June 2014

Using Mopria™ with Xerox® Devices Built on Xerox® ConnectKey® Technology
User Guide

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Introduction

What is Mopria™?

The Mopria Alliance is a non-profit membership organization of leading global technology companies with the shared goal of providing intuitively simple wireless printing from smartphones, tablets and other mobile devices. The goal of the Mopria Alliance is to bring together the entire industry to drive selected standards adoption, support mobile software application providers to deploy print functionality in their applications, develop experience guidelines in the interaction of mobile and print devices, certify products that will carry the Mopria mark and educate consumers and business customers about the ability to easily print from mobile devices. The founding members of the Mopria Alliance are Canon, HP, Samsung and Xerox. Other manufacturers, such as Brother, Epson, Konica Minolta. Kyocera, Lexmark and Ricoh have come onboard.

Mopria print functionality will be embedded in phones, tablets or other mobile devices and there is no setup required.

When mobile device users have access to a Mopria-certified printer, they will be able to effortlessly discover and print to this printer.

The Page Description Languages (PDLs) currently supported by the Mopria Alliance include: PCLm and PWG Raster (from the Printer Working Group standards body) with PDF coming soon. Printer manufacturers must support one of these PDLs to be compliant with the current Mopria Alliance standard. Xerox® devices allow other PDLs to pass-through if the mobile client provides the file in one of the device native formats.

The Mopria-enabled mobile device needs to discover Xerox® multifunction printers to present it to the application as a printing destination. Mopria implements discovery following the procedures defined in the Bonjour Printing Specification 1.2, which specifies the use of Multicast DNS for service discovery.

Certification

To state that a printer is Mopria-compliant, it must pass a certification process defined by the Mopria Alliance. The following Xerox® devices built on Xerox® ConnectKey® technology have achieved this certification:

- Xerox® WorkCentre® 7220/7225 Color Multifunction Printer

- Xerox® WorkCentre® 7830/7835/7845/7855 Color Multifunction Printer

- Xerox® WorkCentre® 5845/5855 Multifunction Printer

- Xerox® WorkCentre® 5865/5875/5890 Multifunction Printer

- Xerox® ColorQube® 9301/9302/9303 Color Multifunction Printer

- Xerox® ColorQube® 8700 Color Multifunction Printer

- Xerox® ColorQube® 8900 Color Multifunction Printer

How is Mopria enabled and configured on the Xerox® device?

- Mopria printing itself is available on Xerox® devices built on Xerox® ConnectKey® Technology. What can be enabled or disabled is Mopria Discovery, which is the ability to discover the printer as a Mopria-enabled printer. By default, Mopria Discovery is enabled on the Xerox® printer or multifunction printer, however, if Mopria Discovery has been disabled, an administrator can re-enable it following the steps below:

  – Obtain the device IP address to access the Mopria Discovery configuration screen. The IP address can be found at the device UI screen. From the front panel in the device, go to the **Machine Status** menu and select the **Machine Information** tab. From there, select the **Information Pages** button and select and print the **Configuration Page**.

  – Open the Xerox® device's Web interface (Xerox® CentreWare® Internet Services) by entering the IP address of the Xerox® device into a Web browser's address box (http://<IP>). This will open the Web interface.

  – Click on the **Properties** tab (enter credentials if prompted; default administrative user is: admin, password: 1111).

  – Select **Connectivity > Setup**. This will bring up the **Connectivity** page in the right frame.

  – Under **Protocols,** look for **Mopria Discovery**.
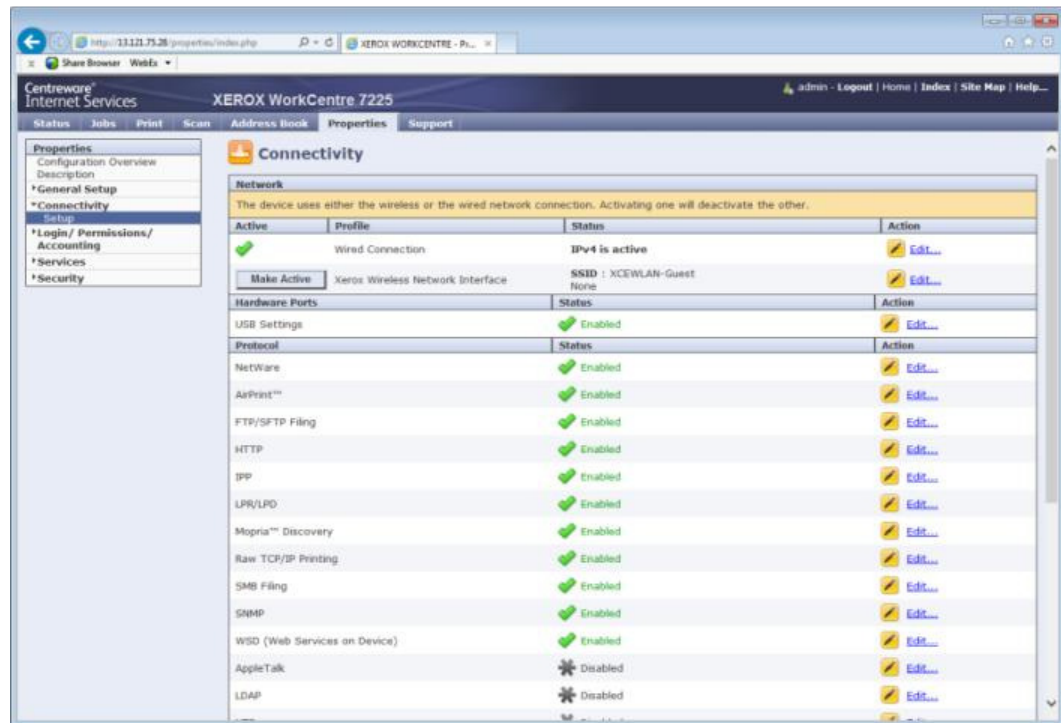
  – Select the action: **Edit** on the **Mopria Discovery** row.

  – This opens the **Mopria** configuration page.

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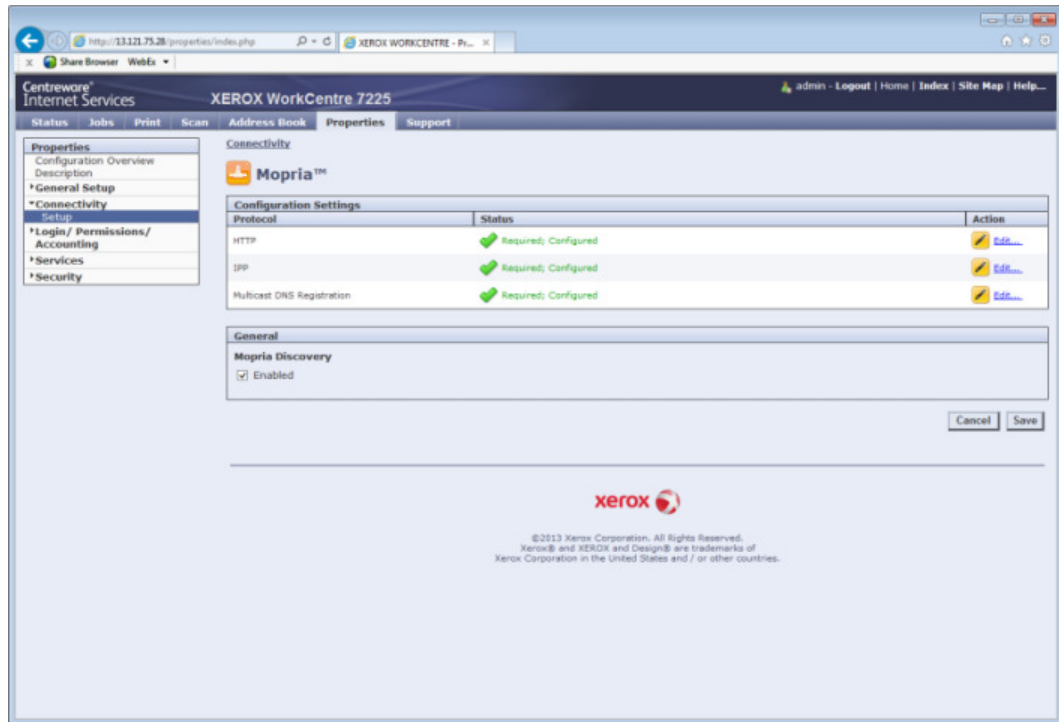
— On the **Mopria** page, under **General**, check the box next to **Enabled.**

Note: HTTP, IPP and mDNS all need to be enabled and configured for Mopria Discovery to be enabled.

After **Mopria Discovery** is enabled, the Mopria-enabled mobile clients will be able to find the Xerox® printer and users will have the ability to select these printers from selected applications.

Printing

After the printer has been discovered, it will be selectable at the mobile device from the appropriate application. The name displayed on the Mopria-enabled mobile device will match that which is configured on the device. This can be seen in Xerox® CentreWare® Internet Services at **Properties > Description**. The default name is the Machine Model value combined with the MAC address.

How do I send a print job from a Mopria-enabled mobile device?

Since there will be a variety of mobile devices that will support Mopria printing, the description here will be somewhat generic.

• Ensure your Mopria-enabled mobile device is set to have Wi-Fi enabled.

• Select something to print (like an email or a photo) from a Mopria-enabled mobile device. (You can print from the gallery, email and Web browser applications.) Apps available from the Google Play™ Store for Android™-based devices.

- Generally, an option will be presented to list all printers, where the user can specify **All Printers** to initiate the search.

- Initiate printing by selecting the discovered printer in the W-Fi list and type in the password if prompted. You choose to print with defaults or choose options to select certain print job attributes (duplex, number of copies, etc.).

Troubleshooting

What if I can't find a Mopria printer from my Mopria-enabled mobile device?

I can't find my Xerox® device when I try to print from my Mopria-enabled mobile device. What's going on?

- First, try to confirm that Mopria Discovery is enabled on the Xerox® printer. See "**How is Mopria Discovery enabled and configured on the Xerox device**" above.

- Next, if you still can't find the Mopria-enabled Xerox® device, restart the Mopria-enabled mobile device and the Xerox® printer or multifunction printer.

- Failing that: In some networks mDNS traffic is not allowed to be passed across subnets. In this case, a device will only be discoverable if the Mopria-enabled mobile device and the Xerox® printer are on the same subnet.

  - Make sure that your Mopria-enabled mobile device is connected to the same subnet as the Xerox® device.

    - At the mobile device, select the Wi-Fi network in the settings (specifics depend on make and model).

    - Confirm that the Mopria-enabled device is connected to the correct Wi-Fi network.

  - Make sure that the Xerox® printer is connected to the correct network.

    - Either print a **Configuration Report** to confirm the IPv4 address of the device (see the Connectivity Physical Connections and Connectivity Protocols, TCP/IPv4 sections of the report) **or** check the Xerox® device's Control Panel and select the **Machine Information** button and view the IPv4 address in the **Machine Information** tab.

    - Confirm that the IP address of the Xerox® device is for the correct network.

- If both devices are on the same subnet and your device is still not being discovered, check with your IT administrator to ensure that mDNS traffic is not being filtered on your network.

I see the Xerox® printer on my mobile device, but selecting the printer does not result in a print. Why?

- The Mopria-enabled mobile device will cache printer information for some time before being refreshed. After initial discovery, the printer might have restarted, or Mopria Discovery might have been disabled. Please refresh the printer list on the Mopria-enabled mobile device or attempt to rediscover the printer. Failing that, verify the configuration at the Xerox® printer or multifunction printer.

I have Xerox® Standard Accounting or Networking Accounting on and my Mopria jobs do not print. Why not?

- All Mopria jobs are passed across the IPP protocol, and not through Xerox® print/fax drivers which enforce using accounting codes.   Your Systems Administrator can utilize Xerox® CentreWare® Internet Services and enable accounting exceptions to allow Mopria jobs to print and be accounted for.

Installation of the Mopria Feature on Xerox® Devices Built on Xerox® ConnectKey® Technology

Many Xerox® devices built on ConnectKey Technology were Mopria-certified after final software was delivered. As such, the Mopria feature currently requires a .dlm to enable it on Xerox® WorkCentre® and Xerox® ColorQube® devices listed below.

To enable the feature, perform the following steps:

1. Check to make sure the device is at the correct software level for the mopriapatch.dlm. The following is the minimum required level for each device requiring a patch to enable this feature.

   - WorkCentre 7200 Series: 072.xxx.xxx.09100

   - WorkCentre 7800 Series: 072.xxx.xxx.09100

   - WorkCentre 5800 Series: 072.xxx.xxx.09101

   - ColorQube 8700, 8900: 072.xxx.xxx.09100

   - ColorQube 9300 Series: 072.xxx.xxx.09101

Note: Any device built on ConnectKey Technology with .071.xxx.xxx.xxxxx cannot support this feature. Software must be upgraded to 072.xxx.xxx.0910x and applied with mopriapatch.dlm to enable.

2. Obtain the correct .dlm file.

   The Mopria .dlm will be available on each of the products' software and support pages at **www.xerox.com**.

3. The following two methods are available for submitting the mopriapatch.dlm to the system once upgrades are enabled:

   a. Via the Manual Upgrade Web UI page:

      1. Navigate to **Properties > General Setup > Machine Software > Manual Upgrade**.

      2. Select the **Browse** button and find the .dlm file.

      3. Select the **Install Software** button.

   b. Via a print protocol such as LPR/LPD or Port 9100 (Raw TCPIP Printing), submit the .dlm file from (2.) above to the device as a print job. If the patch installation succeeds, the .dlm will update the system, install Mopria, enable it, print a confirmation sheet and then reboot. Upon reboot, the Network Controller (NC) version will have ".MP" appended to it to indicate that the Mopria patch has been applied. If the patch fails (due to incompatibility), it will not install and a failure confirmation sheet will print.

4. Mopria should now be enabled at the device.

   a. Print and check the Configuration Report to confirm that the Network Controller version has appended MP to indicate a successful update.


.072.xxx.0910xMP
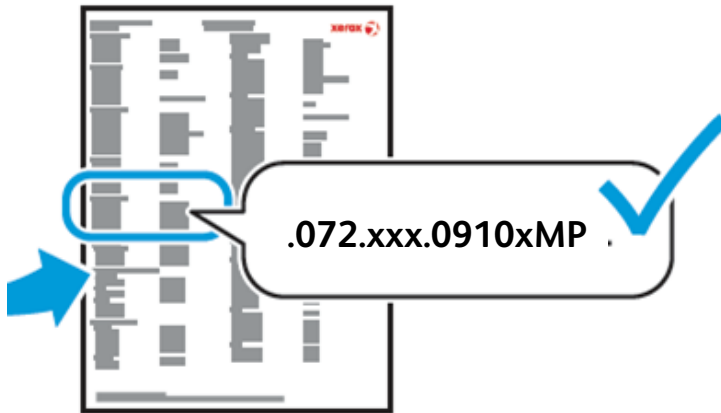
If the Mopria feature is included natively on the device, then Native support can be confirmed by checking Xerox® CentreWare® Internet Services or printing the Configuration Page.

• As Admin, login into CentreWare IS.

   – Select **Connectivity > Setup**. This will bring up the Connectivity page in the right frame.

   – Under **Mobile Workflows,** look for **Mopria Discovery**.
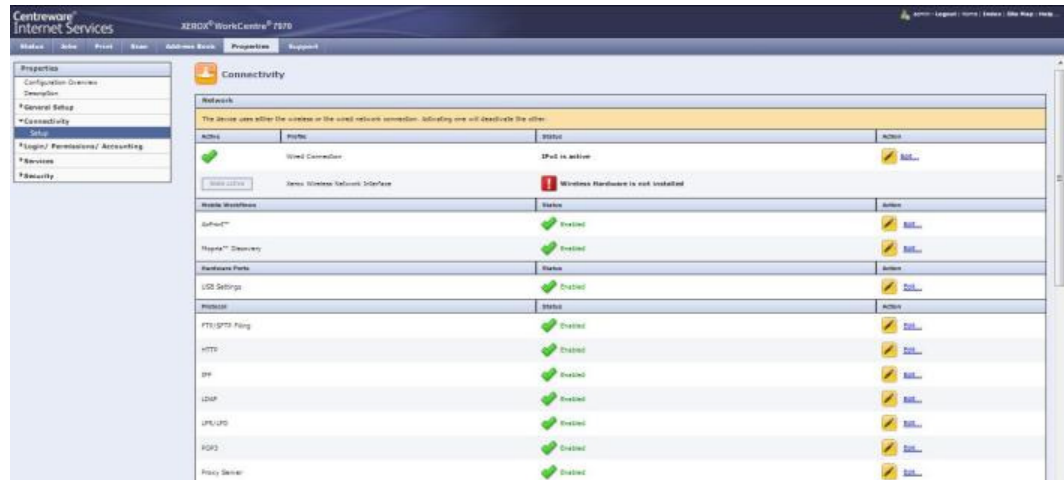
Any user can also print and check the Configuration Page Mobile Workflows section.

- Go to **Connectivity > Mobile Workflows** and look for **Mopria Discovery**.
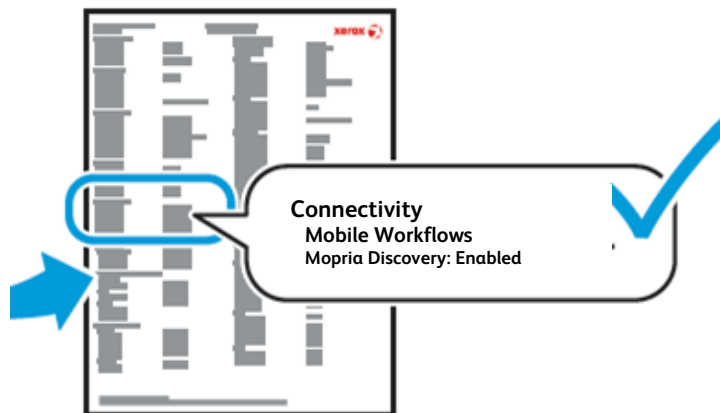
- Xerox® WorkCentre® 7800 series (June 2014 SPAR release)
- Xerox® WorkCentre® 5800 Series (June 2014 SPAR release)
- Xerox® WorkCentre® 7200 Series (June 2014 SPAR release)
- Xerox® ColorQube® 9300 Series (June 2014 SPAR release)
- Xerox® ColorQube® 8700/8900 Series (June 2014 SPAR release)

    Note: For Xerox® devices built on Xerox® ConnectKey® Technology with the Mopria feature installed, any time an incompatibility (such as incorrect version number, existing "MP" or natively installed, the mopriapatch.dlm will be ignored and cause it to show up as "Deleted" on the Completed Jobs screen.

Further Reading and References

- Mopria Alliance Website: **http://www.mopria.org**

- Mopria Alliance Technical Specification, Version 1.02, Mopria Alliance, November 13, 2013

- Bonjour Printing Specification 1.2: **https://developer.apple.com/bonjour/printing-specification**

- RFC 6763 DNS-Based Service Discovery: **http://tools.ietf.org/html/rfc6763**

- IPP 2.0: **http://www.pwg.org/ipp/**

- Xerox® ConnectKey® devices deliver Apple® AirPrint™ to the Enterprise: **http://www.office.xerox.com/latest/XOGWP-17.PDF**