS Server

Supported Browsers

The following browsers are supported:

Table 1-1 Supported Browsers

Browser	Supported Versions
Internet Explorer®	Versions 8 and 9
Firefox®	Version 7
Safari®	Version 5
Chrome®	Version 16

Product Information and IP Address

You will need the **serial number** of your xPrintServer device when setting up your xPrintServer user interface. The serial number can be found on the product information label adhered to your device.

Figure 1-2 Sample Product Information Label



Serial Number

A serial number is a unique, identifying number specific to each hardware device including an xPrintServer, printer or any Apple iOS device.

Figure 1-3 Sample Serial Numbers on Hardware Devices

00-80-A3-8E-00-63 or 00:80:A3:8E:00:63 or 0080A38E0063

IP Address

Every device connected to an IP network must have a unique IP address. The xPrintServer gets a unique IP address from the DHCP server on your network.

2: Installation

This chapter describes how to install your xPrintServer.

Package Contents

Your xPrintServer product package includes the following:

- ◆ One (1) xPrintServer
- ◆ One (1) Quick Start Guide
- ◆ One (1) RJ45 Ethernet Cable (3 ft)
- ◆ One (1) Universal Power Supply

User-Supplied Items

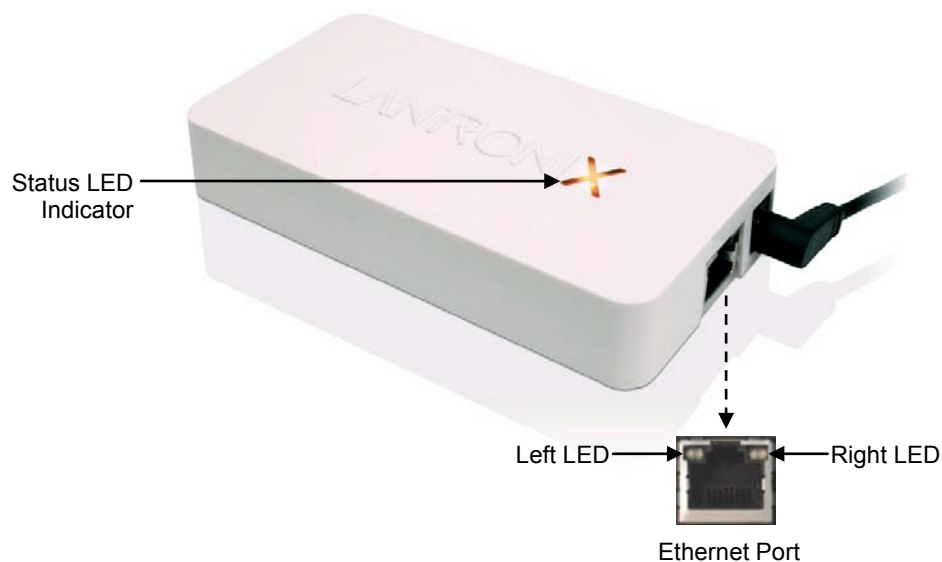
You also need the following items to install and operate your xPrintServer:

- ◆ A working power outlet
- ◆ WIFI Access Point
- ◆ Network Attached Printer (wired or wireless)
- ◆ Your iOS device (e.g., iPad, iPhone) with connection to the network via WIFI

Monitoring LEDs

The LEDs located in two places on the xPrintServer device provide information about device activity and status.

Figure 2-1 xPrintServer LEDs



Ethernet LEDs

There are two LEDs located on the upper left and right corners of the Ethernet socket (see [Figure 2-1](#)). These indicate the status of the connection.

Left LED

- ◆ Green ON, 100Mbps Ethernet Link
- ◆ Green Blinking, 100Mbps Activity
- ◆ Orange ON, 10Mbps Ethernet Link
- ◆ Orange Blinking, 10Mbps Activity
- ◆ OFF, No Ethernet Link

Right LED

- ◆ Always OFF

The Ethernet port can connect to an Ethernet (10Mbps) or Fast Ethernet (100Mbps) network.

Status LED

The Status LED on the xPrintServer device is incorporated into the “X” letter of the Lantronix logo on the top of the device. The behavior of this LED indicates the type of activity occurring in the xPrintServer device. The Status LED color is orange when lit, and specific display patterns indicate the specific type of activity. The LED may display a solid light, display no light, slowly glow on, slowly glow off, or flash on/off.

Table 2-1 Status LED, Top of Device

Orange “X” LED	Description	
Solid	A continuous solid light indicates the power is on or the device is booting.	
OFF	No light indicates the power is off.	
Blinking	Even blinking pattern indicates the device is printing.	
Glow/ Dim (Repeating Pattern)	Pulsating pattern of glowing and dimming light cycle occurring once every three seconds. Indicates the device is booted, idle and waiting for a job.	
Code 1	A repeating pattern of a single flash followed by two seconds of no light indicates the device is obtaining the DHCP address.	Note: Codes 1 through 7 indicate a grouped number of flashes in the Orange “X” LED separated by a two second interval where the light is off. The specific code/number of flashes separated by a two second no-light interval indicates a specific status as
Code 2	A repeating pattern of two flashes followed by two seconds of no light indicates there are no configured printers.	
Code 3	A repeating pattern of three flashes followed by two seconds of no light indicates a factory default reset.	
Code 4	A repeating pattern of four flashes followed by two seconds of no light indicates a <i>successful</i> firmware update.	
Code 5	A repeating pattern of five flashes followed by two seconds of no light indicates a <i>failed</i> firmware	

Orange "X" LED	Description	
	update.	<i>described in the grey cells to the left.</i>
Code 6	A repeating pattern of six flashes followed by two seconds of no light indicates a printing error.	
Code 7	A repeating pattern of seven flashes followed by two seconds of no light indicates printer discovery is in process.	

Installation Steps

With all xPrintServer package contents and the requisite user-supplied items listed above, you may begin installation.

1. Connect the xPrintServer to the network with the Ethernet cable. The xPrintServer can be connected to a router, switch or hub anywhere on your network.
2. Power up the xPrintServer with the supplied power cord.
3. The xPrintServer will auto-discover and auto-provision all printers on your network. The glowing "X" will pulse slowly to show it's ready for printing.
4. Monitor the LEDs on the xPrintServer for activity and status information (See [Monitoring LEDs](#)).

Restoring Factory Defaults

You can reset the xPrintServer to factory default settings. The **Reset** button is on the bottom of the device and is accessible through a hole in the case.

Note: The xPrintServer can also be reset to factory default settings through the user interface (see [Resetting Unit to Factory Defaults](#)).

To reset the unit to factory defaults, perform the following steps:

1. Place the end of a paperclip or similar object into the reset opening (pin-sized hole on the bottom of the device) and press for a minimum of 15 seconds.
2. Remove the paperclip to release the button. This procedure restores factory default settings to the configuration and reboots the unit.

Topology Support

The xPrintServer is hardwired (via standard CAT-5) cabling to a router, switch or hub. The system requires an Access Point (A/P) be also hardwired and connected to the network. The iOS devices associates with the A/P and communicates to the xPrintServer when a print job is ready to be processed. The xPrintServer communicates with network attached printer(s); the printers may either be wired or wirelessly connected to the network.

For the xPrintServer to auto-detect printers on bootup, the xPrintServer and printers must be on the same subnet. After auto-detection has been completed, the xPrintServer can then be relocated to a different subnet (WIFI connected subnet that iOS devices are connected to) assuming that subnet can route to the previous subnet.

The xPrintServer uses Zeroconf to advertise print services to the iOS device(s) and requires either one or both of the following:

- ◆ Both the iOS device and the xPrintServer are on the same subnet.
- ◆ The iOS device and xPrintServer are on different subnets but multicast traffic is communicated between the subnets.

3: Navigation and Printing

This chapter explains how to navigate and use your xPrintServer user interface including directions on how to login and log out, and most importantly, how to print from your iOS device.

Finding the xPrintServer IP Address

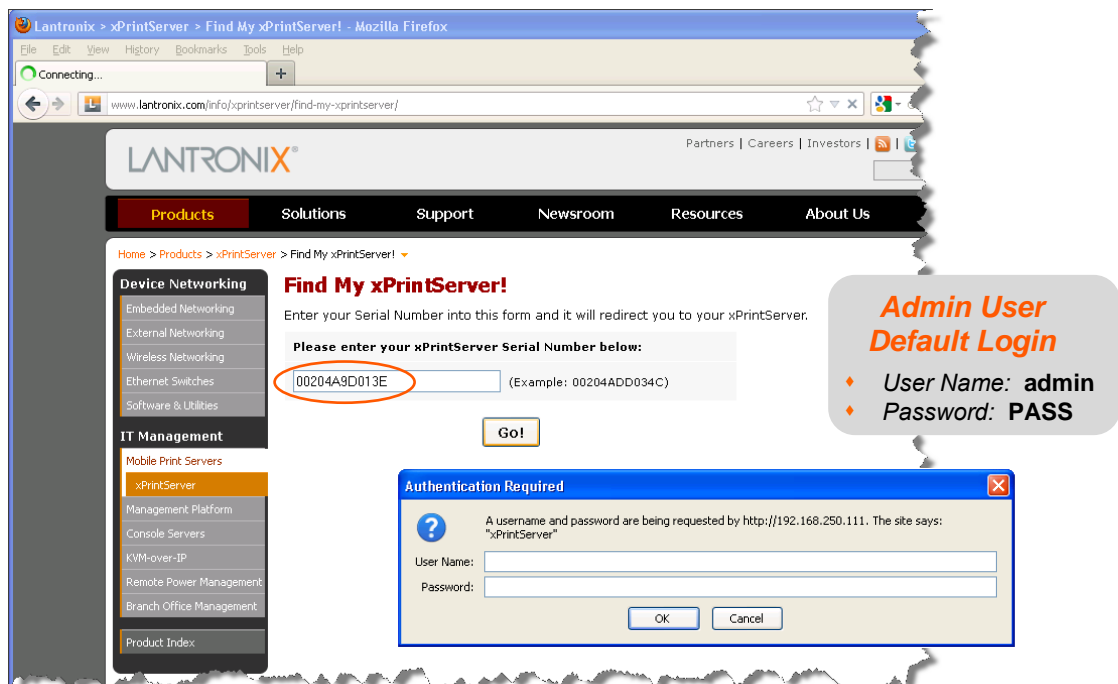
Use these directions to find your device IP address through which you may log into your xPrintServer device. Internet access is required.

Every xPrintServer device has a unique, identifying serial number that can be found on the [product information label](#). As part of the initialization/boot up process, the xPrintServer will automatically register its IP address and associated serial number with the Lantronix Web Services website (<http://www.lantronix.com/findmyxprintserver>) which in turn provides the unique IP address of the xPrintServer device. Users may then use the xPrintServer IP address to log into the user interface for printing management.

Use these directions to find the IP address of a new xPrintServer device.

1. Open an internet web browser. See [Supported Browsers](#).
2. Enter <http://www.lantronix.com/findmyxprintserver> into the web browser address bar.
3. Press **Enter** on the keyboard. You will be prompted for the xPrintServer serial number.
4. Enter the serial number of your xPrintServer. The serial number can be found on the [product information label](#) attached to your xPrintServer packaging. It is an alphanumeric set of 12 characters.
5. Click the **Go!** button. A login prompt will appear.

Figure 3-1 Serial Number



6. Enter the **Admin User Default Login** information.

- ♦ User Name: **admin**
- ♦ Password: **PASS**

Note: Upon initial login, the Admin user should modify the default "PASS" password as soon as possible for security reasons. See [Changing Passwords](#).

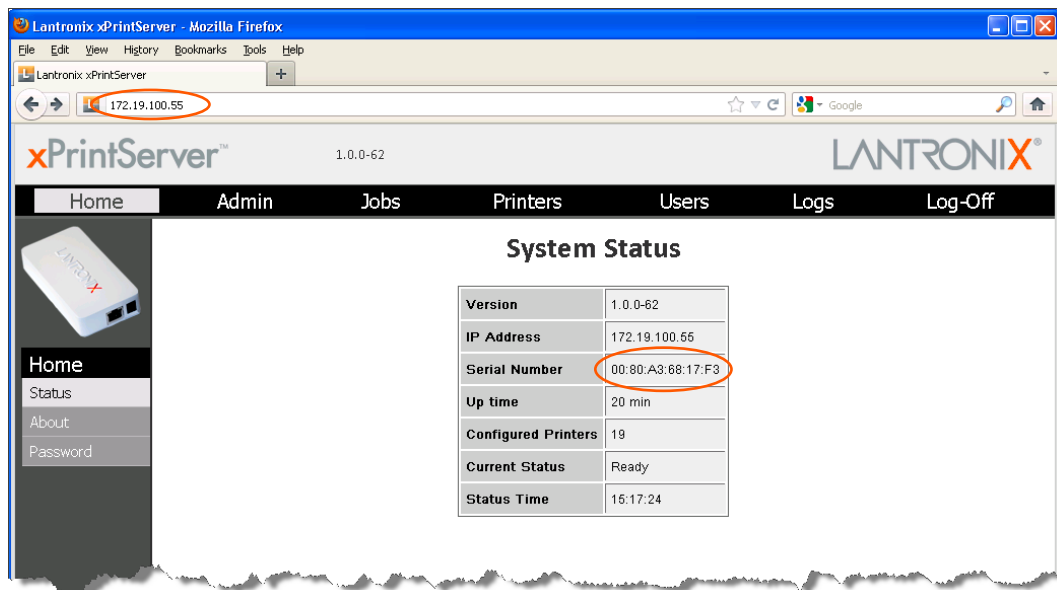
You will be redirected to your xPrintServer device URL where you will see the [System Status on the Home Page](#).

7. Take note of the IP address of your xPrintServer device for all future logins.

System Status on the Home Page

You will see your xPrintServer **System Status** information on the **Home** page whenever you log into your xPrintServer URL.

Figure 3-2 IP System Status Information on the Home Page



The System Status information includes your **IP address** along with other important system status information:

- ♦ **Version**
The current version of your firmware.
- ♦ **IP Address**
The unique IP address associated with your xPrintServer device. This IP address may be used to directly pull up the user interface of a connected and live xPrintServer.
- ♦ **Serial Number**
The unique serial number associated with the xPrintServer device which should match what is on the [product information label](#).
- ♦ **Up time**
The amount of time the xPrintServer has been operational since powered on or last restarted.
- ♦ **Configured Printers**
The number of total discovered printers available for use on iOS devices.

- ♦ **Current Status**
The current status of the xPrintServer.
- ♦ **Status Time**
The time at which the system status information you see on the screen was captured.

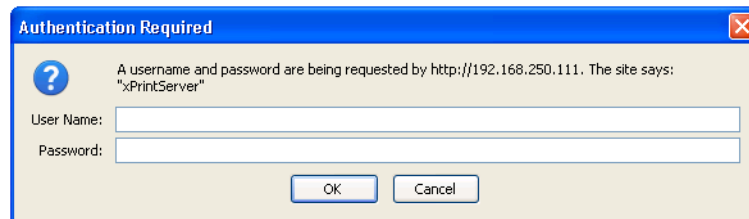
Logging In

Once the IP address of the xPrintServer device is known (see [Finding the xPrintServer IP Address and Initial Login](#)), you may follow these directions to login to xPrintServer at any time.

1. Open an internet web browser.
2. Enter the IP address of your xPrintServer device.

Note: If Bonjour is installed on your computer or Mac, you may also access the user interface by entering: `xPrintServer.local`

Figure 3-3 Login Prompt



3. Enter your login information when prompted.
 - ♦ User Name
 - ♦ Password

You are logged into the xPrintServer user interface when you see [System Status on the Home Page](#).

Logging Off

1. Click the **Log-Off** tab located at the top far right of any xPrintServer user interface page. You will be prompted to close out of your browser window.
2. Close out of your browser to complete logging off.

Navigation

Basic navigation features for the xPrintServer user interface are outlined in this section.

Figure 3-4 Navigating the xPrintServer User Interface

The **firmware version** is listed on the top of every web page

Tabs allow you to move between xPrintServer pages and to **Log-Off**

Double-click to sort table information by **column heading**

Links available for each page are listed here

Search

When a specific printer on the **Printers** page is clicked, details about this printer will appear on the bottom of the screen

Clicking the **gear** button beside a particular table list item will pull up the **popup command menu** associated with that item.

Go to the first page

Go backward one page

Go to the next 1,000 entries

Go forward one page

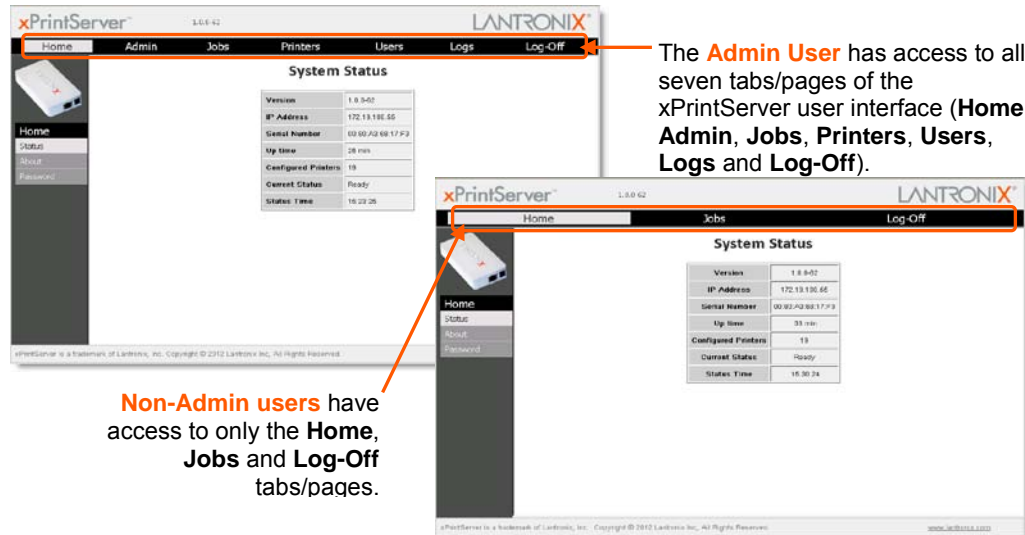
Description	Location	Make/Model	Status
EPSON Artisan 810 - xPrintServer	Auto Discovered	Epson Artisan 810 - C	Idle - "Ready to print."
Epson Stylus NX620 - xPrintServer	Auto Discovered	Epson Stylus NX515 -	Processing - "no profiles in PPD for qualific
hp color LaserJet 4610 - xPrintServer	Auto Discovered	HP Color LaserJet 461	Processing
vito-HP Color LaserJet 4700	Auto Discovered	HP Color LaserJet 4700	Processing
HP Color LaserJet 4700 - xPrintServer	Auto Discovered	HP Color LaserJet 4700	Processing
HP Color LaserJet CP2025n - xPrintServer	Auto Discovered	HP Color LaserJet cp2025n	Processing
HP LaserJet P4014 - xPrintServer	Auto Discovered	HP LaserJet p4014, hj	Processing
HP LaserJet P4014 - xPrintServer	Auto Discovered	HP LaserJet p4014, hj	Processing
HP LaserJet 8100 Series - xPrintServer	Auto Discovered	HP LaserJet 8100 Ser	Processing
HP LaserJet P4014 [81807A] - xPrintServe	Auto Discovered	HP LaserJet p4014, hj	Processing


As illustrated above, basic navigation features for the xPrintServer user interface include the following:

- ◆ **Tabs/Pages**

All the functionality of your xPrintServer user interface is divided between the **Home**, **Admin**, **Jobs**, **Printers**, **Users**, **Logs** and **Log-Off** tabs located across the top of the user interface. Only the Admin user has full access to the functionality of all tabs/pages within the xPrintServer user interface. Non-Admin users only have access to the **Home**, **Jobs** and **Log-Off** tabs/pages. Access these pages by clicking the same-named tab along the top of the screen. For instance, click the **Jobs** tab to get to the **Jobs** page or click **Home** to get to the **Home** page.

Figure 3-5 Tabs/Web Pages Available for the Admin User and Non-Admin Users



- ◆ **Links**
Click to select from the links/commands available for each tab/page. All links available for a particular web page are displayed along the left side. For instance, links to **Active, Completed** and **All** jobs are available on the left side of the **Jobs** page.
- ◆ **Search**
A **Search** field is available for the **Jobs, Printers** and **Users** tab/pages. Directly typing into the Search field will automatically update the displayed list of jobs, printers or users. The contents of the Search field can be edited repeatedly or even deleted and the Jobs/Printers/Users list will adjust automatically. Deleting all contents of the **Search** field will cause the results to show everything available and no longer display filtered results.
- ◆ **Button**
This button may be found beside all items listed on the **Jobs** and **Printers** pages. Click the  button beside a particular print job or printer on these pages to pull up a popup command menu with commands that are available for that item.
- ◆ **Log-Off Tab**
A **Log-Off** tab located at the far upper right of every xPrintServer user interface page allows you to logout easily.

Printing

This section explains how to print from your iOS device (e.g., iPad, iPod). Be sure to have completed the following before attempting to print:

- ◆ Installation of the xPrintServer device to an internet-connected network system with a Mac or pc.
- ◆ Physical installation and configuration of at least one printer to the network system discovered and provisioned through the xPrintServer user interface.

Refer to [Chapter 4: Configuration](#) for more involved printer configuration option information.

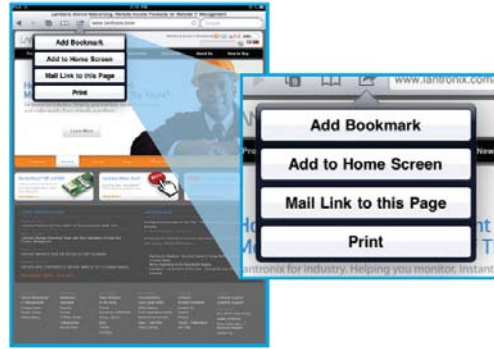
Printing from an iOS Device

Use these steps to print from your iPad, iPhone or other iOS device.

1. Open web page, email, photo, etc. you wish to print and choose the icon to open the native print menu:



Figure 3-6 Sample View of Native Print Menu



Note: A list of available commands will appear on the native print menu and will differ in appearance depending on the type of Apple device.

2. Click the **Print** option on the screen of your iOS device. **Printer Options** will appear on your iOS device.
3. Click **Select Printer**. A list of configured printers will appear on your iOS device.
4. Click the name of the printer you wish to print this file to. You will be returned to **Printer Options**.
5. Click the + or – buttons to modify the number of copies of this file you wish to have printed.
6. Click **Print**. Your print job will be sent to the selected printer.



Note: Printer Options appear differently on different iOS devices.



Figure 3-7
Sample View of
Printer Options

4: Configuration

This chapter describes how to configure your xPrintServer using the xPrintServer user interface.

Admin user: the default and permanent master user login for the xPrintServer. The Admin user has complete access to the xPrintServer user interface functionality including user, printer and job management and configuration capabilities as compared to non-Admin users who are able to change only their own password and have access to only their own print jobs and basic xPrintServer information.

Table 4-1 Comparing Admin and Non-Admin User Privileges

Non-Admin User Privileges	Admin User Privileges
Access to functionality in the Home and Jobs tab/pages in the xPrintServer user interface. <ul style="list-style-type: none">♦ Change own user password.♦ View and modify own print jobs (not the print jobs of other users).♦ View basic information about the xPrintServer system status.	Access to Home, Admin, Jobs, Printers, Users and Logs tab pages which includes all the functionality available through the xPrintServer user interface. <ul style="list-style-type: none">♦ Change all user passwords.♦ View and manage information about all print jobs, printers and user logins.♦ Ability to update firmware, reset device to default settings, add/delete printers and users, manage printer access, modify time zone, restart the device, view and send diagnostic information, update the name of the xPrintServer unit, and monitor logs.

User Administration

The Admin user is able to create new users, delete users, specify user access to particular printers and update user passwords. The Admin user may also utilize the [Search](#) feature as necessary to find a particular user. Non-Admin users may only modify the password of their created account.

Changing Passwords

Directions for changing user passwords are provided in this section. All users may change their own password and the Admin user has the wider privilege of being able to [change all user passwords](#). Password changes are effective immediately.

To change your password:

1. Login to the xPrintServer user interface (see [Logging In](#)).
2. Click the **Password** link on the left side of the **Home** page. The **Change Password** page will appear displaying the **User** for which the password change is being made.
3. Complete the following fields:
 - ♦ Current Password
 - ♦ New Password
 - ♦ Re-enter new Password
4. Click **Change Password**.

Note: Passwords are case-sensitive and may include up to 32 characters. All printable characters maybe used with the exception of single and double quotation marks such as: ' or ".

5. Click **OK** in the confirmation popup that appears. Your password is changed.

Note: You will be asked to login again if you attempt to navigate to a different user interface page.

To change a non-Admin user password as the Admin:

1. Login to the xPrintServer user interface as Admin (see [Logging In](#)).
2. Click the **Users** tab to access the **Users** page. All users are listed here.
3. Utilize [Search](#) as necessary to find a particular user.
4. Click **Password** button to the right of the **User ID** to be changed.
5. Enter the new password into both fields:

- ♦ Password
- ♦ Re-enter Password

Note: Passwords are case-sensitive and may include up to 32 characters. All printable characters maybe used with the exception of single and double quotation marks such as: ' or ".

6. Click **Change Password**.
7. Click **OK** in the confirmation popup that appears. User password is changed.

Note: If the Admin user password is changed, you will be asked to login again if you attempt to navigate to a different user interface page.

Creating a New User

The Admin user can use these steps to create new users.

1. Login to the xPrintServer user interface (see [Logging In](#)).
2. Click the **Users** tab to access the **Users** page. All users are listed here.
3. Click **Add User**.

Note: The **Full Name** of a new user is case sensitive and may include up to 32 alpha and/or numeric characters.

4. Enter the following fields for the new user:

- ♦ User ID
- ♦ Full Name
- ♦ Password
- ♦ Re-enter Password

Note: When establishing a new user, please note that the iOS device browser capitalizes the first character of the User ID. Make sure the User ID is correct prior to submitting your request to add user.

5. Click **Add User** (or **Cancel** if you want to cancel this action). The new user will immediately display on the **Users** page.

Deleting a User


The Admin user can use these steps to delete users.

1. Login to the xPrintServer user interface (see [Logging In](#)).
2. Click the **Users** tab to access the **Users** page. All users are listed here.

3. Utilize **Search** as necessary to find a particular user.
4. Click the **Delete** button to the right of the User ID to be deleted.
5. Click **Yes** in the confirmation popup that appears (or **No** if you want to cancel this action). The deleted user will immediately be removed from the list of users on the **Users** page.

Changing User Access to a Printer

The Admin user can use these steps to change user access to a specific printer.

1. Login to the xPrintServer user interface (see [Logging In](#)).
2. Click the **Printers** tab to access the **Printers** page. All printers configured to the xPrintServer are listed here.
3. Click the **Access** link to the left of the Printers page. A list of **Allowed Users** for each configured printer on the network will be listed here.
4. Utilize **Search** as necessary to find a particular printer.
5. Click the  button to the right of the specific printer with user access to be modified.
6. To allow all users access to this printer, check the **Allow access to all users** checkbox at the top of the screen. Individual **User ID** checkboxes that may have specified user access will disappear.
7. To allow specific users access to this printer, uncheck the **Allow access to all users** checkbox at the top of the screen if not already unchecked. Individual **User ID** checkboxes will appear to allow you to select users allowed access to this printer.
 - ♦ Check the **User ID** checkbox of users you wish to grant printer access for this printer.
 - ♦ Uncheck the **User ID** checkbox of users you do not wish to grant printer access for this printer.
8. Click **Save** (or **Cancel** if you want to cancel this action). The list of printers will re-appear with the **Allowed Users** column immediately updated to show your latest modification.

Discovering New Printers

Note: Discovery in the xPrintServer from a PC requires Bonjour®, which may be installed via iTunes® or Safari or Bonjour Print Helper® at www.apple.com.

All printers are typically added and configured to the xPrintServer via Discovery where the xPrintServer discovers and provisions all network-connected printers as AirPrint printers.

- ♦ **Auto Discovery:** Each time the xPrintServer starts up, the Discovery protocol runs one time automatically.
- ♦ **Discovery:** The Admin user may activate Discovery at will through the xPrintServer user interface any time after the xPrintServer is up and running.

Note: Only printers listed among the Lantronix xPrintServer published list of printers will be auto-provisioned after Discovery (see <http://www.lantronix.com/it-management/mobile-print-servers/supported-printer-list.html>). Configuration options to manually add a printer and modify advanced printer settings are available under **Printers > Advanced**. Use these advanced options only if instructed to do so by Lantronix Technical Support.

Configuring Printers through Discovery

The Admin user may utilize the instructions to discover and provision network-connected printers installed since the xPrintServer last started up or printers on other networks if their IP addresses have been added (see [Adding a Printer IP Address](#)).

1. Login to the xPrintServer user interface (see [Logging In](#)) as the Admin user.
2. Click the **Printer** tab to access the **Printer** page.
 - ♦ A list of all currently configured printers will be listed on this page.
 - ♦ All printers which were discovered and configured at the xPrintServer startup will also be listed here with “Auto Discovered” listed under the **Location** column.

Figure 4-1 Printers Auto-Discovered upon xPrintServer Startup

Description	Location	Make/Model	Status
Canon MX410 series 192.168.0.103 - xPrin	Auto Discovered	Canon PIXMA MX410	Idle
Canon MX410 series 192.168.0.100 - xPrin	Auto Discovered	Canon PIXMA MX410	Idle

3. Click on any printer to retrieve additional information on that printer. In [Figure 4-2](#) below, the second printer in the list was clicked and the printer details in the grey fields below appeared at the bottom of the list of printers.

Figure 4-2 Printer Information

The screenshot shows the xPrintServer web interface. The top navigation bar includes Home, Admin, Jobs, Printers (selected), Users, Logs, and Log-Off. The main content area displays a table of printers. The second printer in the list is selected, and its details are shown in a grey field below the table. Red arrows point from labels on the left and right to specific fields in the printer details.

Description	Location	Make/Model	Status
Canon MX410 series 192.168.0.103 - xPrin	Auto Discovered	Canon PIXMA MX410	Idle
Canon MX410 series 192.168.0.100 - xPrin	Auto Discovered	Canon PIXMA MX410	Idle
TOSHIBA e-STUDIO355 - xPrintServer	Auto Discovered	TOSHIBA e-STUDIO3	Idle
TOSHIBA e-STUDIO355 - xPrintServer	Auto Discovered	TOSHIBA e-STUDIO3	Idle
TOSHIBA e-STUDIO355 - xPrintServer	Auto Discovered	TOSHIBA e-STUDIO3	Idle

Printer Details:

- Description: Canon MX410 series 192.168.0.100 - xPrintServer
- Name: Canon PIXMA MX410 - CUPS+Gutenprint v5.2.7
- IP Address: bjnp://192.168.0.100:8611
- Location: Auto Discovered
- Status: Idle

4. Click the **Discovery** link to the left of the page. A **Printer Auto Discovery Report** will appear showing the date/time the xPrintServer automatically discovered, the number of configured printers (at the last startup of the device) and associated downloaded drivers.

Figure 4-3 Sample Printer Auto Discovery Report

Re-run Discovery

- Printer Auto Discovery Report
 - Date/Time run: Tue Jan 03 14:09:57 PST 2012
 - Configured Printers (Before Discovery): 2
 - SNMP
 - Loaded Drivers : 4486
 - Printers Detected : 2
 - Detected Printers

5. Click the **Re-run Discovery** button within the **Printer Auto Discovery Report** to manually check for any new printers that have since been added.
6. Expand the **SNMP** field to see configuration information about the discovered printer(s). An example of what you may see in the SNMP field:


```
SNMP: network bjpg://192.168.250.115:8611 "Canon MX410 series"
"Canon MX410 series 192.168.250.115"
"MFG:Canon;CMD:BJL,BJRaster3,BSCCe,NCCe,IVEC,IVECPLI;SOJ:BJNP2,BJNPe
;MDL:MX410 series;CLS:PRINTER;DES:Canon MX410
series;VER:1.020;STA:10;FSI:04;HRI:PAM;MSI:DAT,E3,HASF;PDR:3;PSE:LDU
B48061;"
```
7. Expand the **Detected Printers** field, and further expand additional available subcategories (indicated with a **+** icon to the left) to see a list of discovered printers and the status of the provisioning results:

Figure 4-4 Expanding Detected Printers Information

The screenshot shows the xPrintServer web interface. The top navigation bar includes Home, Admin, Jobs, Printers, Users, Logs, and Log-Off. The main content area is titled "Printer Discovery" and contains a "Re-run Discovery" button. Below this is the "Printer Auto Discovery Report" section, which is expanded to show the "SNMP" field. The SNMP field contains two entries: one for a Canon MX410 series printer and one for an Epson Stylus NX620 printer. The "Detected Printers" section shows two entries, both marked as "Already Configured".

Note: If you expand the **Printer Auto Discovery Report**, you may need to use the left-right and up-down scroll bar to see the entire contents of your report.

Setting Real Time Clock

Real Time Clock is a built-in function in xPrintServer which time-stamps printing-related activities such as identifying the time of log activities or print jobs. Real Time Clock is automatically on and syncs time with pool.ntp.org (Network Time Protocol) and is set it at GMT -800 PST (Pacific Standard Time).

To modify the Time-zone

1. Login to the xPrintServer user interface (see [Logging In](#)) as the Admin user.
2. Click the **Admin** tab to access the **Admin** page.
3. Click the **Time-zone** link on the left side of the page to access the **Select Time-zone** page.


4. Select a new time zone from the **Select Time-zone** drop-down menu.
5. Click the **Change Time-zone** button.
6. Click **Yes** in the confirmation popup that appears.
7. Wait 35 seconds. When the time zone is changed, the xPrintServer device will automatically restart, bringing you back to [System Status on the Home Page](#). The unit is now set to your new chosen time zone.

Admin Printer Configuration Options

Configuration options available on a specific printer can be accessed and configured through the xPrintServer user interface (i.e., configuring the number of copies, duplexing and page range). The Admin user may utilize the [Search](#) feature as necessary to find a particular, previously discovered printer and use these directions to configure it.


Printing a Test Page

Use these directions to print a test page for a selected printer.

1. Login to the xPrintServer user interface (see [Logging In](#)) as Admin.
2. Click the **Printers** tab to access the **Printers** page.
3. Click the **List** link on the left side of the **Printers** page. All configured printers are listed here.
4. Utilize [Search](#) as necessary to find a particular printer.
5. Click the  button beside the printer through which you want to print a test page.
6. Click **Print Test Page** in the popup command menu that appears (or **Cancel** within the same menu if you want to back out of it) and a test page print job will be sent to the selected printer..
7. Click **OK** in the confirmation popup providing a print job ID.


Purging Job History

The Admin user may use this selection to purge all printed job history information. By default, xPrintServer otherwise maintains a list of the last 50 printed jobs.

1. Login to the xPrintServer user interface (see [Logging In](#)) as Admin.
2. Click the **Printers** tab to access the **Printers** page.
3. Click the **List** link on the left side of the **Printers** page. All configured printers are listed here.
4. Utilize [Search](#) as necessary to find a particular printer.
5. Click the  button beside the printer with the job history you want to purge.
6. Click **Purge Job History** in the popup command menu that appears (or **Cancel** within the same menu if you want to back out of it).
7. Click **Yes** in the confirmation popup to continue (or **No** to cancel action) and all print jobs not yet printed will be purged from the selected printer.
8. Click **OK** in the second confirmation popup.


Deleting a Printer

The Admin user may use this selection to delete a printer that is currently configured. Printers may later be added and configured according to the directions in the [Adding, Finding and Discovering Printers](#) section.

1. Login to the xPrintServer user interface (see [Logging In](#)) as Admin.
2. Click the **Printers** tab to access the **Printers** page.
3. Click the **List** link on the left side of the **Printers** page. All configured printers are listed here.
4. Utilize [Search](#) as necessary to find a particular printer.
5. Click the  button beside the printer you want to delete.
6. Click **Delete Printer** in the popup command menu that appears (or **Cancel** within the same menu if you want to back out of it).
7. Click **Yes** in the confirmation popup to continue (or **No** to cancel action) and the selected printer will be deleted.
8. Click **OK** in the second confirmation popup.


Changing Printer Description

The Admin user may use this selection to change the description of a configured printer as it will display to all users.

1. Login to the xPrintServer user interface (see [Logging In](#)) as Admin.
2. Click the **Printers** tab to access the **Printers** page.
3. Click the **List** link on the left side of the **Printers** page. All configured printers are listed here.
4. Utilize [Search](#) as necessary to find a particular printer.
5. Click the  button beside the printer for which you want to change description.
6. Click **Change Description** in the popup command menu that appears (or **Cancel** within the same menu if you want to back out of it).
7. Type the new description for the printer in the field which appears.
8. Click **Save**. After a few seconds, the printer description will be changed.

Changing Printer Location


The Admin user may use this selection to change the location of a configured printer. This command is useful for updating the location of printers initially identified as “Auto Discovery”.

1. Login to the xPrintServer user interface (see [Logging In](#)) as Admin.
2. Click the **Printers** tab to access the **Printers** page.
3. Click the **List** link on the left side of the **Printers** page. All configured printers are listed here.
4. Utilize [Search](#) as necessary to find a particular printer.
5. Click the  button beside the printer with location to be changed.

6. Click **Change Location** in the popup command menu that appears (or **Cancel** within the same menu if you want to back out of it).
7. Type the new description for the printer in the field which appears.
8. Click **Save**. After a few seconds, the printer name will be changed.


Sharing a Printer

The Admin user may use this selection to make an xPrintServer-provisioned printer visible and available to iPad, iPhone and other iOS devices.

1. Login to the xPrintServer user interface (see [Logging In](#)) as Admin.
2. Click the **Printers** tab to access the **Printers** page.
3. Click the **List** link on the left side of the **Printers** page. All configured printers are listed here.
4. Utilize [Search](#) as necessary to find a particular printer.
5. Click the  button beside the printer to be shared.
6. Click **Share Printer** in the popup command menu that appears (or **Cancel** within the same menu if you want to back out of it).
7. Click **Yes** in the confirmation popup to continue (or **No** to cancel action) and the selected printer becomes visible and available on iOS devices.
8. Click **OK** in the second confirmation popup.

Hiding a Printer

The Admin user may use this selection to hide an xPrintServer-provisioned printer so that the it is no longer visible or available on iPad, iPhone and other iOS devices.

1. Login to the xPrintServer user interface (see [Logging In](#)) as Admin.
2. Click the **Printers** tab to access the **Printers** page.
3. Click the **List** link on the left side of the **Printers** page. All configured printers are listed here.
4. Utilize [Search](#) as necessary to find a particular printer.
5. Click the  button beside the printer you wish to hide.
6. Click **Hide Printer** in the popup command menu that appears (or **Cancel** within the same menu if you want to back out of it).
7. Click **Yes** in the confirmation popup to continue (or **No** to cancel action) and the selected printer becomes invisible and no longer available on iOS devices.
8. Click **OK** in the second confirmation popup.

Updating Printer IP Addresses


The Admin user may use this feature to update printer IP addresses on the xPrintServer.

1. Login to the xPrintServer user interface (see [Logging In](#)) as Admin.
2. Click the **Printers** tab to access the **Printers** page.

3. Click the **Printer Address** link on the left side of the **Printers** page. A list of existing Printer IP Addresses will appear in the Printer IP Addresses page.
4. Click into the IP Address Page.
5. Update the Printer IP Addresses by adding a new printer IP address, modifying an existing IP address or deleting an address. To add more than one printer IP address, enter one address per line (separated by a paragraph break using the **Enter** key on the keyboard).
6. Click **Save** to save added or modified IP address(es).
7. Click **OK** in the confirmation popup.

Viewing and Cancelling Print Jobs on the xPrintServer User Interface

The Admin user can view and/or cancel all print jobs but non-Admin users may only view and/or cancel their own print jobs. Use these steps to view and/or cancel a specific submitted print job.

1. Login to the xPrintServer user interface (see [Logging In](#)).
2. Click the **Jobs** tab to access the **Jobs** page. All **Active Jobs** are listed here. The information on this page is refreshed every 15 seconds.
3. Click the desired link to left to view a desired job category:
 - ♦ **Active:** to show all jobs that are currently active (default view)
 - ♦ **Completed:** to show all jobs that have been completed
 - ♦ **All:** to show all jobs, active or completed.
4. Utilize **Search** as necessary to find a particular print job.
5. Click the  button to the right of a particular print job to modify. A popup will appear with the option to cancel this print job.
6. Click the **Cancel job** command to cancel the print job (or **Cancel Action** to exit the command menu without cancelling the print job). A confirmation popup will appear.
7. Click **OK** to confirm action. The confirmed action will immediately take place.

Renaming xPrintServer Device

As part of the initialization process, the xPrintServer registers a Lantronix-specific Bonjour Service Type (`lantronix-ips._tcp` which uses the default device name of `xPrintServer`). As with any Bonjour discovery application, you can find your xPrintServer or any Bonjour-supported web browser using the URL: `http://<devicename>.local`, substituting the `<devicename>` with the name of the device. Therefore, you would search for your xPrintServer device with `http://xprintserver.local` by default. If you change the default device name, the xPrintServer URL used to access the xPrintServer web interface would also be modified. For instance, if the default name `xprintserver` is renamed to `printer1`, the browser URL address would be `http://printer1.local`.

The directions below can be used to rename an xPrintServer device to whatever name the Admin user designates. This is a useful function in situations where there are multiple xPrintServers on a network as each device should have a unique name. Changing the xPrintServer name requires

a restart to use the new xPrintServer name. Login to the xPrintServer user interface (see [Logging In](#)) as the Admin user.

1. Click the **Admin** tab to access the **Admin** page.
2. Click the **Name** link on the left side of the page to access the **Change xPrintServer Name** page. The **Current Name** of your device will display (xPrintServer).
3. Type in the **New Name** (an alpha and/or numeric combination that may include the - and _ characters).
4. Click the **Change Name** button to submit the new name.
5. Click **Yes** in the confirmation popup to continue (or **No** to cancel action) renaming your xPrintServer device.
6. Wait 35 seconds. When the renaming of your unit is complete, the xPrintServer device will automatically restart, bringing you back to the **Change xPrintServer Name** page where your new device name will display.

Resetting the xPrintServer to Factory Defaults

The Admin user may use these directions to reset the xPrintServer to factory default settings through the xPrintServer user interface. A device restart automatically follows a reset.

Note: The xPrintServer can also be reset to factory default settings through a pin hole on the bottom side of the device (see [Restoring Factory Defaults](#)).

1. Login to the xPrintServer user interface (see [Logging In](#)) as the Admin user.
2. Click the **Admin** tab to access the **Admin** page.
3. Click the **Default** link on the left side of the page to access the **Reset Unit to Factory Defaults** page.
4. Click the **Reset to Factory Defaults** button.
5. Click **Yes** in the confirmation popup that appears (or **No** to cancel this action) to be brought to the **Restart Unit** page. The unit must be restarted in order to complete resetting to factory defaults.
6. Click **Restart Unit**.
7. Click **Yes** in the confirmation popup that appears (or **No** to cancel this action) to restart the unit.
8. Wait 35 seconds. When the resetting to default is complete and the device restarted, you will be brought back to [System Status on the Home Page](#). Authentication ([Logging In](#)) will be required to access the xPrintServer user interface.

Restarting the xPrintServer

The Admin user may use these directions to restart the xPrintServer device through the xPrintServer user interface and without changing any settings.

1. Login to the xPrintServer user interface (see [Logging In](#)) as the Admin user.
2. Click the **Admin** tab to access the **Admin** page.

3. Click the **Restart** link on the left side of the page to access the **Restart Unit** page.
4. Click the **Restart Unit** button.
5. Click **Yes** in the confirmation popup that appears (or **No** to cancel this action).
6. Wait 35 seconds while the unit restarts. The xPrintServer device will restart, bringing you back to [System Status on the Home Page](#). Authentication ([Logging In](#)) will be required to access the xPrintServer user interface.

Viewing Logs

The Admin user may use these directions to view logs. xPrintServer user interface provides logs for all diagnostic and access messages.

1. Login to the xPrintServer user interface (see [Logging In](#)) as the Admin user.
2. Click the **Logs** tab to access the **Logs** page. A list of all **Diagnostic** logs appear by default.
3. Click the **Access** link to the left to view only access logs.
4. Click the **Diagnostic** link to the left to view only diagnostic logs.

Note: *The number of logs on the bottom of the page will update each time the **Diagnostic** or **Access** link on the left is clicked.*

5: Updating Firmware

Note: Internet access is required for firmware updates.

This chapter provides directions for updating firmware, which may be necessary from time to time. Only the Admin user may perform a firmware update through the xPrintServer user interface.

1. Login to the xPrintServer user interface (see [Logging In](#)).
2. Click the **Admin** tab to access the **Admin** page.
3. Click the **Firmware** link on the left side of the page. The firmware you are currently running will display.
4. Click the **Check for Firmware Update** button to check if a firmware update is available at this time. After a few seconds, you will receive one of two messages:
 - ♦ “Firmware update is available” indicating you may proceed to step 5.
 - ♦ “You are running the latest version of the firmware” indicating no firmware update is necessary at this time.
5. Click **Upgrade Firmware**.
6. Click **Yes** in the confirmation popup that appears. Wait a few minutes while firmware upgrades. When the upgrade is complete, the xPrintServer device will automatically restart, bringing you back to [System Status on the Home Page](#). The list of discovered printers, created users and other custom configuration settings remain unchanged across firmware updates.

6: Technical Specifications

Basic device information is provided in this chapter.

Table 7-1 Technical Specifications

Category	Description
Power Input	90-264 VAC on barrel connector (5V power supply) Efficiency: 87% Normal Power Usage: <1 Watt
Network Interface	1 RJ45 10Base-T/100Base-TX Ethernet port
Dimensions	11.43 x 6.02 x 2.16 cm (4.5 x 2.37 x .85 in)
Weight	19g (.4 lbs)
Temperature	Operating range: 0° to 55°C Storage range: -40° to 70°C
Relative Humidity	Operating 0% to 90% non-condensing
Case	Washable, white plastic case.
Protocols Supported	SNMP JetDirect (AppSocket) LPD LPR IPP
Management	HTTP (HTML/browser-based)
System Software	AirPrint Zeroconf Microsoft Internet Explorer, Version 8 and 9 Firefox Version 7 Safari Version 5 Chrome Version 16
LEDs	(1) Status LED (2) Ethernet LEDs

A: Technical Support

This chapter provides directions and contact information for getting live technical support for your xPrintServer device. The xPrintServer user interface provides an easy way for you to directly send helpful diagnostic information to Lantronix. Calling Technical Support after they have received this information will help them better and more quickly assist you.

Diagnostic Support

The Admin user may follow the directions below to send diagnostic support information about your xPrintServer device to the Lantronix Technical Support before calling for assistance.

1. Login to the xPrintServer user interface (see [Logging In](#)).
2. Click the **Admin** tab to access the **Admin** page.
3. Click the **Diagnostic** link on the left side of the page.
4. Click **Send Diagnostic Information**. Wait a few moments while diagnostic information is sent to Lantronix Technical support.
5. Click **OK** in the confirmation popup that appears. Diagnostic support information is sent.

Contact Information

Technical Support U.S.

Phone: (800) 422-7044

Please check our online knowledge base or send a question to Technical Support at <http://www.lantronix.com/support>.

Technical Support Europe, Middle East, Africa

Phone: (33) 13-930-4172

Email: eu_techsupp@lantronix.com or eu_support@lantronix.com

Firmware downloads, FAQs, and the most up-to-date documentation are available at <http://www.lantronix.com/support>

When you report a problem, please provide the following information:

- ♦ Your name, and your company name, address, and phone number
- ♦ Lantronix model number
- ♦ Lantronix serial number/MAC address
- ♦ Firmware version (on the first screen shown when you Telnet to the device and type **show**)
- ♦ Description of the problem
- ♦ Status of the unit when the problem occurred (please try to include information on user and network activity at the time of the problem)

B: Troubleshooting

Some of the errors encountered setting up or using the xPrintServer are addressed in this appendix. When troubleshooting, always ensure that the physical connections (power cable, network cable) are secure. When troubleshooting the following problems, make sure that xPrintServer is powered up and connected to a good network connection.

Problems and Error Messages

Problem/Message	Possible Solution
LED lights display correctly but printer does not print job.	Make sure that the network printer: <ul style="list-style-type: none">♦ Is powered on.♦ Has a good network connection – wired or wireless. This includes proper cabling, correct IP addressing and/or WIFI connection configuration settings and proper routing if going across routed network environments.♦ Has adequate paper supply.♦ Has adequate ink or toner supply.♦ Has no paper jams. Consult the printer manufacturer to troubleshoot these or other print-specific technical issues.
Status LED does not display light.	Make sure that xPrintServer is connected securely to its power supply unit. Otherwise, try another wall outlet. Contact Technical Support if xPrintServer's status LED continues to not display light after confirming good power.
Ethernet LED(s) are not displaying light.	Make sure that Ethernet patch cable is securely connected to both xPrintServer's Ethernet port and the Ethernet hub or switch to the network at both ends. Otherwise, swap the patch cable for another known good cable. Use a straight CAT5 (or greater) Ethernet patch cable, not a crossover Ethernet cable to connect to the network drop.
Designated banner page is not printing with print job.	Ensure that banners configurations are enabled under Set Default Options in Printers > Advanced page.
Document did not print to the correct printer.	Make sure your application output encode is set to ASCII. If not, change it to ASCII.
Network-attached printer is not displaying on the iOS device.	<ol style="list-style-type: none">1) Reboot the xPrintServer.2) Manually run Discovery3) Verify that the network-attached printer supports Bonjour.
iOS device cannot print or access xPrintServer.	Make sure your iOS device is compatible. See Supported iOS .

C: Compliance

Declaration of Conformity

Manufacturer's Name & Address:

Lantronix
167 Technology Drive, Irvine, CA 92618 USA
Tel: 800-526-8766
Tel: 949-453-3990
Fax: 949-450-7249

Product Name Model: xPrintServer

Conforms to the following standards or other normative documents:

Emissions

FCC Part 15 Class B, VCCI Class B, EN 55022, CISPR22, ICES-003

Safety Agency

UL, CE Mark, and C-Tick

Agency Approvals

RoHS, Reach, Linux OS

D: Warranty

For details on the Lantronix warranty replacement policy, go to our web site at <http://www.lantronix.com/support/warranty/index.html>

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