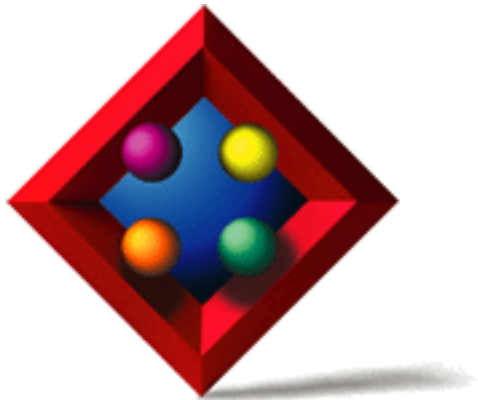




# MarkVision™ Professional 11.0

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## User's Guide



**June 2005**

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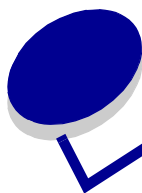
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(<http://www.gnu.org/copyleft/lesser.txt>). The sourcecode is available locally at:

- Windows: <install dir>\MarkVision Server\granite\src\jmdns\_src.zip
- Linux/Mac: /usr/mv\_pro/src/jmdns\_src.zip
- Novell: SYS:\LEXMARK\MVPS\SRC\JMDNS\_SRC.ZIP



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# 1

## Introduction to MarkVision Professional

---

### ***Introduction***

MarkVision™ Professional (MVP) is a Web-enabled device management utility designed for IT staff.

MarkVision works as a client-server application. The server component is responsible for discovering and communicating with devices on the network and providing information about them to a client. The client is then responsible for displaying information about the devices to a user and providing them with an interface to manage those devices.

The ability to use MarkVision through a Web Client provides the convenience of accessing all of MVP's management options from virtually any location. While MarkVision's built-in security provisions help to prevent unauthorized access to devices on your network, an authorized user can access an instance of the Web Client by connecting to the MarkVision Server through supported web browsers. After logging on, all of the information being managed by MarkVision becomes instantly available to authorized users anywhere with web access.

MarkVision's highly customizable format and various tasks also provide highly versatile options for managing devices. You can configure MarkVision to display specific device information to see only the information of interest to you. By using Quick Find or by creating Discovery Profiles, you can quickly and efficiently locate specific devices on your network. Extensive Folders and Filters can then be used to group devices based on one or multiple characteristics (such as color capability, input capacity, and speed) or conditions (such as cover open, low toner, low paper, and paper jam).

The goal of MarkVision Professional is to provide the most comprehensive and efficient device management capabilities available. Here are a few examples of what MarkVision can do:

#### **MarkVision helps to:**

- Quickly troubleshoot printing issues on the network and fix them before they become critical and disruptive.
- Remotely perform printer and printer adapter maintenance and routine updates.

#### **With MarkVision Professional, you can:**

- Diagnose and fix printing problems using Quick Find to locate a specific device on the network.
- Use extensive Filters to find and group devices based on one or more characteristics (such as color capability, input capacity, speed, and multifunction capabilities) or conditions (such as cover open, low toner, low paper, and paper jam).
- Configure settings on multiple devices simultaneously with customizable device policies.

- Display devices that meet predefined criteria (such as Toner Low) so you can fix problems before they affect user productivity.
- Schedule time-intensive activities, such as company-wide device discovery or updating print server firmware when network use is at a minimum.
- Prevent unauthorized access to devices on the network.
- Download plug-ins for additional device support at runtime.

**Note:** This book is written for administrators. To complete these tasks successfully, you should have a working knowledge of your network hardware and software.

## ***Terms used in this document***

MarkVision Professional (also referred to as MarkVision or MVP) refers to the components that make up MarkVision Professional: the MarkVision Server, the MarkVision Web Client, and the Web site files that enable remote installation of MarkVision Professional.

MarkVision Web Client refers to MarkVision Professional running through a browser.

MarkVision Server refers to a server that collects data from network-attached printers and provides information to MarkVision Clients.

**Note:** Within this document, printers and print servers are in some instances referred to as "devices."

## ***What's new in MarkVision Professional 11.0***

MarkVision Professional 11.0 includes several new features and enhancements to provide even greater control of your network devices.

- **Secure communication**

MVP 11.0 provides the option to implement secure communication between the MarkVision Server and devices that support the same security protocol, reducing the possibility of either user information or device commands from being compromised when administrators work with the devices over the network.
- **Bookmark Management**

The Bookmark Management feature lets a user save links or "bookmarks" in printer permanent memory. These bookmarks point to printable documents that are stored on remote servers or on the Internet, and can then be accessed through the printer operator panel of a supported device. MVP's Bookmark Management feature also allows a user to organize bookmarks into folders and to protect access to bookmarks with a secure PIN access number.
- **Wireless device support**

MVP 11.0 provides the capability to configure the wireless settings for the Lexmark™ N8050 wireless print server.



- Confidential print job settings

New settings have been added to the General Settings (Printer) task for MVP 11.0 that help protect confidential print jobs. The Confidential Print Job Expiration setting lets an administrator set a specific time interval that a confidential print job will remain idle in a printer queue before it is deleted. The Confidential Print Job Lockout setting lets an administrator set the number of times that a PIN access number can be entered at the printer operator panel when printing a confidential print job before the job is deleted.

- Device policy options

Several new device policy options have been added to the Device Policies Create/Manage task to provide enhanced configuration capabilities for new MVP features including Confidential Print Job Expiration, Confidential Print Job Lockout, and wireless device support.

- Expanded PIN access number range

The range of digits for PIN access numbers has been expanded from 1–6 to 0–9 for supported tasks and devices.

- More supported devices

MarkVision Professional 11.0 supports even more devices. For a complete list of supported devices, see [Supported devices](#).

## ***MarkVision components***

### ***The MarkVision Client***

The MarkVision Client is a Java program that provides the user with an interface for managing devices. The client can exist in two forms: as a standalone Java application or as a browser-based Java applet.

#### **MarkVision Client Application**

The standalone application can be installed locally on a user's workstation. MarkVision Client files are then copied onto the user's computer during the installation process.

#### **MarkVision Web Client**

The browser-based client is a version of the client that can be accessed through a supported web browser by using the URL **http://<yourserver>/markvision**. If the MarkVision Server is not the default server on your machine, you can use the URL **http://<yourserver>:9180/markvision**.

In order to run the Web Client, you must first enable your web browser to support Sun's Java Runtime Environment (JRE) by installing the Java plug-in.

**Note:** In Windows environments, the plug-in is provided and the user will automatically be prompted to install it the first time they run the MarkVision Web Client. For information on the Java plug-in software and to download available versions of the

plug-in for UNIX and other platforms, go to: <http://java.sun.com/products/plugin/index.html>.

The MarkVision Client application and the Web Client are essentially the same program. All information that is being managed by the MarkVision Server is available to users of either the application or Web Client. The only differences are that the application does not require installation of the Java plug-in and may require less startup time because some files are stored locally on the user's workstation. However, anyone who does not run MarkVision Professional on a regular basis, or who is not currently working from their workstation, should use the Web Client version of MVP. In this case, there is no need to install any MarkVision files in order to use the client.

## ***MarkVision Messenger***

MarkVision Messenger works with MarkVision Professional to provide technicians with e-mail notification or command line execution when a network printer triggers a pre-defined event (such as Paper Tray Missing, Toner Low, and many more). The heart of MarkVision Messenger is a "service" that runs inside the MarkVision Server. To use this service, the user creates "actions" using a browser-based interface. Users can access MarkVision Messenger either by launching it from the Action menu in the MVP application, or by using the URL <http://<yourserver>/messenger> in your browser. For more information, see the **MarkVision Messenger** section of this *User's Guide*.

## ***MarkVision Server***

The MarkVision Server is the engine that powers MarkVision. The MarkVision Server is the single point of contact between an instance of the MarkVision Client and all of the devices that MVP manages. The first time a client requests information, the MarkVision Server gathers the new information from the device and stores it in a cache. Each subsequent request for the same information is then retrieved from the cache. This saves valuable network resources by eliminating redundant network traffic from duplicate requests.

The MarkVision Server also eliminates the complexity of talking to a wide variety of network devices. Client programs only need to send a single protocol to the server, which in turn knows how to communicate with the devices.

In order for the system architecture to work, at least one MarkVision Server must exist on a network. It is possible to install multiple instances of the MarkVision Server on a network, however, a client can only connect with one server at a time.

## **MarkVision Web Server**

MarkVision Professional provides a web server for the browser-based components of the product (MVP Web Client and MarkVision Messenger) as part of the MarkVision Professional package. The MVP Web Server is automatically installed along with the MarkVision Server.

During installation, you are given the option to make the MarkVision web server the default server on the machine. This allows the browser-based application to access the server from the standard port (80), which requires no additional numbering in the URL. If this option is not selected, the MVP Web

Server accepts HTTP requests on a non-standard port (9180) that does not interfere with any other existing web servers.

## ***System requirements***

The following are minimum requirements for installing and running MarkVision Professional. These requirements are for both the server and the client, and should be in place before you install MarkVision.

### **Client system:**

- Windows 98 SE/Me, Windows NT, Windows 2000, Windows XP, Windows 2003 Server, Mac OS X 10.2.8 (or higher), or a supported UNIX Client system
- 30MB available hard disk space
- Internet or TCP/IP connection
- A supported web browser, such as Windows Internet Explorer 6.x or later, Netscape Navigator 6.x or later, or the Mozilla version that shipped with your operating system.
- Java 1.4 software update (see table for specific operating systems)

### **Server system:**

- Windows NT (Service Pack 4.0 or later), Windows 2000, Windows XP, Windows XP SP2, Windows 2003 Server, Windows 2003 Server SP1, Mac OS X server 10.2.3 (or higher), Novell 6 or 6.5, or a supported UNIX server system
- 70MB available hard disk space
- Internet or TCP/IP connection
- Java 1.4 software update (see table for specific operating systems)

## ***Minimum RAM and processor configurations for multiple devices***

<b>Number of printers</b>	<b>Total RAM on computer (MB)</b>	<b>Processor speed of computer (MHz)</b>
1 —250	128	350
251 —500	192	500
501 —1000	256	500
1001 —2500	512	500

**Note:** Managing more than 2500 printers requires additional servers.

## ***MarkVision Professional for UNIX systems***

MarkVision Professional for UNIX systems is available for all supported UNIX platforms that provide Java Runtime Environment 1.4.2.

Supported UNIX systems

<b>Operating system</b>	<b>Version numbers</b>	<b>Hardware</b>
IBM-AIX	5.1, 5.2, 5.3	IBM RISC System/6000
HP-UX	11.0, 11i	Hewlett-Packard 9000/700 and 9000/800
Red Hat Enterprise	3.0 WS	Intel (IA32)
Sun Solaris SPARC	8, 9, 10-Sun SPARC, and Ultra SPARC	Sun SPARC and Ultra SPARC
SUSE LINUX Enterprise	9	Intel (IA32)

## ***Java Virtual Machine recommendations***

<b>Operating system</b>	<b>Java VM level</b>
Windows	Sun 1.4.1_07
IBM-AIX 5.1, 5.2, 5.3	IBM 1.4.2 (java_ca1420-20040626)
Mac OS X 10.2.8 (or higher)	Apple 1.4.2 Update 2 (or higher)
HP-UX	HP 1.4.2_05
Red Hat Linux	Sun 1.4.2_06
SuSE Linux	Sun 1.4.2_06
Sun Solaris SPARC	Sun 1.4.2_06
Novell NetWare server	Novell JVM 1.4.1

## Supported devices

Print servers	
Dell Wireless Printer Adapter 3300	MarkNet N2004fl-SC
Lexmark C750 Ethernet	MarkNet N2004fl-ST
Lexmark C910 Ethernet	MarkNet N2501e
Lexmark T520 Ethernet	MarkNet N4050e
Lexmark T522 Ethernet	MarkNet N8020
Lexmark T520 SBE Ethernet	MarkNet N8050
Lexmark T620 Ethernet	MarkNet Pro 1
Lexmark T622 Ethernet	MarkNet Pro 3
Lexmark W820 Ethernet	MarkNet S
Lexmark X820 Ethernet	MarkNet X2011
MarkNet™ N2000t	MarkNet X2012
MarkNet N2001e	MarkNet X2030
MarkNet N2002e	MarkNet X2031
MarkNet N2003fx-MTRJ	MarkNet XI
MarkNet N2003fx-SC	MarkNet XL
MarkNet N2003fx-ST	MarkNet XLe
MarkNet N2004fl-MTRJ	

Printer table 1	
Brother HL-1470N Series	Canon ImageRunner 400
Brother HL-1650 / 1670N Series	Canon ImageRunner 500
Brother HL-1870N Series	Canon ImageRunner 600
Brother HL-2460 Series	Canon ImageRunner 2800
Brother HL-5070N	Canon ImageRunner 5000i
Brother HL-6050D	Dell Color Laser Printer 3100cn
Brother MFC-8820DN	Dell Laser Printer 1700
Canon GP 200D	Dell Laser Printer 1700n
Canon ImageCLASS C2100	HP 2000 C
Canon ImageRunner 330	HP 2500 C

Printer table 2	
HP 4345 MFP	IBM InfoPrint 20
HP 8550 MFP	IBM InfoPrint 21
HP 8550GN	IBM Infoprint 1145 MFP
HP Business InkJet 2250TN	IBM Infoprint 1145L MFP
HP Color LaserJet 3550N	IBM InfoPrint Color 8
HP Color LaserJet 3700DTN	IBM LaserPrinter 4039
HP Color LaserJet 4500	IBM Network Printer 12
HP Color LaserJet 4550 Series	IBM Network Printer 17
HP Color LaserJet 4650 DTN	Konica KL-3015
HP Color LaserJet 5550DTN	Kyocera FS-C5016N
HP Color LaserJet 8500	Kyocera FS-1700
HP Color LaserJet 9500n	Kyocera FS-1750
HP LaserJet 1320 NW	Kyocera FS-1800
HP LaserJet 2100 Series	Kyocera FS-3750
HP LaserJet 2200	Kyocera FS-3800
HP LaserJet 2420 DN	Kyocera FS-3820N
HP LaserJet 2430 TN	Kyocera FS-3830N
HP LaserJet 3300 MFP Series	Kyocera FS-7000
HP LaserJet 4000 Series	Kyocera FS-9000
HP LaserJet 4050 Series	Kyocera FS-9100DN
HP LaserJet 4100 MFP Series	Lexmark™ 4079 plus
HP LaserJet 4250 DTN	Lexmark C510
HP LaserJet 4350 DTN	Lexmark C750
HP LaserJet 5000 Series	Lexmark C752
HP LaserJet 5/5M	Lexmark C760
HP LaserJet 5si	Lexmark C762
HP LaserJet 8000 Series	Lexmark C910
HP LaserJet 8100 Series	Lexmark C912
HP LaserJet 8150 Series	Lexmark C920
HP LaserJet 9000 Series	Lexmark E230
HP LaserJet 9050N	Lexmark E232
HP Mopier 320	Lexmark E234

Printer table 3	
Lexmark E234n	Lexmark T63X
Lexmark E320	Lexmark T640
Lexmark E321	Lexmark T642
Lexmark E322	Lexmark T644
Lexmark E323	Lexmark W812
Lexmark E330	Lexmark W820
Lexmark E332n	Lexmark W840
Lexmark Optra™	Lexmark X422
Lexmark Optra C	Lexmark X830e
Lexmark Optra C710	Lexmark X832e
Lexmark Optra Color 40	Minolta Color PageWorks
Lexmark Optra Color 45	Minolta PageWorks 20
Lexmark Optra Color 1200	Minolta Magicolor 7300
Lexmark Optra E	Minolta-QMS Magicolor 2200
Lexmark Optra Ep	Minolta-QMS Magicolor 3100
Lexmark Optra K 1220	NEC SuperScript 1800
Lexmark Optra M	Oki C5300
Lexmark Optra N	Okidata C7350n
Lexmark Optra Plus	QMS Magicolor 2
Lexmark Optra S	QMS Magicolor 6100
Lexmark Optra SC	Ricoh Aficio 180
Lexmark Optra Se	Ricoh Aficio 270
Lexmark Optra Se plus	Ricoh Aficio 350/355
Lexmark Optra T	Ricoh Aficio 450/455
Lexmark Optra W810	Ricoh Aficio 550
Lexmark T420	Ricoh Aficio 650
Lexmark T430	Ricoh Aficio 750
Lexmark T520	Ricoh Aficio 850
Lexmark T520 SBE	Ricoh Aficio 1045
Lexmark T522	Ricoh Aficio CL3000
Lexmark T620	Ricoh Aficio CL7000CMF
Lexmark T622	Ricoh AP3800C Series

Printer table 4	
Samsung ML-2152W	Xerox DocuPrint N2825
Tektronix Phaser 350	Xerox DocuPrint N32
Tektronix Phaser 550	Xerox DocuPrint N3225
Tektronix Phaser 560	Xerox DocuPrint N40
Tektronix Phaser 740/750	Xerox DocuPrint N4025
Tektronix Phaser 750DX	Xerox DocuPrint N4525DX
Tektronix Phaser 780GN	Xerox DocuPrint NC60
Tektronix Phaser 850	Xerox Phaser 790
Xerox DocuColor 4CP	Xerox Phaser 860
Xerox DocuColor 2006	Xerox Phaser 1235
Xerox Document Centre 220/230	Xerox Phaser 2135DT
Xerox Document Centre 240 ST	Xerox Phaser 3400
Xerox Document Centre 265 ST	Xerox Phaser 3450
Xerox Document Centre 332	Xerox Phaser 4500DX
Xerox Document Centre 340/440	Xerox Phaser 5400
Xerox Document Centre 440	Xerox Phaser 6200
Xerox DocuPrint 4512	Xerox Phaser 6250
Xerox DocuPrint C55/C55mp	Xerox Phaser 7700DN
Xerox DocuPrint N17	Xerox Phaser 8200
Xerox DocuPrint N2025	Xerox Phaser 8400DP
Xerox DocuPrint N2125	Xerox WorkCentre Pro 32C
Xerox DocuPrint N24	



# 2

## Using MarkVision Professional

---

### *Installing MarkVision Professional*

#### *Before you install*

Before you install the MarkVision Server:

- 1 Make sure you have 70MB of hard disk space available for a complete installation.
- 2 Decide where to install the MarkVision Server.

You must install at least one MarkVision Server on the network.

**Note:** You may install any of the other packages on the same workstation running the MarkVision Server, although this is not necessary.

#### *Where to install MarkVision components*

If your devices are distributed across a local area network (LAN) or wide area network (WAN), network traffic increases as users try to access them. With MarkVision, you can choose where to install components, letting you reduce network traffic.

To minimize network traffic and improve performance, install the MarkVision Server on a host that offers relatively high-speed access to users and to the devices you want to monitor.

#### *Installable components*

##### **MarkVision supplies several installable components**

- MarkVision Application— Installs the primary client application that is used to manage your devices. This application requires a MarkVision Server to be available on the network.
- MarkVision Server— Installs the necessary files to set up the MarkVision Server.
- MarkVision Messenger— Installs the MarkVision Messenger Web-based utility.
- MarkVision Web Client— Installs a Web browser-based version of the MarkVision Client to the MarkVision Server, allowing you to access MVP from a remote location using a browser. Because the installation process is operating system-specific, there are different install packages that can be used for this version of the client. These files include:

- Windows Web package
- Mac OS X Web package
- UNIX Web package (Java runtime environment is required)

When you are installing the MarkVision components, a dialog will appear that shows the hierarchy in which the different components can be installed. You can install the MarkVision application and the MarkVision Server separately; the application only requires that one instance of the MarkVision Server be installed somewhere on the network, not necessarily on the same machine.

**Note:** For Windows based operating systems, you must also be sure to select the parent branches in the hierarchy if you want to include any items located in a sub-branch.

## ***Installation notes***

In order to run the Web Client, you must first enable your web browser to support Sun's Java Runtime Environment (JRE) by installing the Java Plug-in. In Windows environments, the plug-in is provided and the user is automatically prompted to install it the first time they run the MarkVision Web Client.

**Note:** The MarkVision Client program does not require the installation of the browser plug-in.

The MarkVision Web Server is automatically installed along with the MarkVision Server.

MarkVision Professional relies on technology that is specific to the web server that it provides, so it is not possible to use other web servers to make MarkVision available. During installation, you are given the choice to make the MarkVision web server the default server on the machine. This allows the browser-based application to access the server from the standard port (80), which requires no additional numbering in the URL. When this option is rejected, the MarkVision Web Server listens for HTTP requests on a non-standard port (9180) that should not interfere with any other existing web servers.

**Note:** If another web server is listening on port 80, the option to have the MVP Server listen on the default web port (80) is not present.

As an administrator, if you already have a department or corporate web server on which you want to publish the URL to access MarkVision Professional or Messenger, we recommend that you create a URL on your current web server that automatically forwards the user's browser to the URL used by either tool.

## ***Installing MarkVision Professional for Windows and Mac OS X systems***

**To install MarkVision Professional 11.0:**

- 1** Go to [www.lexmark.com](http://www.lexmark.com).
- 2** Click **Products and Supplies**.

- 3 Click **Software**.
- 4 Click **MarkVision Professional**.
- 5 Download the MarkVision Professional 11.0 package.
- 6 Open the MarkVision Professional Installation package, and follow the instructions on the screen.

#### **For a successful installation**

- The operating system must be supported by MarkVision Professional.
- You must use a supported web browser.

#### **To uninstall MarkVision Professional**

To remove MVP from a Windows system, select MarkVision Professional in the Add/Remove Programs application, or go to **Start → Programs → Lexmark → Lexmark Software Uninstall**. For a Mac OS X system, run the MarkVision Professional Uninstaller application located in Applications/Utilities. This will shut down both servers that are running and then remove all aspects of MarkVision Professional.

#### **Windows default file locations**

##### **MarkVision Application**

C:\Program Files\Lexmark\MarkVision Professional

##### **MarkVision Server**

C:\Program Files\Lexmark\MarkVision Server\Granite

#### **Macintosh default file locations**

##### **MarkVision Application**

/Applications/MarkVision Pro Client

##### **MarkVision Server**

/Applications/Utilities/MarkVision Pro Server Control

### ***Installing MarkVision Professional for UNIX systems***

MarkVision Professional supports multiple UNIX operating systems.

## HP-UX

- 1 Download the MVP package file from the Lexmark Web site into the /tmp directory, and extract the package file:

```
# /usr/contrib/bin/gunzip /tmp/markvision-pro-hpux11.pkg.gz
```

- 2 Start the System Administration Manager by typing `/usr/sbin/sam &`.
- 3 On the SAM areas screen, click **Software Management**.
- 4 Click **Install Software to Local Host**. The SD Install-Software Selection screen and Specify Source dialog appear. If these dialogs do not appear, go to the **Actions** menu and click **Change Source** to open the Specify Source dialog.
- 5 Make sure that the hostname of the computer that you are installing on appears in the Host Name text box. If it does not, enter the hostname or select it from the list.
- 6 In the Source Depot Path field, enter the full path to the HP-UX package file:

```
/tmp/markvision-pro-hpux11.pkg
```

- 7 Make sure Change Software View is set to **All Bundles**. If it is not:
  - a Click **Change Software View**.
  - b On the Software View screen, click **All Bundles**, and then click **OK**.
- 8 On the Specify Source screen, click **OK**.
- 9 Select the bundles you want to install. There are two ways to mark the packages: for installing all the MarkVision packages at once or installing individual packages.

### To install all the MarkVision packages at once

- a Click the **MarkVisionPro** bundle.
- b Go to the **Actions** menu, select **Mark for Install**. This marks all the MarkVision Professional packages for install.
- c Skip to step 10.

### To install individual packages

- a Double-click the **MarkVisionPro** bundle. This displays the server and client packages.
  - b Double-click each package bundle to view its contents.
  - c For each package that you want to install, click the package, and then go to the Actions menu and select **Mark for Install**. A “Yes” appears beside each package that you have selected to install.
- 10 Go to the **Actions** menu and select **Install (analysis)**.
  - 11 Click **OK**. A confirmation message appears.

- 12 Click **Yes** to start the installation.

**Note:** If the HOME variable was not set for root when you started SAM, an error message appears. Ignore the message and click **OK**.

- 13 During Installation, select **Logfile** to view the installation log.

**Note:** Make sure there are no errors or warnings during installation.

- 14 When installation is finished, select **Done** to return to the SD Install-Software Selection screen.

- 15 Click **File**, and then click **Exit** to return to the Software Management screen.

- 16 Enter the following in the command line and answer any questions that may appear:

```
/opt/lexmark/setup.mvjserver
```

This file will set up the MarkVision Server users for use with the MarkVision Professional server.

## AIX

- 1 Download the MVP package file from the Lexmark Web site and place the package file in the /tmp directory.

- 2 Type the following in the command line and press **Enter**:

```
smit install_latest
```

- 3 When prompted to enter the input device directory for software, enter:

```
/tmp/markvision-pro-aix.pkg
```

- 4 All packages are normally installed by default, though you can choose to install some packages individually. To install only the packages you want:

- a Under the **Software to Install** option, select **List**.

- b Select the packages you want to install.

- c Select **Do**.

- 5 Specify any other install options, such as **COMMIT**.

- 6 Select **Do** to begin installing MarkVision Professional. A message is displayed when installation is finished.

- 7 Enter the following in the command line and answer any questions that appear:

```
/usr/lpp/markvision_pro/setup.mvjserver
```

## RedHat Linux; SuSE Linux

1 Download the MVP package file from the Lexmark Web site and place the package file in the /tmp directory.

2 Unzip and untar the file:

```
$ tar zxvf /tmp/markvision-pro-linux-glibc2-x86.tar.gz
```

3 cd to the package directory:

```
$ cd /tmp/markvision-pro-linux-glibc2-x86
```

4 Install either all or individual MarkVision components:

- To install all MarkVision components, issue the command:

```
rpm -ivh *.rpm
```

- To install individual MarkVision Professional components, specify the file name of the MarkVision Professional component that you want to install. For example, to install just the MarkVision Professional Server, issue the command:

```
rpm -ivh markvision-pro-MVJserver-*.i386.rpm
```

or

```
rpm -ivh markvision-pro-MVJclient-*.i386.rpm
```

5 Type the following on the command line and answer any questions that appear:

```
/usr/local/lexmark/setup.mvjserver
```

## Solaris SPARC systems

1 Download the MVP package file from the Lexmark Web site and place the package file in the /tmp directory.

2 Start the package installation program:

```
pkgadd -d /tmp/markvision-pro-solaris2-sparc.pkg
```

3 When a list of available packages appears:

- a If you want to install all the packages, type **a11** and then press **Enter**.
- b If you want to install individual packages, type each package number separated by a comma and then press **Enter**. For example: **1,2,3**.

4 Follow the prompts and answer any questions that appear on the screen:

- a To accept the defaults, press **Enter**.
- b To answer yes/no questions, type **y**, **n**, or **?**, and then press **Enter**.

- c When a message appears telling you the installation was successful, type `q` to quit.

**Note:** You must install *all* the packages in the same location.

- 5 Type the following on the command line and answer any questions that appear:

```
/opt/lexmark/setup.mvjservice
```

## Unix general file locations

### MarkVision Application

/usr/mvp/bin (executable files)

/usr/mvp/etc (configurable files)

/usr/mvp/lib (archive/library (JAR) files)

### MarkVision Server

/usr/mv\_pro/bin (executable files)

/usr/mv\_pro/etc (configurable files)

/usr/mv\_pro/lib (archive/library (JAR) files)

## Setting up the MarkVision Professional UNIX Server

Once the MarkVision Professional package is installed on a system, a setup script must run to complete the installation process. This script is installed at:

```
<install-dir>/setup.mjservice
```

The MarkVision Server must be run as a standard system daemon. It collects information about network attached devices, such as printers and print servers. For security reasons, this daemon must be run as a normal user with no special privileges. Therefore, we recommend using an existing user ID or to create a special user ID for this daemon to run as.

The default user ID is user *nobody*. Most modern UNIX systems ship with this ID pre-installed. If you want to change it and use a different ID (for example *markvision*), create the user ID before running the setup script.

The setup script checks if the MarkVision Server is currently running, and if so will exit, prompting the user to stop the server using the appropriate command. If the server is not running, it prompts for the user ID and verifies its validity. Once the user ID is verified, the MarkVision Server starts.

The following shell scripts are used during the MarkVision Server setup and startup process:

- /usr/mv\_pro/bin/findJava
- /usr/mv\_pro/bin/MvService
- /usr/mv\_pro/bin/MvWebService

## FindJava

This script is used by multiple scripts to locate the appropriate version of Java Virtual Machine on the system. This script attempts to find the path to the “java” binary in standard system locations. If the JVM is not found in standard system locations, it tries to search the **PATH** environment variable for the JVM. If the search for the appropriate JVM fails, it exits with an error message informing the user that a suitable JVM was not found. It also indicates the appropriate JVM version(s) required to run the MarkVision Server software.

If you believe a suitable JVM is on the system, make sure it is in your PATH and run the /usr/mv\_pro/bin/findJava script again. This creates a symbolic link from /usr/mvp\_java to the Java home directory (JAVAHOME).

For example, if the full path to the appropriate “java” binary is:

```
/usr/local/java/bin/java
```

The Java home directory is “/usr/local/java.”

Therefore, the link can be created as follows:

```
# /bin/ln -s /usr/local/java /usr/mvp_java
```

## MvService

The /usr/mv\_pro/bin/MvService command is used to start and stop the MarkVision Professional Server as a UNIX daemon.

```
$ man MvService
```

## MvWebService

The /usr/mv\_pro/bin/MvWebService command is used to start and stop the MarkVision Web Server.

The MvWebService process is used to provide the following services over HTTP:

- Serve the MarkVision Professional Web Client
- Provide access to MarkVision Messenger
- Provide browser-based access to MarkVision Professional documentation

To access the above features, point your browser to port 9180 of the machine where you installed MarkVision Professional Server with the following URL:

```
http://<markvision-server-host>:9180/markvision
```

or

```
http://<markvision-server-host>:9180/messenger
```

## To uninstall the MarkVision Professional UNIX Client

- 1 Run the uninstall script which removes the symbolic links to the mounted directory from /usr/mvp.

```
./MVJclient.unlink
```



- 2 Unmount the MarkVision Professional directory. Refer to your operating system documentation for unmounting instructions.

## Removing MarkVision Professional packages

With root authority, you can remove MarkVision Professional using these utilities:

Operating system	Package removal tool
HP-UX	sam
IBM AIX	smit
RedHat; SuSE Linux	rpm -e
Sun Solaris SPARC	pkgrm

Depending on the utility on your system, either mark the packages for removal after you start the program, or provide the names of the packages you want to remove in the command line. Refer to your operating system documentation for more information.

## Removing remaining directories

Package removal utilities usually do not remove directories shared by more than one package. The following two software packages share the same directory structure (install-directory>markvision)

- Enhanced Printer Drivers
- MarkVision Professional

After removing all the previously mentioned MarkVision packages (if one or more were installed), some directories may need to be removed manually.

To see if any directories remain after removing all the MVP packages, check the directory where you installed MarkVision. By default, MVP installs in either **/opt/lexmark/** or **/usr/local/lexmark/**.

## Installing MarkVision Professional into CDE

You can integrate MVP into the Common Desktop Environment (CDE). Integrating installs CDE icons, actions, and online Help.

### To integrate MarkVision Professional into the CDE:

- 1 Make sure you have root user authority.
- 2 Type the following in the command line:

```
/usr/mv_pro/bin/mark2cde
```

On some CDE systems, the MarkVision Professional CDE icons may not appear after installing the MarkVision Professional CDE snap-in. The icons appear after logging out and logging back in again.

If you encounter problems while running mark2cde manually, try running it again using the Korn shell (ksh) rather than the Bourne shell (sh).

## Removing the MarkVision Professional CDE:

When removing the MarkVision Professional Client package, you must manually remove the CDE snap-in.

To uninstall the CDE snap-in, as root, type the following in the command line:

```
# /usr/mv_pro/bin/mark2cde -d
```

## Installing MarkVision Professional into KDE

You can integrate MVP into the K Desktop Environment (KDE). Integrating installs KDE icons, actions, and online Help.

### To integrate MarkVision Professional into the KDE:

- 1 Make sure you have root user authority.
- 2 Type the following in the command line:

```
/usr/mv_pro/bin/mark2kde
```

You must restart KDE after installing the KDE snap-in to see the icons.

## Removing the MarkVision Professional KDE:

When removing the MarkVision Professional Client package, you must manually remove the KDE snap-in.

To uninstall the KDE snap-in, as root, type the following in the command line:

```
# /usr/mv_pro/bin/mark2kde
```

## Installing MarkVision Professional into GNOME

You can integrate MVP into the GNU Network Object Model Environment (GNOME). Integrating installs GNOME icons, actions, and online Help.

### To integrate MarkVision Professional into the GNOME:

- 1 Make sure you have root user authority.
- 2 Type the following in the command line:

```
/usr/mv_pro/bin/mark2gnome
```

On some GNOME systems, the MarkVision Professional GNOME icons may not appear after installing the MarkVision Professional GNOME snap-in. The icons appear after logging out and logging back in again.

## Removing the MarkVision Professional GNOME:

When removing the MarkVision Professional Client package, you must manually remove the GNOME snap-in.

To uninstall the GNOME snap-in, as root, type the following in the command line:

```
# /usr/mv_pro/bin/mark2gnome
```

## Finding space to install MarkVision Professional

Some operating systems require you to install MarkVision Professional in a particular directory. If the file system containing that directory is full, you can create a symbolic link that points to a directory in another file system. The symbolic link appears to be a real directory, but the files are actually installed in the location the link points to.

For example, to appear to install MarkVision Professional in **/disk2/lexmark**, do the following:

- 1 Create a directory in the location where you want the packages to be installed. For example, to install the /disk2 file system:

```
mkdir /disk2/lexmark
```

- 2 Create a symbolic link pointing to the directory you created. For example:

```
ln -s /disk2/lexmark /opt/lexmark
```

## Installing MarkVision Professional for a Novell NetWare server

MarkVision Professional 11.0 supports the use of Novell NetWare 6 and 6.5 as a server platform. The Novell server must have a Java 1.4.2 VM installed in order for the MarkVision Server to work properly. The MVP Client system is currently not supported on Novell systems.

- 1 Login to your NetWare Server from a Windows system.
- 2 Run the installer and extract the installation files to a directory on a volume that you can access from your system console.
- 3 If you have an existing version of MarkVision Professional installed, you will need to stop the MVP Server processes before upgrading. To stop the MVP Server processes, enter the following command at the server console:

```
SYS:\LEXMARK\MVPS\MVPWEB stop
```

- 4 At the server console, load **NWCONFIG**.
- 5 Choose **Product Options**.
- 6 Choose **Install a product not listed**.
- 7 Specify the path to the directory determined in step 1.  
Press **ESC** to cancel the installation.  
Press **F3** to specify the directory path.
- 8 At the installation prompt, press **Enter** to continue the package installation.

## To stop the MarkVision Server

To save the MarkVision Server settings during a Novell Server shutdown or reset, add the following commands to the `SYS:\SYSTEM\SHUTDOWN.NCF` file.

At the server console, enter the following commands:

```
SYS:\LEXMARK\MVPS\MVPWEB stop
```

```
SYS:\LEXMARK\MVPS\MVPS stop
```

## To start the MarkVision Server

Start the MarkVision Professional Server (MVPS) before starting the MarkVision Professional Web Server (MVPWEB).

If you want MarkVision Professional to start at boot time, add the following commands to the bottom of the `SYS:\SYSTEM\AUTOEXEC.NCF`

```
SYS:\LEXMARK\MVPS\MVPS start
```

```
SYS:\LEXMARK\MVPS\MVPWEB start
```

## *Uninstalling MarkVision Professional for a Novell NetWare Server*

**Note:** The Uninstall process is currently a manual process.

- 1 Stop the MarkVision Professional Server processes.
- 2 At the server console, enter the following commands:

```
SYS:\LEXMARK\MVPS\MVPWEB stop
```

```
SYS:\LEXMARK\MVPS\MVPS stop
```

- 3 Delete the following directory:

```
SYS:\LEXMARK\MVPS
```

**Note:** If you want to save the MarkVision Server settings, do not remove the `SYS:\LEXMARK\MVPS` directory.

## *Upgrading from previous versions of MarkVision*

Prior versions of MarkVision for Windows are easily upgraded by running the installation program. All prior folders, filters, devices, and so on are retained with the new version. If you are upgrading from an earlier release of MarkVision Professional for UNIX systems, make sure you upgrade your MarkVision Clients and server(s) together.

**Note:** When upgrading MarkVision Professional for Unix systems, you should remove the currently installed package.

For versions earlier than MarkVision Professional 6.0, such as MarkVision for Intranets, or classic MarkVision, we recommend that you uninstall the old version before attempting a new installation.

### To export devices from classic MarkVision:

- 1 In Classic MarkVision, under the **Configure - TCP/IP option**, click the **Manage Print Server List** button, and then click **Export to File**.
- 2 Enter the location where you want the file stored.
- 3 Once you have exported the file, you need to edit the file to accommodate the current MVP format. Configure the file path to match the following naming convention:  
**IP <Ip address or hostname> <read community name> <write community name>**
- 4 Install your new version of MVP 11.0, and then click **Load** in the Device Discovery task.
- 5 Select your updated file. Click **OK**. The list is imported for discovery.

## Getting started

Once MarkVision has successfully installed, you are ready to access the the MarkVision Client.

### Invoking the MarkVision Client

Select which version of the MarkVision Client you want to use. You can use either the MarkVision Client Application or the MarkVision Web Client.

### Opening the MarkVision Application

In the application form, the client is installed locally, so it can be launched just like any other program. For example, in Windows environments, you can double-click the **MarkVision Professional** icon on the desktop, or go to **Start → Programs → Lexmark → MarkVision Professional**.

### Accessing the MarkVision Web Client

Since the MarkVision Web Client is browser-based, you will need to open your browser and point it to the MarkVision URL:

**http://<your server>/markvision**

In this URL <your server> is the IP address or hostname of the machine that is running the MarkVision Server.

**Note:** If during installation you did not make MarkVision Professional the default server on your machine, you must use the non-standard port number (9180) in the URL:  
**http://<your server>:9180/markvision.**

## Opening the MarkVision Application on a UNIX system

If you are using MarkVision Professional from a UNIX system, you can access MVP from either a command line or the MarkVision Professional Web Client.

### Using the MVP UNIX Client from the command line:

If it is supported by your workstation, you can use the X Window system. To use MarkVision with X, you must set the display variable.

- 1 Set the DISPLAY environment variable.

- Korn (ksh) and Bourne (sh) shell users type the following:

```
Display=hostname:0.0
```

```
export DISPLAY
```

Where hostname is the name of your workstation.

- C shell users type the following:

```
setenv DISPLAY disphost:0.0
```

- 2 If you are running the MarkVision Professional UNIX Client on a different host computer than your X server, make sure the remote host has permission to access your display. For example, if the MVP UNIX Client is running on the host flora, type the following in the command line:

```
xhost + flora
```

- 3 Type `mvp` in the command line, and then press **Enter**.

### Using the MVP UNIX Client from a Web browser:

Once the MarkVision Web server is configured, a MarkVision Web Client starts when you connect to **/markvision** on that server with your browser.

For example, to start a MarkVision Web Client on a Web server whose IP address is 190.168.112.21, point your browser to the following URL:

```
http://190.168.112.21:9180/markvision
```

## Starting MarkVision Professional

When you open MarkVision Professional for the first time, select the server you want to use. Enter the computer/hostname or IP address of the machine running the MarkVision Server, or click **Browse** to locate it, and then click **Connect**.

If you click **Browse** to locate a supported MarkVision Server, the display will list several server details. This provides you the opportunity to select which instance of the MarkVision Server you want to use based on each individual server's current status. For example, If you have multiple instances of the MarkVision Server on your network, and multiple clients are currently active, you can select

the supported server that holds the least number of connections, allowing you faster access to MVP. Clicking **Hide Details** will remove the server details from the display.

Once you have connected to a MarkVision Server, the setup wizard appears. Use the steps outlined in the wizard to:

- Configure MarkVision Professional to your specific needs.
- Locate and organize devices across your network.
- Establish a device management strategy that lets you quickly begin working with MarkVision.

**Note:** To prevent MarkVision Professional from opening the setup screen at startup, check the **Do not show me this setup window again** box.

If you are new to MarkVision Professional, completing these steps in the setup wizard will help you to get the most out of what MarkVision has to offer. Depending on your needs, some steps may not be necessary.

- 1 Find your devices.** Create device profiles and find printers and print servers on your network.
- 2 Organize your devices.** The setup wizard provides a default set of installation folders that you can install on your system, or you can use the Folder Configuration task to organize your devices into folders based on criteria you choose.
- 3 Customize your device information.** The setup wizard provides default sets of custom tables and views, or you can use the Custom Views and Custom Tables tasks to customize the ways that you view your devices.
  - **Creating custom tables.** Use the Custom Tables task to create a table of specific device information. A custom table can be exported as a comma separated variable (.csv) file, which can be opened by spreadsheet or word processing software.
  - **Creating custom views.** Use the Custom Views task to create multiple views that let you view only the printer attributes you want to see.
- 4 Secure access to available information.** Use the User Accounts and Groups task to grant or restrict access to tasks and devices.

## ***Managing your devices with MarkVision Professional***

After you have configured MarkVision, you can begin exploring the powerful management features that MarkVision has to offer.

- **Using filters.** Use the Filters task to create criteria filters that can be saved and applied to folders.
- **Using device policies.** Use the Device Policy tasks to uniformly configure many devices at once.
- **Scheduling tasks.** Use the Scheduling task to schedule certain tasks.

- **Gathering information about printers.** Use the Custom Tables task to view information about your devices.
- **Managing plug-ins.** Use the Software Update task to install and remove plug-ins for additional device support.

### **The All Tasks list**

There are many more device management tasks available in MarkVision Professional than those listed above. For a complete listing, see the [All Tasks list](#).

## **Basics**

### **Home screen**

After you **log in to MarkVision Professional**, the Home screen appears, which lists things you can do with MarkVision Professional. These lists contain some of the most commonly used functions available in MarkVision Professional. You can customize these lists by selecting **Customize** next to the list's category name.

The MarkVision Professional toolbar is directly below the menus. The icons in this toolbar represent frequent tasks. To add or remove tasks from the toolbar, select **MarkVision Personal Settings** from the menus. With the Personal Settings task, you can also configure the level of message detail and other miscellaneous options.

**Note:** Frequent tasks are also available when you right-click a device in a context menu.

### **Layout**

The left pane of the MarkVision Professional window is typically used to select one or more devices. You can find the devices you want by using the Quick Find feature or Folders. Task information for the selected device(s) appears in the right pane.

### **Using Quick Find**

To use the Quick Find feature, select the type of field that you want to search, enter or select the appropriate value for that search field, and then click **Find**.

The search fields that you can select from are:

- IP Address/Hostname
- Device Name
- Hardware Address
- Model (Printer/Print Server)
- Property Tag
- Serial Number
- Other



IP addresses should be in the dot notation form of X.X.X.X, for example, 192.168.12.34. To perform a network discovery (search a subnet), use a zero(0) or asterisk (\*) as a wildcard. For example, 192.168.0.0 would search the entire Class B network, finding all devices whose address begins with 192.168.

You can also enter SNMP community names to change the read or write access privileges associated with Quick Find. To change the read/write privileges, go to **MarkVision** → **Administrative Settings** or select **Administrative Settings** from the All Tasks list. Then, select the **Quick Find** tab. The default value for the Read and Write fields is “public.” To change the default value, enter the new community names in the appropriate field. The community names are case-sensitive.

**Note:** This changes the MarkVision community name, not the print server community name. To change the print server name, refer to your print server documentation.

## Using Folders

For information on folders see [Creating folders](#).

## Find Results window

Devices that are selected using either the Quick Find or Folders tab are displayed in the Find Results window. Devices that appear with a strikethrough are not supported for the selected task. Devices that are displayed in **red** text are password protected.

## *Multi-select capability*

When you are presented with a list of items, such as printers, you can multi-select them using the Control or Shift key. This lets you edit an attribute for all the selected devices at one time. For example, if the contact name for a group of printers has changed, you can multi-select those particular printers and change the contact name for those printers only, without having to change each one individually.

## *Enhanced accessibility*

MarkVision Professional offers alternative keyboard navigation in accordance with industry standards. MarkVision’s user interface and subsequent task oriented dialog boxes can be navigated exclusively with a keyboard. The navigational features include using the Alt key to activate mnemonic (underlined character) options in the Task bar menus, accelerator key combinations that invoke menu items without navigating the menus, and the ability to “jump” through the different elements of a dialog screen using either the F6 function key, which navigates between sections of the dialog, or the Tab key which navigates specific components in a section.

## *MarkVision tasks*

There are a variety of tasks you can perform using MarkVision Professional, and a variety of ways to access them:

- The All Tasks list on the MarkVision Professional Home screen
- The menus (for example: **MarkVision** → **Personal Settings**)
- The MarkVision Professional toolbar (also available by right-clicking a device)
- The MarkVision Professional (MVP) Home screen

**Note:** Because of its customizable user environment, your version of MarkVision may contain a different set of tasks than those listed below.

## ***All Tasks list***

The following table briefly describes the tasks available from the All Tasks list.

<b>Task</b>	<b>Function</b>
About	View the version information of MarkVision.
Add Devices	Search networks and add devices to MarkVision Professional.
Administrative Settings	Change settings regarding how MarkVision Professional obtains information from the server.
AppleTalk	View or modify the AppleTalk network settings.
Application Links	Configure external applications to launch from MarkVision.
Bookmark Management	Create, save, and edit printer bookmarks in a printer's permanent memory.
Change Password	Change the current user's password.
Communication Password	Synchronize the communication password of one or more devices with a new or existing server, or remove the communication password from a device.
Contact Name and Location	View or modify the contact name or location for a specified device.
Create Windows Print Objects	Create a Windows print object (queue) on a remote host computer.
Custom Media - Custom Paper Name	View or modify custom paper names.
Custom Media - Custom Paper Type	View or modify custom paper type settings.
Custom Media - Paper Loading	View or modify custom paper loading settings.
Custom Media - Paper Texture	View or modify custom paper texture settings.
Custom Media - Paper Type Bin	View or modify custom paper bin settings.

<b>Task</b>	<b>Function</b>
Custom Media - Paper Weight	View or modify custom paper weight settings.
Custom Tables - Create/Manage	Configure and export tables of device information.
Custom Views - Create/Manage	Create custom views with multiple pieces of information.
Device Discovery Profiles	Create discovery profiles to search attached networks and add discovered devices to MarkVision Professional.
Device Discovery Results	Display device discovery results based on specific discovery profiles.
Device Password	Change a selected device's password or create a new password for a device.
Device Policy - Check Device Conformance	Determine if selected devices are conforming to device policies.
Device Policies - Apply	Apply created policies to selected devices to enforce settings.
Device Policies - Create/Manage	Manage list of device policies to quickly set or change device settings (such as print quality), or enforce those settings.
Drivers and Utilities (On the Web)	Open the Lexmark driver and utilities Web page.
E-mail Destinations	Create and manage e-mail destinations for selected devices.
Emulators	View emulator (printer language interpreters) settings for selected printers.
Enter Device Password	Enter a password to gain access to a password protected device for the duration of the current client session.
Export Server Settings	Export MVP Server settings to a file that can be used to back up an existing server or be imported to another server.
Fax (Printer)	View or modify a printer's fax settings.
Fax Destinations	Create and manage fax destinations for selected devices.
Fax Settings	View or modify the fax settings for a specified device.
Feature Overview (Printers)	View printer data, such as identification information, capabilities, code levels, and page count information.
Feature Overview (Print Servers)	View print server data, such as identification information, protocol, and fax settings.
Filters	View or edit the list of saved filters, which can be used to limit the number of devices displayed.

<b>Task</b>	<b>Function</b>
Finishing	View or modify a printer's finishing settings, such as copies, collate, and resolution.
Firmware (On the Web)	Open a Web page to obtain print server upgrades for supported print servers.
Firmware Download (Print Server)	Upgrade your print server firmware.
Folder Configuration	- Organize devices using folders. - Filter folder contents based on printer attributes.
Font Cartridges	View information about any installed font cartridges.
FTP Destinations	Create and manage FTP destinations for selected devices.
General Settings (Printer)	View or modify printer settings, such as job timeout, emulation, and power saver.
General Settings (Print Server)	View or modify print server settings, such as job timeout, contact name, contact locations, and network speed.
Generic File Download	Download miscellaneous files such as PostScript files, universal configuration files (UCF), or font files to one or multiple devices on your network.
Home	Return to the Home screen.
Home Page (On the Web)	Open the Lexmark home page on the Web.
Hosts Table	A configuration of host computer names. A part of Print Permissions Technology.
HTTP Settings	View or modify a device's HTTP settings.
Import Server Settings	Import MVP Server settings from a saved file to a server.
Inputs	View settings for paper trays and other printer inputs.
Install CA Certificate	Install a CA Certificate for one or more printers.
Job Timeout (Print Server)	View or modify a device's job timeouts.
LexLink	View or modify the LexLink network settings.
Manage Global Password List	View and edit a list of passwords for devices managed by MarkVision Professional.
MarkVision Setup	Access the MarkVision Setup Wizard.
Map	Place device icons on a graphical representation of your organization to illustrate the distribution of your printers.
MarkVision Messenger Launch	Open the MarkVision Messenger application.
MFP - Backup Configuration Information	Create a backup copy of all configuration settings on MFP device(s). The backup copy will be used to restore the settings during disk recovery or code update operations.

<b>Task</b>	<b>Function</b>
MFP - Default Copy Settings	View or modify Copy Settings for an MFP device.
MFP - Default Scan to E-mail Settings	View or modify Scan to E-mail Settings for an MFP device.
MFP - Default Scan to Network Settings	View or modify Scan to Network Settings for an MFP device.
MFP - Features	View feature information for multifunction devices.
MFP - General Settings	View or modify General Settings for an MFP device.
MFP - LDAP Settings	View or modify LDAP Settings for an MFP device.
MFP - Manage Function Access	View or modify Function Access for an MFP device.
MFP - OptraImage Job Statistics Settings	View or modify OptraImage™ job statistics settings for an MFP device.
MFP - Specify External Destination File	View or modify OptraImage external destination settings for an MFP device.
MFP Status	View the current status conditions of multifunction devices.
Names of Devices	View or modify a device's name.
NetWare	View or modify the NetWare network settings.
Network Time Protocol	Synchronize a print server's internal clock with the MarkVision Server.
Operator Panel	Display a functional operator panel for a specified printer.
Operator Panel LCD	Display the LCD display from the operator panel for a specified printer.
Operator Panel Lock/Unlock	Remotely lock and unlock a printer operator panel.
Outputs	Summarizes device output options. Associated with the Feature Overview tasks.
Output Bin Names	View or modify a printer's custom bin names.
Page Counts	View a printer's current page count information.
Paper Settings	View or modify a printer's paper settings.
PCL	View or modify a printer's PCL settings.
Personal Settings	Personalize MarkVision to fit the way you work.
Picture of Printer	Display a picture of a selected printer.
Ports	View or modify a device's ports.
PostScript	View or modify a printer's PostScript settings.
PPDS	View or modify a printer's PPDS settings.

<b>Task</b>	<b>Function</b>
Printer Lockdown	Force one or more supported devices to communicate exclusively over a secure communication channel.
Profile Destinations	Create and manage profile destinations for selected devices.
Property Tag	View or modify a property tag (user identification) for a printer.
Publications (On the Web)	Open the Lexmark publications Web page.
Refresh Devices	Refresh cached information for selected printer and/or print server devices.
Registration (On the Web)	Open the Lexmark printer registration Web page.
Remove Devices (Advanced)	Lets administrators remove all or specified devices from the system.
Remove Windows Print Objects	Removes Windows print objects (queues) from remote host computers.
Reset	Reset a specified printer or print server.
Resource Management	Download fonts and overlays to printers.
Scheduling	Specify times to automatically initiate certain tasks.
Service Location Protocol	Enable or disable the Service Location Protocol (SLP) function on a print server.
SNMP Traps	View or modify a device's SNMP Trap Destination.
Software Update (Manage Plug-Ins)	Install and remove new MarkVision Professional plug-ins for additional device support.
Status of Printer	View the current status conditions of selected printers.
Status Overview	View the LCD panel, picture of printer, and status of printer for selected devices.
Storage Devices	View information about a printer's storage devices, such as hard disks and flash memory.
Supplies (On the Web)	Open a Web page where printer supplies can be ordered.
TCP/IP	View or modify the TCP/IP network settings.
Technical Support (On the Web)	Open a Web page where technical support for Lexmark products can be obtained.
Toner/Ink Levels	Monitor toner or ink levels for a specified printer.
User's Guide	Opens the <i>MarkVision Professional User's Guide</i> .
User Accounts and User Groups	Create or edit individual accounts or account groups to restrict access to certain tasks.
User's Table	Configure user printing privileges on devices that support Print Permissions Technology.

Task	Function
Web Page (Print Server)	Open a Web page displaying settings for a selected device.
WLAN	Setup and configure wireless devices (Lexmark N8050).

# 3

## Configuring MarkVision Professional

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### *Adding and removing devices*

MarkVision Professional lets you search your network for devices, such as printers and print servers. You can then schedule and configure discoveries to suit your needs. Once devices are "discovered," their locations are stored on the MarkVision Server, and, by default, populate the All Devices folder.

To discover devices, you must first create a profile (or profiles) for the devices you want to discover. If you have upgraded from MarkVision Professional 10.1 or earlier, any devices that have previously been discovered and stored on the server are available in version 11.0 as a profile labeled Full Discovery. If you have upgraded from MarkVision Professional 10.2, you will not need to create a Full Discovery profile.

Device profiles define the range of devices that you want to discover, letting you select devices specific to your current needs. You can create multiple device profiles, each with a different set of devices. Each profile can then be saved and reused for future discoveries.

### *Creating discovery profiles*

- 1 On the MarkVision Home screen, go to **MarkVision** → **Device Discovery** and select **Manage Discovery Profiles**, or select **Device Discovery Profiles** from the All Tasks menu.
- 2 Click **New**.
- 3 Enter a name for the profile that you want to create. For example, enter My Network.
- 4 Enter any comments about the profile.
- 5 Click **Add** to add devices to the Include list. The Add Address dialog box appears.
- 6 Select the type of address, and enter the range from which the devices will be included. Specify one or more of the following:
  - **TCP/IP address, subnet, or hostname**

IP addresses should be in the dot notation form of X.X.X.X, for example, 192.168.12.34. To perform a network discovery (search a subnet), use a zero(0) or asterisk (\*) as a wildcard. For example, 192.168.0.0 would search the entire Class B network, finding all devices whose address begins with 192.168.

    - You can also search for a device using its hostname.



- After you enter the address information, you can enter SNMP community names to change the read or write access privileges. To change privileges from the default value (public), enter the new community names in the appropriate field. The community names are case-sensitive.

**Note:** This changes the MarkVision community name, not the print server community name. To change the print server name, refer to your print server documentation.

- **TCP/IP address range**

Enter the TCP/IP address range, beginning with the From: box and ending with the To: box.

With this option, you can also enter SNMP community names to change the read or write access privileges. To change privileges from the default value (public), enter the new community names in the appropriate field. The community names are case-sensitive.

**Note:** This changes the MarkVision community name, not the print server community name. To change the print server name, refer to your print server documentation.

- **IPX**

Enter the network number on which your print server resides. It is an eight-digit hexadecimal number; for example, 000C2194. If the print server resides on the same network as your MarkVision Server, enter 00000000 (zeros) for the network number. If you do not know the network number of your print server, you can find it on the print server setup page, under the NetWare settings.

- 7 Click **OK** to return the Manage Discovery Profiles screen. The entered address or address range is now listed under the Include tab.
- 8 Click **Apply**.

**Note:** If you want to discover a device or group of devices without creating a profile, see [Adding devices](#).

## ***Discovering devices***

- 1 Go to **MarkVision** → **Device Discovery** → **Manage Discovery Profiles**.
- 2 Select the profile from the **Discovery Profiles** window that encompasses the devices that you want to discover.
- 3 Click **Start**.
- 4 MVP communicates with the devices included in the selected profile. To stop a discovery at any time, click **Stop Discovery**.

**Note:** Performing a discovery with the Full Discovery profile, or any profile that includes all of the devices on your network, requires a large amount of CPU usage. Running

a full discovery can render the MarkVision Server virtually unusable while the discovery is executing.

## ***Including and excluding devices***

The Include and Exclude tabs on the Manage Discovery Profiles screen display lists of devices that are to be included or excluded from the profile's current device list respectively. When creating a profile, if there are certain devices that were listed in the device range that you entered that you do not want to include in the profile, select the **Exclude** tab and *add* that device to the exclude list. You can then use the Remove and Remove All buttons to remove devices from the include/exclude lists.

### **Examples:**

- If you are the network administrator and know the addresses of routers and computers on your network and do not want to have extraneous traffic created by the discovery, add the addresses of your routers and computers to the exclude list.
- If you want to manage all printers on the 70 subnet except for the secretary's printer, add the 70 subnet in your include list, and then add your secretary's printer address in your exclude list.

## ***Advanced features***

To configure advanced device discovery features, click the **Advanced** tab from the Device Discovery main window. The following are features that may be customized for an advanced device discovery profile:

- **Query each address:** MarkVision Professional sends an individual query to each address specified in the device discovery.
- **SLP Multicast:** MarkVision Professional sends a single SLP (Service Location Protocol) request over the network. An SLP Multicast only generates a brief spike in network traffic.
- **Also search for other vendors' devices:** MarkVision Professional discovers non-Lexmark devices on the network.
- **Maximum number of seconds to wait for a device to respond:** This specifies the maximum amount of time to wait for a device response during device discovery. Adjust this value if devices are not responding or network traffic is heavy.
- **Maximum number of seconds to wait for responses to an SLP Multicast:** This specifies the maximum amount of time to wait for a print server response during an SLP Multicast. Adjust this value if print servers are not responding or network traffic is heavy. Only supported print servers are discovered during an SLP Multicast.
- **Number of retries to perform when a device does not respond:** This specifies the number of attempted retries before an address is ignored. Setting this value beyond 1 does not normally provide greater accuracy. Setting this value to zero (0) disables retries, which may substantially increase speed with little impact on accuracy.

**Note:** Each Discovery Profile can have its own advanced settings.

## ***Import / Export buttons***

You can use the Import and Export buttons to import or export profiles for discovery. They are saved in XML format.

## ***Load / Save buttons***

The Save button saves the information in the Devices to Include on the Server and Devices to Exclude from the Server fields as a text file, which can later be retrieved using the Load button.

## ***Scheduling***

To schedule discoveries, select the **Schedule** task from the All Tasks menu.

You can schedule device discoveries to occur on a daily, weekly, or monthly basis. This ensures that the list of devices MarkVision Professional manages is always current. If your device discoveries are network-intensive, you can schedule them to occur at off hours, when network traffic is at a minimum. Select the profile that you want to use for the discovery, then choose the initial day from the **Start time:** box, and select the time at which the discovery is to occur. You can then decide to have the discovery occur once, daily, weekly, or monthly. When all of your selections are made, click **OK**. For more information on scheduling, see **Scheduling tasks**.

## ***Naming devices***

After you have found all of the devices that you want to manage with MarkVision Professional, you can establish the name that MarkVision will use to identify the device.

MarkVision uses a specific algorithm to determine a device's name. First, it looks to see if a name has been assigned to it from the Names of Devices task. Then MarkVision looks for the following in order: TCP/IP address, hostname, IPX address, Serial Number, and then Property Tag. The order of this list can be changed using the Administrative Settings task.

From the All Tasks menu on the MarkVision Home screen, select **Custom Names**. With this task, you can select the devices that you want, and enter any name you want for the device. For example, name the device My Printer.

**Note:** You must have administrative access to name devices or to use the Administrative Settings task.

## ***Adding devices***

In some situations you may want to discover some devices without creating a profile. In these situations you can use the **Add Devices** task to discover individual or small groups of devices.

## To use the Add Devices task:

- 1 Select **Add Devices** from the All Tasks menu, or select **MarkVision** → **Device Discovery** → **Add Devices** on the MVP Home screen.
- 2 Select a specific device or devices from the list of existing devices on the screen, or click **Add** to enter a new device address, and then click **OK**.
- 3 Click **Start** to begin the discovery.

You can also select the **Exclude** tab to select devices from an existing profile that you *do not* want to include in the discovery.

Select the **Advanced** tab to reset additional discovery settings.

**Note:** You can save any new groups of devices that you establish with the Add Devices task as a new discovery profile by clicking **Save as Profile**.

## *Device discovery results*

After you have performed a device discovery, you can view the discovery's results. You can access device discovery results under **MarkVision** → **Device Discovery** → **Device Discovery Results**.

The discovery results contain a series of log entries detailing the discovery. The Device discovery dialog box also gives you the opportunity to export the device discovery results. To export the results, click **Export**. Browse to the location that you want to save the results, and click **Save**.

## *Removing devices from the server*

If there are any devices that you no longer want to associate with your network, you can remove them from the server's list of managed devices with the Remove Devices task. You can then change the discovery profile to ensure that the devices are no longer discovered in subsequent discoveries. The Remove Devices task is available by clicking the **Remove Devices** icon, located between the navigation buttons and the frequent task icons on the MVP toolbar, in the MarkVision menu under **Device Discovery** → **Remove Devices (Advanced)**, or by selecting **Remove Devices (Advanced)** under the **All Tasks** menu.

To remove devices from the MarkVision Server, browse the existing device folders or use the Quick Find feature to locate the devices that you want to remove. When you have selected all of the appropriate devices, click the **Remove** icon on the MarkVision taskbar. The selected devices are removed from the MarkVision Server.

## *Creating folders*

Folders are a way of grouping devices by particular conditions, such as low toner, or by particular options, such as duplexing. By grouping devices in this manner, it is much easier to find the devices you want.

MarkVision Professional is shipped with a pre-existing root folder, All Devices, which cannot be deleted. All additional folders you create are listed below this root folder. However, you do not have to create additional folders to use MarkVision.

**To create folders:**

- 1** Select **Folder Configuration** from the All Tasks menu, or click **MarkVision → Folders**.
- 2** Select the parent folder.
- 3** Click **New** from the Folder window.
- 4** Enter a name for the new folder.
- 5** Add devices to the folder. There are two methods to populate a folder with devices (printers or print servers):

- Manual selection
- Filter

To add devices manually, select the **Manual Selection** tab, and then select the devices you want.

To add devices through the use of filters, select the **Filter** tab, and configure your filter.

- 6** Click **Apply**.

**Note:** You can also create folders by right-clicking a parent folder, and then clicking **New**.

Manual selection is very useful when dealing with a small number of devices, or if there is a specific device that you want to include in the folder. Filters are the most efficient method for managing a large number of devices. A filter limits the number of devices visible in a folder to only those exhibiting the characteristics you specify, letting you select a limited number of devices from the multitude that are connected to your network. Select multiple filter characteristics for an increasingly narrow printer selection. For example:

Jane is in charge of keeping the printers in her company up and running. She would like to know which ones presently need human intervention or will need attention very soon. To accomplish this, she creates a folder that populates by using filters. In the Device Type list box, she selects **Printers**. She clicks **Advanced**, then selects **Status: Message, Equal To, Paper Jam**. She clicks **New** to create another filter criterion, and then selects **Status: Message, Equal To, Toner Low**. Once Jane applies the filter, the folder will only display printers with paper jams or low toner.

**Note:** When organizing a large number of printers based on frequently changing criteria (such as paper jams), we recommend that you use filters rather than folders to observe the affected devices. The effort needed by the MarkVision Server to continuously update and repopulate folders can dramatically slow your system. As a result, populating folders based on static criteria saves network resources on larger printer networks.

You can also use the Load and Save buttons to import or export a filter set. The Save button saves the filter criteria you have selected as a file which can later be retrieved using the Load button. For more information on creating filters, see [Using filters](#).

## Using filters

The Filters screen lets you create a filter set, which limits the number of devices visible in a list or folder to only those exhibiting the characteristics you specify. Filters can have multiple criteria, allowing for specific device selection. When you create a folder, you have the option to create a filter for that particular folder, or load a previously saved filter and apply it to the folder. A folder with no filter contains all the devices of its parent folder. There are two types of filters:

- **Basic:** Choose one or more common device characteristics as filter criteria.
- **Advanced:** Create multiple filter criteria, some of which require characteristics to be typed into the Value list box. For example, if you have a brand XYZ printer model (that is not in the list of available printer models) with Job Timeout set at 90 seconds, you could specify both:

Parameter	Operation	Value
Model:	Equal To	XYZ

Parameter	Operation	Value
Job Timeout:	Equal To	90

In the above example, both the "90" and "XYZ" would be manually typed into the Value list box.

You can also filter devices by conformance (or lack of conformance) with specific device policies. To create a Device Policy Conformance filter, select the parameter **Policy Conformance** and select either **Is in conformance with** or **Is not in conformance with** for the operation. The value will be one of the device policies on the MarkVision Server (unless no policies have been created yet). For example:

Parameter	Operation	Value
Policy Conformance	Is in conformance with	Jane's Printer Policy

**Note:** Only printers that have all values specified in Jane's Printer Policy are visible if this filter is used.

Click **New** to add additional filter criteria; click the red **X** to remove filter criteria.

## ***When multiple conditions are selected***

- Clicking the **All conditions must be met** radio button means that every device must meet every criterion displayed by the filter.
- Clicking the **At least one condition must be met** radio button means that devices must meet only one condition displayed by the filter.

## ***Device Type***

- You can choose to have your filter include printers, print servers, or both. Specify this in the Device Type list box.

## ***Example 1: Basic filter***

John is in charge of keeping the printers in his company up and running. He would like to know which ones presently need human intervention or will need attention very soon. To accomplish this, he creates a Basic filter.

- 1 Since John is only interested in printers, he selects **Printer** from the Device Type list box.
- 2 From the Select Filter Type list, he selects **Status**.
- 3 He then selects **All Errors** and **All Warnings**.
- 4 He then clicks **Apply**, and the filter is created.
- 5 To save the filter, he clicks **Save Filter As**.

Once John applies the filter to a folder, that folder only contains printers displaying an error or warning state. He can then select another MarkVision task such as Status of Printer to view the new folder he created, letting him see which printers are currently exhibiting errors or warnings.

## ***Example 2: Advanced filter***

Mary would like to create and save a filter that only displays monochrome printers with firmware code level 1.10.17. To accomplish this, she creates an **Advanced filter**.

- 1 Since Mary is only interested in printers, she selects **Printer** from the Device Type list box.
- 2 She then selects the following:

Parameter	Operation	Value
Color	Equal To	Monochrome

- 3 She clicks **New** to create another filter criterion, and then selects the following from the Parameter and Operation list boxes. She must manually type in the firmware code (1.10.17).

Parameter	Operation	Value
Printer Firmware Code	Equal To	1.10.17

- 4 Since Mary's printers need to meet both conditions, she clicks the **All conditions must be met** radio button.
- 5 To save the filter, Mary clicks **Save Filter As**.

Once Mary applies the filter to a folder, that folder only contains monochrome printers with a firmware code equal to 1.10.17.

## ***Creating user accounts and user groups***

The User Accounts and Groups task lets you create and manage user accounts and account groups that define the user's access to the devices that MarkVision manages.

Accounts are designed as a security measure. By having accounts, you limit user access to specific tasks. Similarly, you can place several accounts into account groups. This lets you distribute a range of privileges across a number of accounts.

To access the User Accounts and Groups task, go to **MarkVision** → **User Accounts and Groups** or select **User Accounts and Groups** from the All Tasks menu on the MarkVision Home screen. When adding accounts or account groups, a wizard dialog box appears to guide you through the process.

The MarkVision Setup Wizard helps you create some initial accounts. You do not have to add accounts to use MarkVision, but we recommend that you at least create an administrator account to ensure the security of your devices.

Only administrators or designated users can add or delete accounts. As people join or leave your staff, you may need to create or update MarkVision user accounts. If you do not want a specific account to have full administrative rights, you can either specify the appropriate **privileges** when the account is created or **assign the account to a group** that contains rights to only the tasks you allow.

### ***Create an administrator account***

It is only possible to create an Administrator account if no other accounts have previously been created. To complete the creation of an administrator account, you must also create at least one other user account. For information on creating additional user accounts, see **Create a new user account**.

- 1 In the **Accounts** section of the users table, click **Add**.
- 2 Enter the administrator account name and password.



- 3 Confirm the password that you entered. The indicator light to the right of the field turns green and enables the OK button when the password confirmation is entered correctly.
- 4 Click **OK**.

## **Create a new user account**

An administrator account must be created before a new user account can be completed.

- 1 In the **Accounts** section of the users table, click **Add**.
- 2 Enter the account name and password.

**Note:** If you are utilizing user authentication with LDAP, with the exception of an administrator account, the account name should correspond to an existing account listing on your LDAP server. Similarly, an account password is not needed as user passwords will instead be verified with your company's LDAP server. However, An MVP administrator account will always need an authentic user ID and password specific to MVP.

- 3 Confirm the password that you entered. The indicator light to the right of the field turns green and enables the Next button when the password confirmation is entered correctly.
- 4 Click **Next**.
- 5 Select the privileges that will be available to the account from the Available Privileges window.
- 6 Click the (>) buttons to add or remove the selected privileges to and from the user account.
- 7 Click **Next**.
- 8 Select all the device folders that the user account will have access to.
- 9 Click **Finish**.

## **Create an account group**

By putting user accounts into groups, you can ensure that your user accounts are configured uniformly. If, for example, you wanted a group of users to only have access to certain tasks on certain devices, you could create an account group to:

- Specify the user accounts to be included in the group
- Specify the tasks to be available to the group
- Specify the devices to be available to the group

For example:

Group	Access rights	Devices
Help desk	Reset printers and print servers; Change printer and print server settings	All devices
Executive secretaries	Monitor toner and paper supplies	Respective department printers only
Department B73	Change printer settings; View status; Discover printers	Department printers only

**Note:** If you assign task privileges for your users and then add the user accounts to a group, your users will have access to tasks granted by both the account and the group. For example, if a user account is not given access to the Device Discovery task, and that user account is a member of an account group that grants access to the Device Discovery task, that user account will have access to Device Discovery.

### ***Create a user group***

- 1 In the **Groups** section of the users table, click **Add**.
- 2 Enter the group name.
- 3 Select the user accounts that will be assigned to this group.
- 4 Click **Next**.
- 5 Select the privileges that will be available to the user group from the Available Privileges window.
- 6 Click the (>) buttons to add or remove the selected privileges to and from the user group.
- 7 Click **Next**.
- 8 Select all the device folders that the user group will have access to.
- 9 Click **Finish**.

### ***Edit or remove an existing user account or group***

- **To edit a user account or group**
  - 1 Double-click the account or group that you want to edit, or select the desired account or group, and then click **Edit** in the corresponding section of the table.
  - 2 Select the appropriate step in the wizard, and adjust the account or group attributes accordingly.
  - 3 Click **Finish**.

- **To remove a user account or group**
  - 1 Select the account or group that you want to remove, and then click **Remove**.
  - 2 If the Confirm Account and Group Deletion setting is enabled under Personal Settings task, enter *your* user account and password into the confirmation prompt, and then click **OK**. If a password is not required, click **OK**.

**Note:** Removing groups may affect a user's access rights. You cannot recover a group once it has been removed.

## ***Assigning user privileges***

MarkVision administrators can restrict the access of other MarkVision users so they can only perform certain tasks on certain devices. To control user privileges, create accounts and account groups (**User Accounts and Groups task**). When you set up a group, determine what tasks the group can perform, or assign them individually when creating an account. You can also determine which devices the users can view.

## ***Administrator privileges***

If you decide to create accounts in MarkVision, you are required to create an administrator account. This administrator account is authorized to perform all MarkVision tasks on all devices.

**Note:** If no accounts (administrator or otherwise) are created, all MarkVision users have authorization to perform all tasks.

## ***Designated user privileges***

For non-administrator accounts, user privileges and accessible devices are either defined by the parameters specified when the user account was created, or the group assigned to the user.

# 4

## MarkVision Professional Security

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### *Adapter password conformance*

MarkVision Professional emphasizes the password protection of individual network devices. Access to network devices that are password protected through MVP are tightly regulated, increasing MarkVision's security and providing MVP with another level of device management options.

There are three tasks at the center of adapter password conformance. The Enter Device Password task provides password protected access to specific network devices, the Device Password task lets you set or change device passwords on network devices, and the Manage Global Password List task lets you manage a password list that provides access to numerous devices on a user by user basis.

### *Enter Device Password task*

When a device in MVP is not supported by a specific task, it is displayed with a black line through the device icon and IP address. Similarly, network devices that are password protected are displayed in red. To gain access to these devices, a user must enter the device password. The Enter Device Password task provides the opportunity to enter a device password to gain temporary access to a network device for the duration of the current client session.

### **Using the Enter Device Password task**

- 1 Go to **MarkVision** → **Enter Device Password** or select **Enter Device Password** from the All Tasks list.
- 2 Select the device that you want to access.
- 3 Enter the device password.
- 4 Click **Apply**.

### *Device Password task*

The Device Password task lets you set a new password on a network device or change an existing device password. Once a password has been set on a device, the device's display in the Find Results window turns red to indicate that it is password protected.

## Using the Device Password task

- 1 Go to **Settings** → **Security** → **Device Password** or select **Device Password** from the All Tasks list.
- 2 Select the device that you want to set a password for.
- 3 Edit the **Old Password** field accordingly:
  - a If you want to change an existing device password, enter the device's current password.
  - b If you want to create a new device password, delete any text in the **Old Password** field and proceed to the next step.
- 4 Enter the new password in the **New Password** field.
- 5 Confirm the device password. If the passwords match, the light next to the field turns green. If the passwords do not match, the light turns red.
- 6 Click **Apply**.

## To remove a password from a device

- 1 Go to **Settings** → **Security** → **Device Password** or select **Device Password** from the All Tasks list.
- 2 Select the device that you want to remove the password from.
- 3 Enter the device's current password.
- 4 Delete any text from the **New Password** and **Confirm New Password** fields so that both text fields are blank.
- 5 Click **Apply**.

## *Manage Global Password List task*

The Manage Global Password List task opens a list of the device passwords for your network devices. When a user has access to the Manage Global Password List task, if a network device's password is included in the list, the user is provided access to any device that password applies to on the network. Each entered password is displayed in uppercase in the device password list. For security purposes, because this list displays important device passwords, we recommend that access to this task be limited only to authorized personnel.

## To add a device password

- 1 Go to **MarkVision** → **Manage Global Password List** or select **Manage Global Password List** from the All Tasks list.
- 2 Click **Add**.

- 3 Enter the new password.
- 4 Click **OK**.

### **To edit a device password**

- 1 Go to **MarkVision** → **Manage Global Password List** or select **Manage Global Password List** from the All Tasks list.
- 2 Select the password you want to edit.
- 3 Click **Edit**.
- 4 Enter a new password.
- 5 Confirm the changed password.
- 6 Click **OK**.

### **To delete a device password**

- 1 Go to **MarkVision** → **Manage Global Password List** or select **Manage Global Password List** from the All Tasks list.
- 2 Select the password you want to delete from the list.
- 3 Click **Remove**.
- 4 Click **Yes**.

**Note:** Click **Remove All** to delete all passwords from the list.

## ***Confidential print job settings***

For some supported printers, confidential print jobs can be associated with a PIN access number that a user must enter at the printer operator panel before the document will be printed. This prevents unauthorized users from gaining access to confidential materials in a shared-printer environment. In order to help prevent user access to confidential materials from being compromised, MVP 11.0 has implemented two controls that affect how confidential print jobs are handled by a printer: Confidential Print Job Lockout and Confidential Print Job Expiration.

The Confidential Print Job Lockout feature limits the number of attempts that a user can make at entering the PIN access number for a confidential print job before the document is deleted from the printer queue. The Confidential Print Job Expiration feature lets an administrator determine the specific amount of time that a confidential print job will remain idle in the printer queue before it is deleted.

## ***Using Confidential Print Job Lockout***

The Confidential Print Job Lockout feature is available under both the General Settings (Printer) task and the Device Policy tasks.

### **To use Confidential Print Job Lockout with the General Settings (Printer) task:**

- 1** From the MarkVision Professional Home screen, go to **Settings** → **Printer** → **General Settings** or select **General Settings (Printer)** from the All Tasks list.
- 2** Select the device(s) that you want to enable Confidential Print Job Lockout for.
- 3** In the **Confidential Print Job Lockout** drop down list, select the number of attempts the user will have to enter the correct PIN number before the print job is deleted. The default setting for this feature is Off (unlimited attempts), and can be set within the range of 2 —10 attempts.
- 4** Click **Apply**.

### **To use Confidential Print Job Lockout with the Device Policy tasks:**

- 1** From the MarkVision Professional Home screen, go to **Actions** → **Device Policies** → **Create/Manage** or select **Device Policies —Create/Manage** from the All Tasks list.
- 2** Click **New**.
- 3** Select **For Any Printer**, and then click **Continue**.
- 4** Expand the **General Settings** folder.
- 5** Click the **Confidential Print Job Lockout** check box.
- 6** Select the number of attempts the user will have to enter the correct PIN number before the print job is deleted. The default setting for this feature is Off (unlimited attempts), and can be set within the range of 2 —10 attempts.
- 7** Click **Apply**.

## ***Using Confidential Print Job Expiration***

The Confidential Print Job Expiration feature is available under both the General Settings (Printer) task and the Device Policy tasks.

### **To set Confidential Print Job Expiration with the General Settings (Printer) task:**

- 1** From the MarkVision Professional Home screen, go to **Settings** → **Printer** → **General Settings** or select **General Settings (Printer)** from the All Tasks list.
- 2** Select the device(s) that you want to enable Confidential Print Job Lockout for.
- 3** In the Confidential Print Job Expiration drop down list, select the period of time that the confidential print job will remain in the printer queue before being deleted. The default setting for this feature is Off (unlimited), and can be set to 1 hour, 4 hours, 1 day, or 1 week.

- 4 Click **Apply**.

**To set Confidential Print Job Expiration with the Device Policy tasks:**

- 1 From the MarkVision Professional Home screen, go to **Actions** → **Device Policies** → **Create/Manage** or select **Device Policies – Create/Manage** from the All Tasks list.
- 2 Click **New**.
- 3 Select **For Any Printer**, and then click **Continue**.
- 4 Expand the **General Settings** folder.
- 5 Click the **Confidential Print Job Expiration** check box.
- 6 Select the period of time that the confidential print job will remain in the printer queue before being deleted. The default setting for this feature is Off (unlimited), and can be set to 1 hour, 4 hours, 1 day, or 1 week.
- 7 Click **Apply**.

## ***Secure communication***

MVP 11.0 provides the option of secure communication between the MarkVision server and network devices that support the same security protocol. This allows system administrators to communicate with, configure, control, and retrieve information from devices on the network while reducing the threat of either user credentials or device commands being compromised.

Secure communication can be implemented by first establishing the communication security settings for the MarkVision Server either through the initial MVP setup process, or by accessing MVP's administrative settings. Security may then be established for specific devices, provided the device is capable of communicating securely.

Communication security for devices consists of setting a communication security password using the Communication Password task, and "locking down" a device using the Printer Lockdown task. The Communication Password task lets an administrator establish a communication security password for a device by synchronizing it with the server's communication password. Both the server and the device must use the same communication security password in order for a secure communication channel to be opened. Locking down a device forces the device to communicate only over a secure channel when sending and receiving configuration information. It is possible to communicate securely with a printer that is not locked down even if the communication password has not been set for the device. It is also possible to set the communication password for a device without locking it down. However, if a communication password is set for a device, it must match the server communication password in order to establish a secure channel. In addition, it is not possible to lock down a device without first setting the communication password, and a secure communication channel must be open between the device and the server in order for the communication password to be changed for a device.



The degree of security with which the devices and the server communicate over the network is then determined by the security level that has been set on the MarkVision Server in conjunction with the communication security that has been applied to the device.

**Note:** Secure communication is limited to configuration commands between the host computer and the device, not for printing.

## ***Setting server communication security***

There are two elements of server communication security: establishing a communication security password for the server and setting the server communication security level. The server communication security password can be set in the MarkVision Setup wizard or through the Administrative Settings task. The server communication security level is set exclusively through the Administrative Settings task. The default server security level is *Low*.

### **Setting the server communication security password**

#### **If using the MarkVision Setup Wizard:**

- 1** The MarkVision Setup Wizard appears when the application opens. If the setup wizard does not appear, go to **MarkVision** → **MarkVision Setup** from the MarkVision Home Screen or select **MarkVision Setup** from the All Tasks list.
- 2** Proceed through the MarkVision Setup Wizard to **Step 6: Secure Communication**.

**Note:** It is not necessary to complete each step of the setup wizard. To go directly to secure communication setup, click **Step 6** at the top of the wizard.

- 3** Enter a server communication password.
- 4** Confirm the password.
- 5** Click **OK**.

#### **If using the Administrative Settings task:**

- 1** Go to **MarkVision** → **Administrative Settings** or select **Administrative Settings** from the All Tasks list.
- 2** Select the **Communication Security** tab at the top of the dialog.
- 3** Click the **Communication Password** button.
- 4** If the server has an existing password, enter the password in the **Current Password** field.
- 5** Enter the new password.
- 6** Confirm the new password.
- 7** Click **OK**.

## Setting the server communication security level

- 1 Go to **MarkVision** → **Administrative Settings** or select **Administrative Settings** from the All Task list.
- 2 Select the **Communication Security** tab at the top of the dialog.
- 3 Move the slide bar to indicate the desired communication security level for the server. Server communication security consists of four security levels:

Server security level	Effect
High	This setting allows only secure communication. Devices that are not capable of secure communication will be discovered, but communication between the server and the device will not be possible. Devices that are not capable of secure communication can be identified by a red circle and slash over the device icon.
Medium	This setting allows both secure and insecure communication, but prefers secure communication. Communication is secure if the device is capable of secure communication whether it is locked down or not. Devices that are not locked down and/or are incapable of secure communication will continue to communicate over insecure channels.
Low (Default)	This setting allows both secure and insecure communication, but prefers insecure communication. Communication is secure only if the device is capable and locked down. All other communication is insecure.
Off	This setting allows only insecure communication. Devices that are locked down will not be able to communicate with the server.

**Note:** The current MarkVision server security level is displayed in the bottom right corner of the MarkVision Professional Home Screen.

- 4 Click **Apply**.
- 5 Click **OK**.

## Selecting Server-to-Client security

The Communication Security tab in the Administrative Settings Dialog also provides an administrator with the option to use a Secure Socket Layer (SSL) for communication between the MarkVision Server and Client. For more information on SSL, see [LDAP Server authentication](#) or refer to your LDAP Server documentation.

- 1 Go to **MarkVision** → **Administrative Settings** or select **Administrative Settings** from the All Task list.
- 2 Select the **Communication Security** tab at the top of the dialog.
- 3 Click the **Use SSL for Server-Client Communications** check box to enable SSL communication.

- 4 Click **Apply**.
- 5 Click **OK**.

## ***Setting communication security for devices***

The two tasks that control communication security for devices are the Communication Password task and the Printer Lockdown task. The Communication Password task lets the user synchronize the communication password of one or more devices with a new or existing server or lets the user remove the communication password from one or more devices. In order for secure communication to take place the server and device must use the same communication password. Synchronizing a device password sets the communication password for the device to the same password that is used by the server.

The Printer Lockdown task lets a user force one or more supported devices to communicate exclusively over a secure channel.

Before either the Communication Password task or the Printer Lockdown task may be implemented, a server communication security password must first be set. If a user attempts to access one of these tasks before a server communication password has been set, the user will be prompted to set a password before the task will open.

### **Using the Communication Password task**

- 1 From the MarkVision Professional Home Screen, go to **Settings** → **Security** → **Communication Password** or select **Communication Password** from the All Tasks list.
- 2 Select the devices that you want to establish a password for using either the Quick Find or Folders tab in the Find Results window. You can use Ctrl + click to select multiple devices.

**Note:** Devices that are not capable of secure communication are displayed with a red circle and slash over the device icon in the Find Results window.

#### **To synchronize the device communication password with the MarkVision Server:**

- 1 Click the **Synchronize with Server** button.
- 2 Click **Yes**.

#### **To synchronize the device communication password with a new server password:**

- 1 Click the **Synchronize with Server** button.
- 2 Click the **I want to change the communication password of the server before synchronizing** check box.
- 3 Click **Yes**.
- 4 Enter the new server communication password.
- 5 Click **OK**.

### To remove the device communication password:

- 1 Click **Remove Password**.
- 2 Make sure the device has not been locked down. For more information on printer lockdown, see Using the Printer Lockdown task.
- 3 Click **Yes**.

### Using the Printer Lockdown task

- 1 From the MarkVision Professional Home Screen, go to **Settings** → **Security** → **Printer Lockdown** or select **Printer Lockdown** from the All Tasks list.
- 2 Select the devices that you want to establish a password for using either the Quick Find or Folders tab in the Find Results window. You can use Ctrl + click to select multiple devices.

**Note:** Devices that are not capable of secure communication are displayed with a red circle and slash over the device icon in the Find Results window.

- 3 Click the **Lockdown** check box to lock down the device. To remove lockdown from a device, uncheck the check box.

## *Secure viewing of encrypted hard disk drives*

Some supported devices contain encrypted hard disk drives to prevent information stored on the devices from being compromised. MVP is capable of retrieving hard disk drive information without interfering with the security of the device.

If the device has an encrypted hard disk drive and is communicating over a secure channel, an administrator can use the Storage Devices task to view the drive. As a precaution, if the hard disk drive is encrypted and the device is *not* communicating securely, the task will not display the hard disk drive information. In addition, though MVP is able to view encrypted hard disk drives, MVP will not allow a user to change the encryption for the device.

To access the Storage Devices task, go to **Features** → **Storage Devices** or select **Storage Devices** from the All Tasks list.

## *User authentication*

MarkVision Professional utilizes three security techniques to authenticate user access to MVP: LDAP Server authentication, active session expiration, and account password expiration.

## ***LDAP Server authentication***

MVP Administrators can use their company's LDAP server to authenticate user IDs and Passwords, eliminating the need for MarkVision Client users to maintain separate login IDs and passwords for use with MarkVision Professional.

If an administrator chooses to utilize LDAP authentication, when creating a new user account they will only enter the user's existing network login ID and leave the password field blank. Then, when a user logs into MVP, they will enter the user ID and password that they use for their company's local network. The MarkVision Server then accesses the company's LDAP server's directory service and authenticates the user's login through either a simple bind protected by SSL, or a secure bind using Kerberos.

**Note:** The only directory service that MarkVision Professional 11.0 currently supports is Microsoft Active Directory.

When enabling LDAP server authentication, administrators have three modes of LDAP authentication to choose from: Anonymous, simple (Default), and secure. The use of each of these modes of authentication is determined by how the LDAP server is set up. To use simple LDAP authentication, an MVP Server account will need to be set up on the LDAP server. Also, when using simple LDAP authentication to utilize SSL, select the SSL check box and then select the appropriate SSL certificate from the store to complete the setup.

If using secure (Kerberos) LDAP authentication, the need to set up an MVP Server account will be determined by the current Kerberos configuration. For information on determining the need to set up an MVP Server account for Kerberos, see your Kerberos documentation.

### **To enable LDAP Server authentication**

LDAP Server authentication is only accessible through the Master Administrator account. If you are upgrading from a previous version of MarkVision Professional, open the **User Accounts and Groups** task under the MarkVision menu, or select **User Accounts and Groups** from the All Tasks list. Select the administrator account and click **Edit**.

If MarkVision Professional is being installed for the first time, the option to set up LDAP Server authentication will be available when creating the Master Administrator account.

**Note:** LDAP authentication works for all user accounts with the exception of the Master Administrator account. As a result, the Master Administrator account will still need to contain a password that is unique to MarkVision Professional. Make sure that the administrator password is defined before proceeding with LDAP Server authentication setup.

- 1** Once the Master Administrator account wizard has been accessed, enter a master administrator account name and password, then click the **Authenticate with an LDAP Server** check box.
- 2** Select the authentication mechanism to be used from the drop-down list. The options are Anonymous, Simple, and Secure.

- 3** Click **Next**.
- 4** Enter your LDAP Server information.
  - a** If Anonymous or Simple is selected as the authentication mechanism:

Enter the **LDAP Server Address**, **Port Number**, **Search Base**, and **User Attributes** in the **LDAP Settings** area.
  - b** If Secure is selected as the authentication mechanism:

Enter the **KDC IP HostName** and **Realm** (Domain Name) of your LDAP Server in the **Kerberos Settings** area.
- 5** Enter the MVP Server information. This step is needed only if your LDAP Server configuration requires authentication by the MVP Server.
  - a** If Anonymous is selected as the authentication mechanism:

Proceed to step 7.
  - b** Simple is selected as the authentication mechanism:

In the **MVP Server LDAP Account** area, enter a **Distinguished Name** and **Password** that was previously set up on the LDAP Server.
  - c** If Secure is selected as the authentication mechanism:

In the MVP Server Account area, enter a **User Name** and **Password** that was previously set on the LDAP Server.
- 6** If Secure is selected as the authentication mechanism, click **Finish**. If Anonymous or Simple is selected, proceed to step 7.
- 7** If Anonymous or Simple is selected as the authentication mechanism, and you want to use SSL, click the **Use SSL** check box, enter the Certificate Store password, then click **Next**. If you do not want to use SSL, click **Finish**.
- 8** Select the appropriate certificate for use with the SSL protocol. Without the proper certificate, the SSL protocol will not work. The LDAP server should have a facility for issuing a certificate request.
- 9** Click **Import**.
- 10** Click **Finish**.

### ***Active session expiration***

If active session expiration has been enabled, and if an MVP Client session remains idle for a specified period of time, a dialog appears prompting the user to re-enter their password to regain access to the application. Active session expiration helps to prevent unauthorized users from accessing a MarkVision Client that has been left unattended.

## To use active session expiration

- 1 Go to **MarkVision** → **Administrative Settings** or select **Administrative Settings** from the All Tasks list.
- 2 Under the Intervals section of the dialog, specify the active session expiration interval in minutes (10 to 60 minutes). To remove active session expiration, delete the current number in the box.
- 3 Click **OK**.

## *Account password expiration*

To reduce the likelihood of a password being compromised, administrators can choose to set a password expiration interval for user accounts. After a specified amount of time, a user account password will become invalid, forcing users to regularly change their MVP passwords.

Account password expiration applies to all users with the exception of the administrator, unless LDAP Server authentication has been enabled. If LDAP Server authentication is used, account password expiration will not be enabled as password security will depend on your company's existing password security and network protocols.

**Note:** To eliminate the need for the administrator to change each user account password for every expiration interval, all users should have access to the Change Password task.

## To set the account password expiration interval

- 1 Go to **MarkVision** → **Administrative Settings** or select **Administrative Settings** from the All Tasks list.
- 2 Under the Intervals section of the dialog, specify the account password expiration interval in days. To remove the password expiration interval, select **Never**.
- 3 Click **OK**.

## To change your account password

- 1 Go to **MarkVision** → **Change Password** or select **Change Password** from the All Tasks list.
- 2 Enter your current password.
- 3 Enter your new password.
- 4 Confirm your new password. If the passwords match, the light next to the field turns green. If they do not match, the light turns red.
- 5 Click **OK**.

# 5

## Managing devices

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### *Finding the devices you want*

There are numerous ways to find devices using MarkVision. You can search for one device using specific criteria, or multiple devices using a variety of methods.

**Note:** MarkVision only recognizes devices that have been discovered using the Device Discovery task (see [Adding and removing devices](#)), or Quick Find by Address. Once MarkVision recognizes a device using one of those methods, that device can later be found by its other attributes, such as its serial number or a property tag.

Here are some suggested methods for finding one or more printers in MarkVision:

- If you know a specific setting for a printer, you can use this attribute to find it. For example, you can find a printer using its IP address, name, serial number, or a property tag. First, select a task to perform. Using the Quick Find tab, pick the attribute you want to use in your search from the Select a field to search list. Type the attribute information in the appropriate box, and then select **Find**.

You can substitute the asterisk (\*) character as a wildcard for unknown information in your search. It acts as a placeholder for any number of characters. For example, you could enter 192.168.12.\* as your search criteria.

- If you monitor only 10 printers in MarkVision, the easiest way to find the one you want is to scan the tabs in the Feature Overview task for the feature you want. Select **Feature Overview (Printers)** from the All Tasks list. Choose the **Folders** tab, and view the folder that contains the printers you want to choose from. You can then scan the various features columns. Click any column heading to sort the printers according to the criteria you want. With only a few printers, you should easily find the printer you are looking for.
- Let's say, however, that you have 800 printers distributed over a large network, and you need to find all the color printers with duplex units. First, scan your folders to see if you already have one for color or duplex printers. Otherwise:
  - 1 Choose the **Quick Find** tab, and then select **Other** from the Select a field to search list.
  - 2 Click **Find Parameters....**
  - 3 Configure the filter to find only color printers with duplex units.

For more information on configuring filters, see [Using filters](#).



- 4 Click **OK**, and then click **Find**. A list of any color duplex printers on your MarkVision Server appears.

You can also create a folder that automatically populates itself with color printers that have duplex units. For help creating such a folder, see [Organizing devices](#).

## ***Creating custom views***

With the Custom Views task, you can create multiple views that let you view only the printer attributes you would like to see.

### ***To create a custom view***

- 1 Select **Custom Views - Create/Manage** from the All Tasks menu.
- 2 Click **New**.
- 3 Give the custom view a name.
- 4 Choose the printer attributes you would like to add to this view by clicking the **New Component** icon (next to the Name field).
- 5 As you select the attributes, blocks indicating the size of the data appear in the window below. Arrange the blocks so that each one can be easily viewed.
- 6 Click **Apply**.

Once created, custom views are available from the All Tasks list. A custom view is listed by the name you gave it in the steps above. You can also select your custom view by clicking **View** → **Custom Views** → **<custom view name>** from the menu bar.

### ***To edit a custom view***

- 1 Select **Custom Views - Create/Manage** from the All Tasks menu.
- 2 Select the custom view to change.
- 3 Change the custom view as appropriate.
- 4 Click **Apply**.

## ***Creating custom tables***

Custom Tables provide an easy interface with which to view device information. After it has been configured, a custom table can be exported as a comma-separated variable (.csv) file, which can be opened by spreadsheet or word processing software.

## ***Creating a custom table***

- 1 Select **Custom Tables - Create/Manage** from the All Tasks menu.
- 2 Click **New**. (To edit an existing custom table, click the table's name.)
- 3 Give your table a descriptive name.
- 4 From the Available Columns box, select the items to be included in the table. You can use the Ctrl or Shift keys to select multiple items.
- 5 Click the arrow to move the selected items into the Columns In Use box. You can then arrange the columns by using the up and down arrows. For example, if you wanted **Duplex Option** to be the first column of the table, you would move it to the first position in the Columns In Use box.
- 6 Choose how to sort the rows of your table. For example, if you choose **Color** from the Sort Custom Table By list, and then click **Ascending**, your table lists color printers first.
- 7 If you want your Custom Table to be a Frequent Task, click the **Frequent Task** box in the upper right corner. Your custom table is then available from the MarkVision Professional toolbar or when you right-click a device.
- 8 Click **Apply**.

Your Custom Table is also available by selecting **View → Custom Tables → <your custom table>**.

## ***Viewing a custom table***

- 1 Select the devices you want to appear in the table.
- 2 Select your custom table from the All Tasks menu, or select **View → Custom Tables → <your custom table>**. Your custom table appears.
- 3 To print your custom table, click **Print**. To export your custom table, click **Export**.
- 4 To edit a custom table while viewing it:
  - Reorganize columns by dragging them.
  - Click a column heading to sort by that column.
  - Right-click the table to save your changes or reset to the default column and sort order.

**Note:** These changes do not change the table settings as defined in the Custom Tables task; they are unique to each user account. To change the default column and sort order, you must use the Custom Tables task.

## *Using device policies*

A device policy contains saved printer or print server settings. When a policy is created, it can then be applied to one or more devices. The device's settings are then reconfigured to match the settings listed in the policy. Any setting that is not applicable to the device is not applied.

### *Reasons to create a device policy*

- To enforce a standard configuration across a set of devices. For example, Power Saver should be set to Off for all printers, and Printer Timeout set to 20.
- To use multiple configurations for a device. For example, one policy could set Toner Saver on and low resolution for draft printing, while another policy could set Toner Saver off and high resolution for final document printing.

### *Tasks associated with device policies*

- **Device Policies - Create/Manage.** Create, edit, or remove a policy.
- **Device Policies - Apply.** Apply a policy to one or more specified devices.
- **Device Policies - Check Conformance.** Determine if selected devices are conforming to device policies.
- **Scheduling.** Specify days and times to automatically apply a policy or perform a conformance check.

### *Create a device policy*

Let's say you want to duplicate the printer settings you have configured for one printer to several new printers.

- 1 Select the **Device Policies - Create/Manage** task.
- 2 Click **New** and select the **based on a specific device** option.
- 3 Select the device whose settings you want to copy, and then click **OK**.
- 4 Give the new policy a meaningful name, such as "Company Printer Settings."
- 5 Click **Apply**.

### *Apply the device policy*

Select the **Device Policies - Apply** task.

Select the printers you want to update with the new policy from the device list. If the printers you want to update do not show up in the list, you can search for them. (See **Finding the devices you want** for help.)

Select the device policy you created ("Company Printer Settings") from the Device Policies list and click **Apply Policy**.

## ***Check device policy conformance***

The **Device Policies - Check Conformance** task displays a selected device's current settings in comparison to its applied device policy.

To access the task:

- 1** Select **Device Policies - Check Conformance** from the All Tasks list.
- 2** Select the device you want to check for policy conformance.
- 3** Compare the present device settings with the policy settings.

## ***Scheduling device policies***

You can set up a schedule telling MarkVision when to apply specific policies on one or more devices. This might be useful for resetting defaults for your devices each day or checking a device's conformance to a policy. For scheduling information, see **Scheduling tasks**.

**Note:** Not all devices support the device policy task. Unsupported tasks appear with a line through the device name.

## ***Scheduling tasks***

The Scheduling feature lets you perform a task such as Device Discovery or Generic File Download on a specific day at a specific time. Each task can have multiple schedules.

### ***Tasks you can schedule using MarkVision***

- Generic File Download
- Device Policies: Apply Policies
- Device Policies: Check Conformance
- Firmware Download
- Device Discovery
- Remove Devices
- Resource Management

## ***To schedule a task***

When you access the Scheduling task, the scheduling screen appears with a list and calendar showing all presently scheduled events.

- 1** Select **Scheduling** from the All Tasks menu or click **Actions** → **Scheduling**.
- 2** Click **Add**.
- 3** Select the event you want to schedule and type a description of the event. Click **Next**.
- 4** Select the date and time you want the event to take place. You can schedule an event to occur on a daily, weekly, or monthly basis. If your scheduled event is to occur on a weekly or monthly basis, select the days on which you want it to occur.
- 5** Click **Next**.
- 6** Select the type of database (if applicable) and the database's location (URL) where you want to store the results of the scheduled event.
- 7** Enter your user name and password in the appropriate fields. Click **Next**.
- 8** Select discovered devices from the device folders window, or use the Quick Find feature to locate new devices and place them in the selected devices window using the (>) buttons.
- 9** Once you have selected all of the devices that you want to associate with the event you are scheduling, click **Finish**.

The scheduled event now appears in the calendar window of the Scheduling task.

**Note:** To schedule a device discovery, use the **Device Discovery task**.

## ***Managing plug-ins***

You can download and install new MarkVision plug-ins on your MarkVision Server for added device support. The plug-ins you install will, in most cases, also contain downloadable client components. Relevant client information then downloads to your workstation when you log into the MarkVision Server.

To access the Software Update (Manage Plug-Ins) task, select **MarkVision** → **Software Update (Manage Plug-Ins)** on the MVP Home screen, or select **Software Update (Manage Plug-Ins)** from the All Tasks list.

The Manage Plug-Ins screen lists all of the plug-ins that are currently installed. A list of all of the currently installed plug-ins is also available on the About MarkVision Professional screen, which you can access through the About task. If there are no plug-ins listed, you can download the current updates from the Lexmark Web site at [www.lexmark.com](http://www.lexmark.com) .

The manage plug-ins screen then provides two management options: Remove and Install New.

- **Remove**

The Remove option lets you uninstall a selected plug-in. First select the plug-in(s) that you want to uninstall from the list. Click **Remove**. This removes the selected plug-in(s) from the server and the client. The uninstall script on both the server and the client then determines if a restart is needed.

- **Install New**

When you click **Install New**, a dialog box appears that lets you select a plug-in from the directory to be installed on the server. Once a plug-in file has been selected, a confirmation screen appears containing more specific information about the plug-in(s) that you have selected, and provides you with the option to proceed with installation.

- If you select a plug-in of which an earlier version has already been installed, you have the option to upgrade the existing plug-in.
- If the selected plug-in has previously been installed, you will be informed that the plug-in is already installed.
- If the selected plug-in is down-level from the one that is currently installed, the current plug-in will need to be uninstalled before the down-level version can be installed.

The successful installation of a plug-in is then announced to all clients connected to the server through the MVP message window located at the bottom of the MVP Home screen.

After a plug-in has been installed on the server, the MVP Client receives information on the plug-in versions that have been installed and details on which plug-ins contain downloadable client components. If new client components are available, the client determines if the server and itself are compatible and then automatically downloads the client component of any plug-ins that it does not already have.

**Note:** If the client and server are not compatible because the client contains a component that the server does not have, a warning message is issued and any incompatible client components are removed.

## ***Generic file download***

The Generic File Download task lets you download miscellaneous files from the MarkVision Server to one or multiple devices on your network. As a result, various file types, including universal configuration files (UCF), can be instantly distributed to any devices that MarkVision manages.

The Generic File Download task is available under the All Tasks menu, or by clicking **Actions** → **Generic File Download** on the MarkVision Professional Home screen.

You can also schedule the download of files by using the **Scheduling** task.

## ***Using the Generic File Download task***

- 1 Select the file(s) that you want to download from the list of available files on the MarkVision Server. If there is a file from another location that you want to include in the list, click **Load** to browse for local files that you can load onto the server.
- 2 Click the (>) button to move the files to the file management table on the right side of the screen.

**Note:** Clicking **Remove** removes the selected files from the list of available files, subsequently removing the files from the server's file store, as well as the file management table.

- 3 In the file management table, select the file's target location in the **Target Directory** column, then specify the directory name in the **Remote Directory** column.
- 4 Click **Next**.
- 5 Select the device or devices to which you want to download the selected file(s).

## ***Resource Management***

Resource Management is a new task in MarkVision Professional 11.0 that lets you upload various resource files such as fonts and overlays to the MarkVision Server. These files can then be distributed to your Lexmark network devices that have hard disks and/or Flash SIMMs.

Unlike the Generic File Download task, which normally handles the distribution of miscellaneous files to your network devices, Resource Management is capable of handling the more complex formatting information involved in installing fonts and overlays.

The Resource Management task supports the following font and overlay types:

- SFP - PCL Bitmap Font
- TTF - True Type Font
- PFB - Type 1 Font
- Overlay PCLXL
- Overlay PS
- Overlay PCL5

## ***Using the Resource Management task***

### **Uploading resource files to the MarkVision Server**

- 1 Go to **Actions** → **Resource Management** or select **Resource Management** from the All Tasks list.
- 2 On the left side of the dialog under the Resources folder, select the folder of the font or overlay type that you want to upload to the MarkVision Server.

- 3 Click **Upload** to browse for the font file(s) that you want to load on the server.
- 4 In the Upload Resources dialog, enter the file name in the file field or click **Browse** to locate the file(s).

**Note:** To upload multiple files simultaneously, use the Browse feature and then **Ctrl + click** the files you want to upload.

- 5 Enter a description of the file.
- 6 Click **OK**.

## Removing resource files from the MarkVision Server

- 1 Go to **Actions** → **Resource Management** or select **Resource Management** from the All Tasks list.
- 2 On the left side of the dialog, select the folder that contains the file(s) that you want to remove.
- 3 Select the files that you want to remove from the Resource Management table. You can select multiple devices using Ctrl + click.
- 4 Click **Remove**. Click **Remove All** to remove all files listed in the table.

## Downloading resource files to selected devices

- 1 Go to **Actions** → **Resource Management** or select **Resource Management** from the All Tasks list.
- 2 On the left side of the dialog, select the folder that contains the file(s) that you want to distribute to your devices.
- 3 Select the files that you want to distribute to your devices. You can select multiple files by using Ctrl + click.
- 4 Click **Send to Printer**. The Resource Management Download Wizard opens.
- 5 To select devices that contain a hard disk, click **Step 1** at the top of the wizard. To select devices that contain Flash SIMM memory, click **Step 2** of the wizard. For devices that contain both types of memory, proceed through the wizard normally.

**Note:** Only printers that contain Flash SIMM memory or ones that are connected to a hard disk may be selected to receive the file download.

- 6 Select the devices to which you want to download the files. You can select your devices using the Quick Find feature, or by selecting devices from the existing device folders.

If the printers you want to download to are not present in the existing folders, you will need to use a filter to display the supported devices. For more information on filters see [Using filters](#).



- 7 Use the (>) button to transfer the printers to the Selected Printers window. Then click or Ctrl + click the devices you want to download to.
- 8 Click **Existing Files** to display the files currently stored in the device's memory. Select **Font** or **Overlay** to show the different types of files. Clicking the Log button will display a dialog containing a log of the resource downloads for the selected device.
- 9 Click **Next** to proceed to the next step in the wizard.
- 10 In the left side of the dialog, select the files that you want to download by clicking **Select All** at the top of the field, or by clicking the individual check boxes next to each file.
- 11 In the right side of the dialog, click either the Hard Disks tab or Flash SIMMS tab to display the devices of each type and select the printers to which you want to download the selected files by clicking **Select All** or by clicking the individual check boxes next to each printer.
- 12 Click the (>) button to match the files with the devices. This button will only be enabled if at least one check box is selected on each side of the dialog.
- 13 Click **Finish** to begin the download.

## ***Bookmark Management***

The Bookmark Management task lets the user create and save printer bookmarks in a printer's permanent memory. A printer bookmark is a link to a document that is stored on a Web server or the Internet. When a bookmark is called from the **BOOKMARKS** menu on a supported printer's operator panel, the document the bookmark points to is printed. A supported printer in this case indicates a printer that utilizes sufficient memory to store bookmarks, and includes the appropriate operator panel and menu.

Existing bookmarks may also be loaded into the Bookmark Management task to be organized in folders and then distributed to supported printers accross the network. Multiple bookmarks can then be saved as a configuration file allowing the distribution of bookmark sets to devices with a single action.

In addition, the Bookmark Management task also facilitates the following bookmark management options:

- Protecting an individual bookmark, folder, or bookmark set with a Personal Identification Number (PIN)
- Loading bookmarks from a printer using an IP address or host name
- Setting or changing bookmark properties including: name, URL, and available print settings such as duplex, orientation, and copies

## *Using the Bookmark Management task*

### **Creating folders**

The Bookmark Management task provides a default root folder called BOOKMARKS, to which additional folders or bookmarks can be added.

#### **To create a new folder:**

- 1** Go to **Actions** → **Bookmark Management** or select **Bookmark Management** from the All Tasks list.
- 2** Click the **Create New Folder** icon at the top of the Bookmark Management window.
- 3** Enter a folder name up to 25 characters in length.
- 4** If you choose, you may also assign a PIN number to the folder. A user will be required to enter the PIN when trying to view the contents of the folder or when trying to print the contents of the folder from a printer operator panel. The PIN should be four digits long using the numbers 0 —9.
- 5** Click **OK**.

### **Creating a new bookmark**

- 1** Go to **Actions** → **Bookmark Management** or select **Bookmark Management** from the All Tasks list.
- 2** Select the folder location where you want to place the bookmark.
- 3** Click the **Add Bookmarks** icon located at the top of the Bookmark Management window. The Bookmark Properties dialog opens.
- 4** Under the Bookmarks tab, enter the bookmark name and the URL location for the corresponding document.
- 5** If you choose, you may also assign a PIN number to the bookmark. A user will be required to enter the PIN in order to print the bookmark from a printer operator panel. The PIN should be four digits long using the numbers 0 —9.
- 6** Verify that the settings listed under the remaining dialog tabs are appropriate for the document that will be printed when the bookmark is accessed. Most settings will be set to the existing printer defaults.
- 7** Click **OK** to create the bookmark. Click **Cancel** to stop the creation of the bookmark.

## Loading an existing bookmark

Bookmarks may be loaded from either an existing file or printer memory. Once the Load Bookmark dialog has been opened, the option to either Browse for a specific file or select a specific printer is provided.

- 1 Go to **Actions** → **Bookmark Management** or select **Bookmark Management** from the All Tasks list.
- 2 Select the folder location where you want to place the bookmark.
- 3 Click **Load**. The Load Bookmark dialog opens.
- 4 If loading a bookmark from a file:
  - Select the **From File** radio button, then enter the file path in the space provided or click **Browse** to find the appropriate file location.If loading a bookmark from a printer:
  - Select the **From Printer** radio button, then select either the **Quick Find** or **Folders** tab to locate the appropriate printer.
- 5 Click **OK** to create the bookmark. Click **Cancel** to stop the creation of the bookmark.

## Saving a bookmark

Once a bookmark or set of bookmarks has been created or loaded, it can then be saved to either a file that can be stored on a computer for future use, or on a printer hard disk drive.

- 1 Go to **Actions** → **Bookmark Management** or select **Bookmark Management** from the All Tasks list.
- 2 Select the folder or bookmark that you want to save. Selecting a folder for this operation will save all folder contents.
- 3 Click **Save**.
- 4 If saving the bookmark(s) to a file:
  - Select the **To File** radio button, then enter the file path in the space provided or click **Browse** to find the appropriate file location.If saving the bookmark(s) to a printer:
  - Select the **To Printer** radio button, then select either the **Quick Find** or **Folders** tab to locate the appropriate printer. Use the (>) button to add the correct printer(s) to the Selected Printers window.
- 5 Click **OK**.

## Deleting a bookmark or folder

- 1 Go to **Actions** → **Bookmark Management** or select **Bookmark Management** from the All Tasks list.
- 2 Load the folder or bookmark set that contains the bookmark(s) that you want to delete.
- 3 Select the folder or bookmark that you want to delete. Selecting a folder for this operation will delete all folder contents.
- 4 Click the **Delete Folder/Bookmark** icon at the top of the Bookmark Management window. The Confirm Removal dialog opens.
- 5 Click **Yes** to delete the selected items.

**Note:** The Bookmark Management task is only an interface through which bookmarks may be manipulated for other devices and locations. As a result, deleting a folder or bookmark through this process only removes the selected item(s) from the interface, not from the saved location of the file.

## Changing the properties of a folder or bookmark

The Change Properties feature of the Bookmark Management task lets a user edit various characteristics of a selected bookmark or folder. In terms of folders, with the exception of the root BOOKMARKS folder, the user can change a folder name or the folder PIN access number. Only the PIN access number may be changed for the root folder.

For bookmarks, in addition to the bookmark name, URL, and PIN access number, the Page Layout, Paper, and HTML/PDF tabs let the user change various print attributes of the document. Some of these attributes include: number of copies to be printed, page orientation, duplexing, N-Up printing, as well as output options and HTML and PDF settings.

- 1 Go to **Actions** → **Bookmark Management** or select **Bookmark Management** from the All Tasks list.
- 2 Load the folder or bookmark set that contains the bookmark(s) that you want to edit the properties for.
- 3 Select the folder or bookmark that you want to change settings for. If the correct bookmark is not already present, you may need to reload it into the Bookmark Management task.
- 4 Click the **Change Properties** Folder/Bookmark icon at the top of the Bookmark Management task window.
- 5 Edit the appropriate fields to reflect the desired change.
- 6 Click **OK**.

**Note:** The Bookmark Management task is only an interface through which bookmarks may be manipulated for other devices and locations. As a result, any changes to the properties of a folder or bookmark will not be permanent until the file is saved.

## ***Wireless print server support***

In addition to adding device support for several new wireless devices (for a complete list of the printers and print servers that MVP supports, see **Supported devices**), MarkVision Professional 11.0 provides the ability to setup and configure the Lexmark N8050 wireless print server for use on your network.

MarkVision Professional 11.0 includes a new WLAN task and a new WLAN device policy option to manage the wireless settings for supported print servers attached to the network. The WLAN task and device policy let an administrator enter or edit the wireless settings for a supported print server, and then transfer the settings to the supported devices.

The WLAN task and device policy can support wireless configurations for both Ad Hoc and Infrastructure Basic Service Set (BSS) modes, as well as WEP and WPA-PSK security modes.

In addition, for security modes that utilize CA certificates as part of an authentication mechanism, an additional task called Install CA Certificate is available to install CA Certificates on devices.

### ***Creating a WLAN device policy***

- 1** Go to **Actions** → **Device Policies** → **Create/Manage** from the MarkVision Home screen, or select **Device Policies – Create/Manage** from the All Tasks list.
- 2** Click **New** and select **For Any Print Server**, and then click **Next**.
- 3** Under Print Server Policy, expand the **WLAN** nodes.
- 4** Enter the **SSID**, **BSS Type**, **Channel**, and **Wireless Security Mode** for the device. For more information on your wireless settings, see your wireless network documentation.
- 5** Enter the appropriate authentication or encryption information for the wireless security mode that you selected by expanding the WEP or WPA nodes under WLAN.
- 6** Click **Apply**.

### ***Using the WLAN task***

- 1** Go to **Settings** → **Network** → **Wireless** → **WLAN** or select **WLAN** from the All Tasks list.
- 2** Select the device(s) that you want to configure wireless settings for.

**Note:** The WLAN task provides the ability to configure the wireless settings on multiple devices simultaneously. As a result, if multiple devices are selected for use with this task, make sure that only the values that are shared by all of the selected devices are changed. Some settings are specific to one device and changing them can disrupt wireless communication for that device.

- 3** Enter the **SSID**, **BSS Type**, **Channel**, and **Wireless Security Mode** for the device. For more information on your wireless settings, see your wireless network documentation.

- 4 Enter the appropriate authentication or encryption information for the wireless security mode that you selected.

Some wireless security modes require certificates to work properly. To install the appropriate certificates, go to the print server embedded Web page or use the Install CA Certificate task. For information on accessing the print server embedded web page, see your print server documentation.

- 5 Click **Apply**.

## ***Using the Install CA Certificate task***

Some wireless security modes require Certificate Authority(CA) certificates for authentication purposes. The Install CA Certificate task provides a means of installing a CA certificate on one or more devices at a time. The CA certificate must be in a PEM encoded format.

- 1 Go to **Settings** → **Network** → **Wireless** → **Install CA Certificate** or select **Install CA Certificate** from the All Tasks list.
- 2 Select the device(s) that you want to install a CA Certificate for.
- 3 Click **Browse** to locate the CA Certificate that you want to install.
- 4 Click **Apply**.

**Note:** If you select more than one device for this task, the selected CA Certificate is applied to all selected devices and overwrites any existing certificates.

## ***Destination management***

MarkVision Professional's destination management tasks provide the ability to more accurately manage the destinations to which the devices on your network send information. MVP provides a destination management task with which you can easily add or edit specific destinations for each protocol that your network devices use to transmit information.

The destination management tasks are:

- Fax destinations
- E-mail destinations
- FTP destinations
- Profile destinations

## Using destination management tasks

- 1 Select one of the four destination management tasks from the All Tasks menu, or select **Settings** → **MFP** → **Destinations** from the MVP home screen.
- 2 Using either Quick Find, or by choosing a specific device (or devices) from existing folders, select the devices that have the destination types you want to manage. A table will appear in the right side of the screen displaying the existing destinations. If the selected devices have no current destinations, the table will be empty.
- 3 To add a new destination, click **Add**. Enter the appropriate information in the dialog box, and then click **OK**.

Destination	Fields
Fax	Name, Fax number, Shortcut (If applicable)
E-mail	Name, E-mail address, Format, Content, Color, Resolution, Shortcut (If applicable)
FTP	Name, Server, Login, Password, Password confirmation, Path and filename, Format, Content, Color, Resolution, Shortcut (If applicable)
Profile	Name, Address, Port

- 4 Click **Apply**.
- 5 The listed destinations are added to the selected devices.

You can also cut, copy, or paste definitions by right-clicking destinations listed in the destination management table.

## Editing destinations

- 1 Select one of the four destination management tasks from the All Tasks menu, or select **Settings** → **Destinations** from the MVP Home screen.
- 2 Using either Quick Find, or by choosing a specific device (or devices) from existing folders, select the devices that have the destination types you want to manage. A table will appear in the right side of the screen displaying the existing destinations. If the selected devices have no current destinations, the table will be empty.
- 3 Select the destination you want to edit. Click **Edit**.
- 4 Enter the updated information in the dialog box, and then click **OK**.
- 5 Click **Apply**. The edited destinations are updated for the selected devices.

## Removing destinations

- 1 Select one of the four destination management tasks from the All Tasks menu, or select **Settings** → **Destinations** from the MVP Home screen.
- 2 Using either Quick Find, or by choosing a specific device (or devices) from existing folders, select the devices that have the destination types you want to manage. A table appears in the right side of the screen displaying the existing destinations. If the selected devices have no current destinations, the table will be empty.
- 3 Select the destination you want to edit. Click **Remove**. Clicking **Remove All** removes all listed destinations.

## *Destinations in device policies*

You can also set specific destinations for print servers through the **Device Policies** task. To set destinations for print servers:

- 1 Open the **Device Policies** task and select the print server policy that you want to edit.
- 2 Expand the **MFP** folder view and open the **Destinations** folder.
- 3 Click the check box for the destination type that you want to edit, and then click **Edit**.

**Note:** When policies containing destinations are applied to devices that already contain destinations, the device's existing destinations are first deleted.

- 4 The Destinations Management dialog box opens beneath the selected destination. Edit the destination list accordingly. Click **Hide** to close the Destination Management dialog.

## *Changing printer settings*

The easiest method of changing printer settings is by selecting the item you want to change from the Settings menu or the All Tasks list. Select one or more printers and change the settings appropriately.

You can create a device policy to coordinate multiple settings and save them as a unit. A policy can then be applied to one or more devices at a time, or saved for future use. See **Using device policies** for more information.

## *Checking printer status*

To check printer status, you can select one of the following options from the View menu:

- Status of Printer
- Toner / Ink Levels

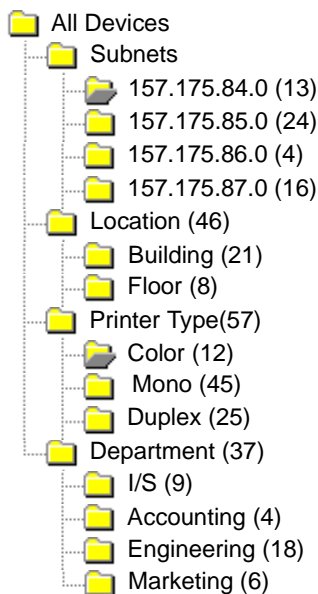


- MFP Status
- Picture of Printer
- Page Counts
- Operator Panel LCD
- Map
- Custom Tables
- Custom Views

## Organizing devices

MarkVision lets you organize your devices using folders. When you create or edit folders, you can specify certain criteria to limit which devices are in a folder. This works like a filter so that only the devices you want to appear are in the folder.

For example, if you are responsible for maintaining toner cartridges for printers on the third floor of your building, you might create a folder for your printers named "3rd floor." Create a subfolder named "Low Toner," specifying that a filter should be placed in it. Click **Advanced**, then specify the filter criteria by selecting **Status: Message, Equal To, Toner Low**. This causes the "Low Toner" folder to display only those printers in need of service due to low toner cartridges.



In this example, one folder groups printers by subnet. Other folders group printers by their location, printer type, or department. Using the built-in filtering feature, the folders show you only the printers matching the criteria you specify.

- The same printer could appear in multiple folders, depending on your needs.
- The devices in a sub folder are dependent on the members of the parent folder. In other words, if you create a sub folder called Main under the Building folder, the sub folder can only contain the devices that are also in the Building folder.
- The numbers in parentheses indicate the number of devices in that particular folder.

## Using filters to automatically populate folders

- 1 Select **Folder Configuration** from the All Tasks menu.
- 2 Click **New** to create a new folder, or select a specific folder to edit an existing one.
- 3 Enter the name of the new folder.
- 4 Select the properties to use in adding filters or devices to the folder.
- 5 You can specify a device name or names to further narrow down which devices to show in the folder.
- 6 Click **Apply** to apply the specified criteria to the current folder.

For more information about finding specific printers within a folder, see [Finding the devices you want](#).

For more information about filters, see [Using filters](#).

## Viewing a print server embedded Web page

- 1 Select **Web Page (Print Server)** from the All Tasks menu, or click **Actions** → **Web Page (Print Server)** from the menus.
- 2 Select the appropriate print server, and then click **Launch**.
- 3 Your browser opens with an information page for that print server. You see a real-time view of the selected printer status.

**Note:** Not all print servers have Web pages.

## Viewing all printers

MarkVision gives you several ways to see all the printers available to you at a glance.

### Create folders and filters

Use the Folder Configuration task to create custom folders to organize your printers. If your printers are on a small network, you may only need one folder. However, if your printers are distributed across a large network, you can create multiple folders to organize them.

For example, if your printers are concentrated on a small network within a single building, you could create folders for each floor or type of printer. For larger printer networks, you could create a folder hierarchy that includes subfolders identifying printers listed by geographical location or by subnet.

Apply filter criteria to your folders to automatically populate folder contents or to find a specific printer. For example, create a folder named "Color," and then select the appropriate filter criteria to show only color printers. MarkVision applies the filter and adds only color printers to that folder. The same printer can appear in more than one folder, depending on the filters you set. For example, a color printer with a duplex unit would appear in both the "Color" folder and the "Duplex" folder. For

more information on creating folders and using filters, see [Organizing devices](#) and [Finding the devices you want](#).

### **Create a map view**

You can use the Map task to create a graphical representation that illustrates the distribution of your printers by placing a printer icon on a map background relative to your organization. The printer status determines the border color of the icon that is displayed. A printer icon with a yellow border is in a warning state; a printer icon with a red border is in an error state. For more information on using the map feature, see [Creating maps](#).

## ***Creating maps***

With MarkVision's Map task, you can create a graphical representation that illustrates the distribution of your devices.

### ***Creating a map***

The type of map you create depends on the structure of your organization. If your organization has one location with just a few printers, your map could be a simple line drawing or a scanned plan of your building with icons marking the printer locations. If, however, you are responsible for many printers in various geographies, you might create maps that correspond with the hierarchy of your printer folders. For example, you could create a folder for the state where a group of printers are located. Within that folder, you might create a sub folder for the city. Additional subfolders could contain printers grouped by the building or floor number. Create a corresponding map for each folder.

Create maps using any graphics application that saves in JPEG or GIF format. You can create an original image or develop your graphic using a scanned image like an area map or building plan. Save the image in JPEG or GIF format. You can then select the graphic from the Map task in MarkVision.

### ***Using a map***

- 1** Select **Map** from the All Tasks menu, or select a folder and click **View** → **Map**.
- 2** Select a folder.
- 3** Click the **Map** icon in the lower part of the window. Select the map you want to use, or click **Browse** to find the graphic you want to use.
- 4** Arrange the device icons on the map image to represent its location in your organization, and then click **Apply**.

**Note:** A yellow border around a device icon indicates that the device is in a warning state; a red border indicates an error state.

## ***Monitoring printer supplies***

There are several methods you can use to monitor printer supplies.

If you are responsible for monitoring multiple printers:

- Select **Folder Configuration** from the All Tasks menu and create a folder with a filter based on the status criteria you are interested in. For example, you could create a folder named All Status Errors and Warnings, and configure the filter to display only those devices containing status errors or warnings. This folder's contents dynamically changes as devices meet or fail to meet the filter criteria.
- You can also perform a **Quick Find** to monitor printer supplies. Click the **Quick Find** tab, and under the Select a Field to Search box, select **Other**. Click **Find Parameters** to configure the parameters of your search. Click **Find**. The results of your search are displayed.
- To see at a glance which printers are low on toner, select **Status of Printer** from the All Tasks menu, open a folder, and select the printers you are interested in.

If you are responsible for monitoring only one printer:

- Select **Status of Printer** from the All Tasks list. Choose the appropriate printer from either the **Quick Find** or **Folders tab**.

**Note:** MarkVision's Map task displays an icon for each device. These icons give you an indication of a device's status. A yellow border around a device icon indicates that the device is in a warning state; a red border indicates an error state.

## ***Moving the MarkVision Server***

As newer hardware becomes available, it may become necessary to move the MarkVision Professional Server to another machine, or import settings from one instance of the MarkVision Server to another server. Since MarkVision Professional is extremely customizable, you may not want to repeat the process of creating folders, filters, and rediscovering devices. As a result, MVP provides the option of either moving an entire MarkVision Server or exporting specific settings for folder configuration and MarkVision Messenger actions to a file to be imported on another server.

The following steps describe a method of creating a backup of MarkVision Professional's customized data, and integrating that data onto a new machine.

- 1 Stop the MarkVision Server.
- 2 Back up the directory in which the customized data files are stored.
  - In Windows, the default directory is: **C:\Program Files\Lexmark\MarkVision Server\granite\data**
  - For Mac and UNIX, the default directory is: **/var/spool/markvision/data**
- 3 Install the MarkVision Server on the new machine.
- 4 Stop the MarkVision Server.

- 5 Replace the data files saved in step 2 into the same locations on the new machine.
- 6 Restart the MarkVision Server.

**Note:** The listed files do not contain settings for window and frame sizes or positional information.

## Starting and stopping the MarkVision Professional Server on a Windows system

For Windows 2000:

- 1 Go to **Control Panel** → **Administrative Tools** → **Services** and select the **MarkVision Server**.
- 2 Click **Start/Stop**.

**Note:** You can use the same process to start or stop the MarkVision Web service.

For Windows NT:

- 1 Go to **Control Panel** → **Services** and select the **MarkVision Server**.
- 2 Click **Start/Stop**.

**Note:** You can use the same process to start or stop the MarkVision Web service.

For Windows XP and Windows 2003 Server:

- 1 Go to **Control Panel** → **Performance and Maintenance** → **Administrative Tools** → **Services** and select the **MarkVision Server**.
- 2 Click **Start/Stop**.

**Note:** You can use the same process to start or stop the MarkVision Web service.

## Starting and stopping the MarkVision Professional Server on a Macintosh system

To start the MarkVision Server, open a Terminal session and type:

```
/usr/mv_pro/bin/MvService start
```

To stop the MarkVision Server, open a Terminal session and type:

```
/usr/mv_pro/bin/MvService stop
```

## Starting and stopping the MarkVision web service on a Macintosh system

To start the MarkVision Web service, type:

```
/usr/mv_pro/bin/MvWebService start
```

To stop the MarkVision Web service, type:

```
/usr/mv_pro/bin/MvWebService stop
```

## Starting and stopping the MarkVision Professional Server on a UNIX system

To start the MarkVision Server, type:

```
/usr/mv_pro/bin/MvService start
```

To stop the MarkVision Server, type:

```
/usr/mv_pro/bin/MvService stop
```

## Starting and stopping the MarkVision Web service on a UNIX system

To start the MarkVision Web service, type:

```
/usr/mv_pro/bin/MvWebService start
```

To stop the MarkVision Web service, type:

```
/usr/mv_pro/bin/MvWebService stop
```

## *Importing and exporting MVP Server settings*

Only folder configurations and MarkVision Messenger actions are imported or exported.

### Exporting MVP Server settings

- 1 Go to **MarkVision** → **Export Server Settings** or select **Export Server Settings** from the All Tasks list.
- 2 Browse to the location where you want to save the server settings file.
- 3 Name the file.
- 4 Click **Export**.

### Importing MVP Server settings

- 1 Go to **MarkVision** → **Import Server Settings** or select **Import Server Settings** from the All Tasks list.
- 2 Browse to the server settings file you want to use.
- 3 Click **Import**.

## ***Flashing print servers***

Periodically, you may need to rewrite the flash memory inside one or more of your print servers. For example, let's say Customer Support recommends you upgrade to a newer or different version of firmware to solve a network printer problem.

You can also flash your print servers to take advantage of new functions available in the latest version of firmware. Use MarkVision Professional to flash multiple print servers simultaneously.

**Note:** Not all print servers are supported.

All supported firmware (flash) files are available free of charge from the Lexmark Web site. You can access the Web site by selecting **Firmware (On the Web)** from the All Tasks List, or by visiting [www.lexmark.com](http://www.lexmark.com).

### ***To flash Lexmark print servers***

- 1 Download the latest flash files from the **Lexmark** Web site. Store these files in a safe place (C:\temp, for example).
- 2 Select the **Firmware Download (Print Server)** task from the All Tasks list, or click **Actions** → **Firmware Download (Print Server)** from the menus.
- 3 Select the print servers you want to update.
- 4 Click **New File** to find the downloaded files (C:\temp, for example).
- 5 Click **Start**.

**Warning:** If the print server is turned off or reset during flashing, it may be damaged. For this reason, try to perform flash operations at night, on holidays, or other times when printer traffic is very light. Accomplish this using the **Scheduling** task.

## ***Formatting storage devices***

You can use the **Storage Devices** task to format a device's hard disk or flash memory. If you select a device in the Storage Devices task, changing the Job Buffer amount causes the hard disk to reformat, erasing all files. Likewise, clicking the Format button for either the hard disk or the flash erases all files located in the device's memory.

You can only copy or move files within a single device. For example, you can move a file from the hard disk to the flash within a printer, but not to another printer.

## ***Print Permissions Technology***

Print Permissions Technology lets an administrator restrict color printing to specific users for supported color printers on your network. By restricting the use of color printing, you can more closely monitor and save valuable color printing resources.

MVP's Print Permissions Technology is separated into two related tasks that control user access to color printing, the Users Table task and the Hosts Table task. The Users Table displays and controls basic user access to color printing. Adding a user's ID to the Users Table lets you specify the user's color permission (whether that user may print with color or not). The Hosts Table takes color print permissions a step further by controlling print permissions on a specific host computer. This allows you to override user level permissions on a specific host computer. As a result, if a user with access to the Users Table task had set their color permissions to "On," the color permission for their host computer could still be disabled by setting the Color permission to "Off" and the Override permission to "On" in the Hosts Table.

The following tables illustrate some Print Permission settings.

**Users Table:**

User ID	Color	Result
Mary	On	Mary can print color on all selected printers.
Bob	Off	Bob cannot print color on any selected printers.

**Hosts Table:**

Computer (Host) Name	Color	Override	Result
MARYSPC	On	Off	A user logged into Mary's computer can print color on all selected printers, regardless of the individual user's print permissions.
BOBSPC	Off	On	A user logged into Bob's computer cannot print color on any selected printers regardless of the individual user's print permissions.
MARYSPC	Off	Off	A user logged into Mary's computer will not be able to print color jobs unless their User ID is granted color printing permissions in the User's Table (as Override is "Off").



## ***Using the Print Permissions Technology tasks***

- 1 Go to **Settings** → **Printer** → **Print Permissions Technology** and select either **Users Table** or **Hosts Table**.
- 2 Select the supported color devices that you want to use with the task from the **Find Results** window. For information on locating devices, see **Finding the devices you want**.
- 3 Select your management option:
  - Click **Add** to enter a new user or host.
  - Click **Edit** to modify an existing user or host.
  - Click **Remove** to remove a selected user or host.
  - Click **Remove All** to remove all users or hosts from the table.
- 4 Enter or modify the appropriate fields in the table dialog box.
- 5 Click **OK** to implement the changes or **Cancel** to cancel the command.
- 6 Click **Apply** to save the changes or **Undo** to revert to the table's previous state.

## ***Queue management***

Queue management provides the capability to create and remove Windows print objects (queues) on host computers that utilize Windows-based platforms. Queue management utilizes two tasks to manage print objects: the Create Windows Print Objects task and the Remove Windows Print Objects task. The Create Windows Print Objects task can create Windows print queues on multiple host computers simultaneously, eliminating the need to set up print queues separately on each individual host computer. The Remove Windows Print Objects task similarly lets you remove print queues from host devices.

**Note:** In order to create print objects on remote host computers (computers on which an instance of the MarkVision Server is not running), the MarkVision Server must first be configured to perform the necessary network operations. See **Configuring the MarkVision Server** for instruction on implementing this configuration.

## ***Configuring the MarkVision Server***

To create print objects on remote host computers, the MarkVision Server service for Windows must be configured to run in the context of a valid administrative user ID and Password. This allows the MarkVision Server service to perform network operations such as listing the existing print objects and drivers that reside on other computers.

### **For Windows operating systems only**

- 1 Open the Windows Control Panel. For example, go to **Start** → **Settings** → **Control Panel**.
- 2 Double-click **Administrative Tools**.

- 3 Double-click **Services**.
- 4 In Services, right-click **MarkVision Server**.
- 5 Select **Properties**.
- 6 Select the **Log On** tab.
- 7 Select the **This account** radio button.
- 8 Enter the user ID and password for an administrative account.

### ***To create print queues***

- 1 Go to **Actions** → **Queue Management** → **Create Windows Print Objects**, or select **Create Windows Print Objects** from the All Tasks list.
- 2 In the queue management wizard, select the printers that you want to create queues for. You can locate the printers under the **Folders** tab or by using **Quick Find**.
- 3 Click the (>) button to move the printers to the Selected Printers window.
- 4 Click **Next**.
- 5 In the **Domains** window, select the domain of the computers you want to create print queues on.
- 6 In the **Computers** window, select the host computers that you want to create print queues on. Use the (>) button to transfer the computers to the Selected Computers window.

**Note:** Each domain can potentially list several computers. To create printer queues on host computers under different domains, repeat steps 5 and 6 selecting different domains with each pass until all of the desired host computers are present in the Selected Computers window.

- 7 Enter a network administrator user ID and password. To gain access to the host computers, a high-level network administrator's user ID and password is required for security purposes. If you do not have administrative rights on the host computers you are trying to access, contact an administrator with the appropriate privileges.

If you are using the Windows XP operating system, and the network administrator account does not include a password, see **For Windows XP administrator accounts without passwords**.

- 8 Select the type of print object that you want to create on the host computer. Select PCL, PostScript, or both PCL and PostScript.

**Note:** MVP will attempt to locate and match the type of print object that is selected with the appropriate device and drivers by name comparison. If the pre-selected drivers are not your preference, you can change them in step 10.

- 9 Click **Next**.
- 10 Verify that the print queue information is correct for each host computer in the queue creation table. If the default settings are incorrect, select the table entry, and modify each of the fields in the dialog below the table.
- 11 Click **Select** to open the Print Driver dialog.
- 12 Select the appropriate driver source radio button: **Server** (target computer) or **MVP Server**.
- 13 Select the driver from the list, then click **OK**.  
If the driver is not included in the list:
  - a Make sure the **MVP Server** radio button is selected as the driver source.
  - b Click **Add**, browse to the driver, then click **OK**.
  - c Select the driver from the list, then click **OK**.
- 14 To remove a print object from the list to be created, select the table entry that contains the print object you want to remove, and click **Remove**.
- 15 Click **Apply** to save any changes, and then click **Finish**.

### ***To remove print queues***

- 1 Go to **Actions** → **Queue Management** → **Remove Windows Print Objects**, or select **Remove Windows Print Objects** from the All Tasks list.
- 2 Select the domain of the host computer that you want to access.
- 3 Select the host computer that contains the queue you want to remove. Use the (>) button to add the computer to the Selected Computers window.
- 4 Enter a network administrator user ID and password.
- 5 Click **Next**.
- 6 Select the print queue or queues that you want to remove from the list of print objects present on the system.
- 7 Click **Finish**.

### ***For Windows XP administrator accounts without passwords***

In most cases, when selecting a server in either the Create Windows Print Objects task or the Remove Windows Print Objects task, an administrator account user name and password for that specific computer must be entered. If the administrative account that is used to complete this

process does not include a password, or if use of an administrative account without a password is preferred, the following procedure must be completed on the target computer.

- 1** Open the Windows Control Panel. For example, go to **Start → Settings → Control Panel**.
- 2** Double-click **Administrative Tools**.
- 3** Double-click **Local Security Policy**.
- 4** Double-click **Local Policies**.
- 5** Double-click **Security Options**.
- 6** In the Policy column, double-click **Accounts: Limit local account use of blank passwords to console logon only**, and change the value from Enabled to Disabled.

# 6

## MarkVision Messenger

---

MarkVision Messenger is a utility that lets you create Actions. An Action defines a command to execute whenever an event occurs across a set of devices. Device Status Events are conditions signaled by messages like Paper Tray Missing or Toner Low. Folder Events are signaled when devices enter and/or exit a particular folder.

During the installation of MarkVision Professional, you are asked to select the components to install. To install MarkVision Messenger, check **MarkVision Messenger**.

If the MarkVision Server is your default Web server, you can access MarkVision Messenger from any browser by entering:

```
http://yourserver/messenger
```

Where your server is the TCP/IP hostname or address of the workstation on which you installed the MarkVision Server. For example, if you installed the MarkVision Server and MarkVision Messenger on a workstation with an address of nexus.dev.yourcompany.com, you would enter:

```
http://nexus.dev.yourcompany.com/messenger
```

### Notes:

- MarkVision Messenger requires at least one MarkVision Server to be running on your network.
- If MarkVision Professional is not your default Web server, you will need to add the 9180 port number to the Messenger URL:

```
http://yourserver:9180/messenger
```

### ***Installing MarkVision Messenger***

MarkVision Messenger requires at least one MarkVision Server to be running on your network. If you choose, you can run MarkVision Messenger multiple times on the same workstation. However, each instance of the client must use a different configuration directory.

### ***How does MarkVision Messenger work?***

MarkVision Messenger communicates with the MarkVision Server to let you create and configure automated responses to printer events. These responses are called Actions. When you create an Action, you must specify three things:

- The type of event your Action will monitor
- The devices your Action will monitor
- The type of command your Action will execute

With MarkVision Messenger, you can create Actions to automate many printer administration tasks. For example, you can configure Actions to:

- Keep a log of printer paper jams
- E-mail someone when a specific device condition occurs
- Order supplies for a specific device when messages, such as Toner Low, occur

## ***Event Types***

Your Action can be triggered by two types of events:

### **Device Status Alerts**

A Device Status Alert is a notification that something has changed at a printer. For example, when you pull a paper tray out of a printer, the printer tells MarkVision Messenger that the tray is now missing. This is represented in MarkVision Messenger by an event with name = "Paper Tray Missing" and state = "ACTIVE."

When the tray is put back into place, the printer tells MarkVision Messenger that the tray is no longer missing. This is represented in MarkVision Messenger by an event with name = "Paper Tray Missing" and state = "CLEARED."

You can configure your Action to respond to an event when its state is "ACTIVE," when its state is "CLEARED," or both. If your Action responds to Device Status Alerts, you will be prompted to choose the specific device status alerts that will trigger your action.

### **Printer Folder Alerts**

A Folder Alert is generated when printers enter and/or exit a specified folder. For example, you could create a folder in MarkVision Professional that contains printers with a Toner Level less than 10%, and create an Action in MarkVision Messenger to notify you when printers enter this folder. If your Action responds to Printer Folder Alerts, you will be prompted to choose a folder.

### **Device Selection**

When choosing the devices your Action will monitor, you have three choices:

#### **All Devices on the MarkVision Server**

If your Action will monitor all devices on the MarkVision Server, choose this option.

## Devices in a Specified Folder

If your Action will monitor only a specific folder, choose this option. For example, if you were in charge of devices on the third floor, and had configured a folder on the MarkVision Server that included these devices, you could limit the number of devices your Action monitors by choosing this folder.

## Selected Devices

If your Action will monitor only specific devices, choose this option.

## Command types

There are four types of commands that your Action can execute:

### Send an SMTP e-mail

Your Action, when triggered, sends an e-mail to addresses you specify. These e-mails are highly customizable from within MarkVision Messenger. For example, an Action, triggered by a Folder Alerts event, could e-mail an administrator when monitored printers enter a "Low Toner" folder. This e-mail message could be configured to list the model of printer, its IP address, and the time at which it entered the "Low Toner" folder.

### Execute a command line on the MarkVision Server

Your Action, when triggered, executes a command line. For example, if you wanted to keep a log of offline devices, you could configure your Action to respond to the "Offline" Device Status Alert. Each time a monitored device becomes offline, specified information is written to a text file. Like the example above, the information MarkVision Messenger writes to this text file is highly customizable. For example, you could specify that the text file list the device model, page count, and the time at which it went offline.

### Execute a command line on a remote host server

Your Action, when triggered, executes a command line on a remote host server. In order to execute command lines on a remote host server, the rexec client must connect to a rexec server on the remote host server.

Furthermore, you can specify whether to perform commands conditionally or repeatedly, and how to execute them. You can have your Action execute its command:

- Only after a specified delay period.

For example, if your Action sends an e-mail message when a printer goes offline, you can delay the execution of the command for a specified amount of time. This way, if the printer returns online during the delay period, the e-mail will not be sent. See [Delaying Event notifications](#) for more information.

- After additional conditions have been met.

For example, if your Action is triggered by a Paper Tray Missing event, but you only want to execute the command when the event occurs for Tray 3, you could write a custom filter to

specify that your Action only respond when Tray 3 is removed from monitored printers. See [Custom filters](#) for more information.

### **Send device status alerts to a Tivoli event server**

MarkVision Messenger contains a custom event adapter that integrates with Tivoli's event management console. This event adapter lets administrators use the Tivoli event console to monitor printer events across a range of devices in real time. In order for Tivoli to display printer events, you must first setup the Tivoli event adapter by creating an action in MarkVision Messenger.

### ***What are Actions?***

Actions are associations that let you execute event-driven commands. They can be set up to occur automatically, as well as conditionally or repeatedly. You can specify which commands MarkVision Messenger executes when device status events, such as **Paper Tray Missing** or **Toner Low**, occur, or when devices enter and/or exit a specified folder on the MarkVision Server.

See [How does MarkVision Messenger work?](#) for more information about using Actions.

### ***Simple Filters***

By using the Simple Filter you can set your Action to execute its command when a device is added to a folder, removed from a folder, or both. For example:

If you create a folder that contains printers whose page count is greater than 10,000, once a printer's page count exceeds that amount, the printer is added to that folder.

If you create a folder that contains printers with a flash device installed, and someone removes the flash from the printer, it is removed from that folder.

By using the with a delay of: option, you can delay the execution of your Action until a device has been in or out of the folder for a specified amount of time.

### ***Custom filters***

Custom filters let you customize and define how your action executes. You can do this by either uploading a previously defined script file or by writing a new one.

MarkVision Messenger provides a very simple scripting language to define filters. The following is a complete list of the statements and conditions you can use to write a custom filter:

#### **Statements:**

- **While** (Condition)
- **waitUntil** (Condition)
- **IfThen** (Condition)
- { **StatementList** }



- **Distribute**

### Conditions:

- **And** (Condition\_1...Condition\_n)
- **Or** (Condition\_1...Condition\_n)
- **EventDataIs** (key, value)
- **SourceDataIs** (key, value)
- **TimeIsAfter**

As an example, let's look at the script representation of the built-in Trigger on Active filter:

```
IfThen (EventDataIs("state", "ACTIVE"))
```

#### Distribute

The effect of the EventDataIs condition is to ask the event for the value of the event.state keyword. This is the same keyword you can insert into command lines and e-mail messages. The first statement, an **IfThen**, executes the next statement if the condition **EventDataIs ("state", "ACTIVE")** is true. An **EventDataIs** condition is true if the value of the keyword (**state**) matches the given value (**ACTIVE**). The next statement, **Distribute**, causes the command to execute.

Now, let's look at the script to write when the Trigger on Active filter is set with a delay of 30 seconds:

```
{
    WaitUntil (TimeIsAfter(30))
    IfThen(EventDataIs("state", "ACTIVE"))
    Distribute
}
```

The braces ({} ) are used to group statements into a list. They were not needed in the previous example because the **IfThen** and following statements were treated like a single statement.

The **waitUntil** statement causes the script to pause execution until the condition is true. The **TimeIsAfter** condition checks for true only after the specified number of seconds has passed. Once the 30 seconds has passed, if the event is still Active, the **Distribute** statement executes the command.

The script representation of the built-in Trigger on Either Active or Clear filter is a single **Distribute** statement. Let's say, for example, that you select Paper Tray Missing as the event, but you only want to execute the command when the event occurs for Tray 3. Also, you want to wait 20 minutes before executing the command, and execute the command again at the same 20-minute interval if the condition remains Active. Let's look at the script to write for this filter:

```
While (And(EventDataIs("state", "ACTIVE"), EventDataIs("location", "Tray 3")))
{
    WaitUntil(TimeIsAfter(1200))
```

```
IfThen(EventDataIs("state", "ACTIVE"))
Distribute
}
```

In this example, **And** was used to build a compound condition. The **while** loop is only entered or repeated if the event is active for **Tray 3**. The code within the loop is the same as the code for the Trigger on Active filter, except the **TimeIsAfter** condition is set to wait 1200 seconds (20 minutes).

## ***Trigger on Either Active or Clear filters***

Choose the **Trigger on Either Active or Clear** filter if you want to set your Action to execute each time a condition becomes Active or Cleared.

For example, let's say you want to keep a log of all printer paper jams so you can determine the average time it takes for a jam to be cleared. When a paper jam occurs, the printer generates an event with a state of Active. This satisfies the condition of the filter and executes your Action.

When the paper jam is cleared, the printer generates another event with a state of Clear. This event also satisfies the condition of the filter and executes your Action. You now have two lines in your log file, one with the time at which the paper jam occurred and another with the time it was cleared.

## ***Trigger on Active filters***

Choose the **Trigger on Active** filter if you want to set your Action to execute its command only when a condition becomes Active.

When you pull out a tray, the printer generates a Paper Tray Missing event with a state of Active. This satisfies the condition of the filter and executes your Action, perhaps by sending an e-mail notification.

When you push the tray back into place, the printer generates another Paper Tray Missing event, this time with a state of Clear, which does not satisfy the condition of the filter. Therefore, your Action is not executed and no one is notified when the event is cleared.

You can also choose to delay execution of your Action until the condition has been Active for a specified amount of time. Let's say the e-mail recipient is receiving too many notifications and you want to wait 20 minutes to see if the condition clears. By using the Delay Time option, you can create a filter that won't send the e-mail notification unless the Paper Tray Missing condition has been Active for 20 minutes.

**Note:** The Delay Time value is limited to 10 characters.

## ***How do I use MarkVision Messenger?***

Use MarkVision Messenger to create Actions that automatically perform printer administration tasks in response to printer events.

Use the following examples for ideas about how you can use MarkVision Messenger to:

- Keep a log of all printer paper jams
- Delay event notifications
- Monitor specific paper trays
- E-mail or page someone when a specific event occurs
- Order supplies

### ***Step 1: Preview the steps***

To create an Action:


- 1** From the MarkVision Messenger Home screen, click **Create New**.
- 2** Define your Action by completing the following steps in order:
  - a** Name and describe your Action.
  - b** Set user access.
  - c** Select the Event Type that will trigger your action.
  - d** Select the events or folder that will trigger your Action.
  - e** Select the devices to monitor for your Action.
  - f** Select the type of command to execute.
  - g** Compose the command, and any parameters, for the event(s).
  - h** Select or create a filter for the events.
  - i** Verify Action information.

**Note:** If you no longer want to preview your choices, select **Do not display this screen again**.

### ***Step 2: Name your Action***

The name you choose associates the Action you create with the name that appears in the Action list on the MarkVision Messenger Home screen.

From the Description Information screen:

- 1 Enter a unique name for you Action in the Name: field.
- 2 Enter a more detailed description about your action and what it does in the Description: field.
- 3 Enter instructions associated with your Action in the Notes: field. For example, "Please clear the paper jam."
- 4 Click  when you're ready to continue.

**Notes:**

The Name: field is limited to 80 characters.


The Description: field is limited to 255 characters.

The Notes: field is limited to 255 characters.

### **Step 3: Set user access**

User access determines who can see, use, and change the Action you create.

From the Access screen:

- 1 Select **Public** to make your Action available to all users.
- 2 Select **Private** to make your Action available only to you.
- 3 Click  when you're ready to continue.

**Notes:**


- This screen only appears if user accounts have been created in MarkVision Professional.
- A private Action does not require a special access password from within MarkVision Messenger. However, since it is associated with the username used to create it, the Action is only accessible to that specific user.

### **Step 4: Select the Event Type**

You must tell MarkVision Messenger which type of event your Action will monitor.

From the Event Type screen, you can:

- Choose to monitor **Printer Status Alerts**.
- Choose to monitor **Printer Folder Alerts**.


Click  when you're ready to continue.

For more on Event Types, see [How does MarkVision Messenger work?](#)

## Step 5: Select specific events or folder





Depending on the Event Type you have chosen, you must now tell MarkVision Messenger either the Device Status Alerts your Action will monitor, or the folder whose events your Action will monitor.

### If your Action is triggered by a Printer Folder Alert



- 1 Select a folder.
- 2 Click  when you're ready to continue.

### If your Action is triggered by a Device Status Alert

From the Events screen you can:

- Add an event to the Selected Events: list:
  - 1 Choose whether to sort events by Type or Severity.
  - 2 Select an event category.
  - 3 Add events to the Selected Events: list by:
    - Selecting an event, and then clicking .
    - Selecting **[All events]**, for example **[All Input Alerts]**, and then clicking .
    - Clicking  to add all category events.
  - 4 Click  when you're ready to continue.
- **Remove an event from the Selected Events: list**

Select the event you want to remove, and then:

  - Click  to delete the event from the list.
  - Click  to delete all events from the list.

#### Notes:

- Selecting [All events] adds all category events to the Selected Events: list, even ones added to the server later.
- You can select from one or more event categories, one or more events, or a combination of the two.

## Step 6: Select devices


You must choose which devices you want to monitor. For your convenience, MarkVision Messenger provides you with a list of all available devices capable of producing the events you selected.

From the Event Sources screen, you can:

- Select **All Devices on the MarkVision Server** to monitor all devices, even ones added to the server later.
- Select **Devices in a Specified Folder** to monitor all devices in a specified folder, even ones added to the folder later.
- Select **Selected Devices** to specify which devices to monitor.

If you choose Selected Devices, you can:

- Click the name of a specific device in the Selected Devices list to select it.
- Click **Select All** to select all devices currently in the Selected Devices list.
- Click **Deselect All** to remove all devices selections from the Selected Devices list.

Click  when you're ready to continue.

**Notes:**

- If your Action is triggered by a **Folder Event**, you may be confused to be asked to choose a folder for a second time. By choosing a folder on this screen, you can narrow the list of printers you are interested in. In MarkVision Professional, printers can occupy more than one folder at a time.
- For example, if your Action is triggered when printers move into a folder named "Toner Level < 10%," and you only want to monitor printers in the folder named "Building 7." select the "Building 7" on this screen. MarkVision Messenger will execute your Action when a printer from the "Building 7" folder enters the "Toner Level < 10%" folder.

## ***Step 7: Select a command***

You must tell MarkVision Messenger which type of command your Action will execute.

From the Command Type screen, you can:

- Choose to execute a command line on the MarkVision Server.


**Note:** Because command lines are run on the MarkVision Server, you must be logged in as the MarkVision administrator to select this option.

- Choose to send an e-mail message.
- Choose to execute a command line on a remote host.

**Note:** This option requires that a rexec server be present on the remote host.

- Choose to setup a Tivoli event adapter.



**Note:** this option is only available if the Device Status Alert option is selected.

Click  when you're ready to continue.

## Step 8: Compose the command



Keywords represent information about your Action, a device, or an event. You can pass this information to your command on the MarkVision Server or a remote host, or choose to embed it in an e-mail message.

### To send an e-mail message



- 1 Enter the recipient's e-mail address in the **To:** field. Make sure you separate multiple e-mail addresses with a comma.
- 2 Enter optional e-mail addresses in the **Cc:** field. Make sure you separate multiple e-mail addresses with a comma.
- 3 Enter the purpose of your e-mail in the **Subject:** field.
- 4 Enter your e-mail message in the **Body:** field.
- 5 Add keyword(s) to any text field by:
  - Selecting a keyword from the **Keywords:** list, and then clicking .
  - Typing the keyword directly into the field.
- 6 Click  when you're ready to continue.

**Note:** If you have not [set up your SMTP mail server](#), you will be prompted to enter your mail server and mail path information.

### To execute a command line on a remote host

- 1 Enter the remote host information in the **Hostname:**, **Username:**, and **Password:** fields.
- 2 Enter the name of an executable command in the **Command Path:** field.
- 3 Add keyword(s) to the **Command Line Parameters:** field by:
  - Selecting a keyword from the **Keywords:** list, and then clicking .
  - Typing the keyword directly into the field.
- 4 Click  when you're ready to continue.

### To execute a command line on the MarkVision Server

- 1 Enter the name of an executable command in the **Command Path:** field.
- 2 Add keyword(s) to the **Command Line Parameters:** field by:
  - Selecting a keyword from the **Keywords:** list, and then clicking .
  - Typing the keyword directly into the field.
- 3 Click  when you're ready to continue.

## To setup a Tivoli event server

To execute this command, see [Setting up the Tivoli event adapter](#).

### Step 9: Select a filter


A filter lets you control commands that execute when events occur. Your filter options depend on the Event Type.

#### If your Action is triggered by Device Status Alerts:

- Choose **Trigger on Active** to set the command to execute only when a condition becomes Active. You can also choose to delay execution of the command until the condition has been active for a specified amount of time.
- Choose **Trigger on Either Active or Clear** to set the command to execute each time a condition becomes Active or Clear.
- Choose **Custom** to customize and define when the command executes. You can do this by either uploading an existing script file or writing a new one.



#### If your Action is triggered by Printer Folder Alerts:

- Choose **Simple Filter** to set the Action to execute when a device is added to the folder, removed from the folder, or both. You can also choose to delay execution of the command until the condition has been active for a specified amount of time.
- Choose **Custom** to customize and define when the command executes. You can do this by either uploading an existing script file or writing a new one.

Click  when you're ready to continue.

### Step 10: Customize a filter

If you choose **Custom** from the Filter Type screen, you can customize and define how your action executes. Do this by either uploading a previously defined script file or by writing a new one.

- To upload a previously defined script file:
  - 1 From the Custom Filters screen, enter the name of the script file you want to upload, or click **Browse...** to locate it.
  - 2 Click **Load**. The script file appears in the text field.
  - 3 Click  when you're ready to continue.
- To write a new script file:
  - 1 From the Custom Filters screen, type new script information into the text field.
  - 2 Click  when you're ready to continue.






**Notes:**


- Click **Tips** for more information and sample scripts.
- When you upload a script file, all information in the text field is erased. Make sure you upload the script file first, and then make changes or enter additional information.

## ***Step 11: Verify Action information***

When you're finished, you should verify all Action information for technical accuracy. Carefully review the detailed summary provided in the text field.

When you're ready to continue:

- Click **Yes** to enable your Action.
- Click **No** to disable your Action.
- Click  to step back through the setup process and make changes.
- Click  to create your Action and return to the MarkVision Messenger Home screen.
- Click  to return to the MarkVision Messenger Home screen without creating an Action.

**Note:** You cannot alter information directly in the text field. If you want to make changes, click  to step back through the setup process and make changes from the appropriate screens.

## ***Modifying an Action***

- 1** From the MarkVision Messenger Home screen, find the Action you want to change.
- 2** Click **Modify**.

You are presented with the same series of choices you used to create an Action, but each choice defaults to the current setting for the Action you selected. You may change any or all of your previous settings.

**Notes:**

- You cannot modify an Action that is enabled by another user.
- You cannot modify an Action that another user has selected.

## ***Enabling an Action***

- 1 From the MarkVision Messenger Home screen, select the Action you want to enable by clicking the box to the left of the Action name.
- 2 Click **Enable Selected**. The status of the selected Action changes to Enabled.

**Note:** You cannot enable an Action that another user has selected.

## ***Disabling an Action***

- 1 From the MarkVision Messenger Home screen, select the Action you want to disable by clicking the box to the left of the Action name.
- 2 Click **Disable Selected**. The status of the selected Action changes to Disabled.

**Note:** You cannot disable an Action that another user has selected.

## ***Deleting an Action***

- 1 From the MarkVision Messenger Home screen, select the Action you want to delete by clicking the box to the left of the Action name.
- 2 Click **Delete Selected**. The selected Action is removed from the Actions list.

### **Notes:**

- You cannot delete an Action that is enabled by another user.
- You cannot delete an Action that another user has selected.

## ***Viewing Action information***

To display a detailed summary of an Action:

- 1 From the MarkVision Messenger Home screen, click the name of the Action.
- 2 Click **Done** when you are ready to return.

**Note:** You can only view information for one Action at a time.

You cannot make changes to the Action from the screen. If you want to make changes:

- 1 From the MarkVision Messenger Home screen, find the Action you want to change.
- 2 Click **Modify**.

See **Modifying an Action** for more details.

## Setting or changing user data

User data identifies and provides more information about a specific device or set of devices. It is associated with the *action.sourcedata* keyword string that can be inserted into the **Command Line Parameters:** list. You can associate the same data with one or more devices.

To set or change user data:

- 1 From the MarkVision Messenger Home screen, click **Set User Data**. A list of all available devices and current user data is displayed.
- 2 Enter your device information in the **Data:** field.
- 3 Select the devices you want to associate with this data. You can:
  - Click the box to the left of a device name to select it.
  - Click **Select All** to select all devices.
  - Click **Deselect All** to remove all device selections.
- 4 When you're finished:
  - Click **Apply** to save your changes and refresh the Set User Data screen.
  - Click **Done** to return to the MarkVision Messenger Home screen.

### Notes:

- User-defined data is user specific and cannot be viewed or altered by another user.
- The Data: field is limited to 80 characters.

## Generating reports

You can create Actions to generate event-specific reports.

For example, you're an account administrator and you want to set up an Action to generate a report containing billing and delivery information for all supplies that have been ordered.







- 1 From the MarkVision Messenger Home screen, click **Create New**.
- 2 Enter your Action information in the setup screens that follow, and then click **Next**.
- 3 From the Events screen, select **Supplies Alerts** from the Categories: list.
- 4 Select the events you want to monitor and click the (>) button to add them to the Selected Events: list.
- 5 Click **Next** when you are ready to continue.
- 6 Select the devices you want to monitor, and then click **Next**.
- 7 Enter your command information and keywords in the appropriate fields.
- 8 Click **Next**, and complete the remaining steps.

## Keeping a log of paper jams

You can create an Action to keep a log of specific device events.

For example, you may want to keep a log of paper jams to determine the average time it takes for them to be cleared.


To set up an Action to log paper jams:

- 1 From the MarkVision Messenger Home screen, click **Create New**.
- 2 Enter your Action information in the setup screens that follow, and then click .
- 3 From the Event Type screen, select **Printer Device Status Alerts**, and then click .
- 4 From the Events screen, choose **[Output Alerts]** from the Categories: list.
- 5 Select **Paper Jam** as the event, and then click  to add it to the Selected Events: list.
- 6 Click  when you're ready to continue.
- 7 Select the devices you want to monitor, and then click .
- 8 Select **Execute a Command Line on the MarkVision Server**, and then click .


**Note:** Because command lines are run on the MarkVision Server, you must be logged in as the MarkVision administrator to select this option.

- 9 Enter the name of an executable command in the Command Path: field.


**Note:** Make sure the command you enter can accept the keywords you insert and write them to the end of a log file.

- 10 Select the keywords you want to appear in the log file, and then click  to add them to the Command Line Parameters: field.

**Note:** Make sure you insert the keywords in the correct order.

- 11 Click  when you're ready to continue.
- 12 From the Select a filter screen, select **Trigger on Either Active or Clear**.

**Note:** This creates two lines in the log file: one that logs the time at which paper jams occur, and another that logs the time they are cleared.

- 13 Click , and then complete the remaining steps.


## Delaying Event notifications

You can set up an Action to delay execution of its command until an Event has been active for a specified amount of time.

Let's say you created an Action to send an e-mail notification when a Load Paper or Envelope condition occurs. But after a week, the e-mail recipient is receiving too many notifications, and often when he goes to a device, someone else has already loaded more paper. By using the Delay Time option, you can create a filter that will only send a notification if the Load Paper or Envelope condition has been active for an amount of time that you specify.

Likewise, if your Action is triggered by a Folder Alert, you can delay its execution by using the **With a delay of:** option.

If you want to create an Action that uses the Delay Time option:

- 1 From the MarkVision Messenger Home screen, click **Create New**.
- 2 Enter your Action information in the setup screens that follow, and then click .
- 3 Enter the filter information:
  - If your Action is triggered by Device Status Alerts*
  - From the Filter Type screen, choose **Trigger on Active**.
  - Under **Delay Time**, specify how long you want the Action to wait to execute its command. For example, type in 20 and select **Minute(s)** from the drop-down list.

*If your Action is triggered by Folder Alerts*

From the Filter Type screen, select **Simple Filter**.

Under with a delay of:, specify how long you want the Action to wait to execute its command. For example, type in 2, and then select **Hour(s)** from the drop-down list.




Click **OK**, and then complete the remaining steps.

## ***Monitoring specific device paper trays***

You can use a filter to narrow the Events that trigger your action.


Let's say you configured **Tray 2** on all your devices for your company's letterhead and you only want to monitor for **Load Paper** or **Envelope** events on **Tray 2**. For this example, the **Trigger on Active** or the **Trigger on Either Active or Clear** filter is not sufficient.

To write a custom filter to monitor specific paper trays:

- 1 From the MarkVision Messenger Home screen, click **Create New**.
- 2 Enter your Action information in the setup screens that follow, and then click .
- 3 From the Event Type screen, choose **Printer Device Status Alerts**, and then click .
- 4 From the Filter Type screen, choose **Custom**, and then click .

- 5 In the text field, enter a script that only executes the command when the parameter is the paper tray you want to monitor. For example:

```
IfThen (EventDataIs("location", "Tray2"))  
Distribute
```



- 6 Click  , and then complete the remaining steps.

## ***Sending an e-mail***


You can create an Action to automatically send an e-mail to someone when a specific event occurs.

For example, your network administrator must be notified each time an Operator Intervention Alert occurs, but he is rarely at his desk. If your administrator has an alphanumeric pager, you can set up the Action to send an e-mail to his pager and promptly alert him when the event occurs.

To create an Action to send an e-mail:

- 1 From the MarkVision Messenger Home screen, click **Create New**.
- 2 Enter your Action information in the setup screens that follow, and then click  .
- 3 From the Event Type screen, choose **Printer Device Status Alerts**, and then click  .
- 4 From the Command Type screen, choose **Send SMTP E-mail**.

**Note:** If you have not set up your SMTP mail server, you are prompted to enter your mail server and mail path information.

- 5 Enter the recipient's e-mail address in the **To:** field. Make sure you separate multiple e-mail addresses with a comma.
- 6 Enter optional e-mail addresses in the **Cc:** field. Make sure you separate multiple e-mail addresses with a comma.
- 7 Enter the purpose of your e-mail in the **Subject:** field.
- 8 Enter your e-mail message in the **Body:** field.
- 9 Add the appropriate keyword(s) to any text field.
- 10 Click  , and then complete the remaining steps.







## ***Ordering supplies***

If you have an automated ordering system on your network, you can set up an Action to automatically order supplies for all devices attached to the server.



For example, you can configure an Action to automatically order toner when the first Supply Low event occurs. You can also use the Delay Time option to tell your command to ignore Supply Low and Supply Empty messages for 10 days after the first event. This lets your Action invoke the

automated ordering system to order toner for the printer, and allows time for the new toner to arrive and be installed before more Supply Low and Supply Empty messages are logged.

To create an Action to order supplies:

- 1 From the MarkVision Messenger Home screen, click **Create New**.
- 2 Enter your Action information in the setup screens that follow, and then click .
- 3 From the Event Type screen, choose **Printer Device Status Alerts**, and then click .
- 4 From the Events screen, choose **Supplies Alerts** from the Categories: list.
- 5 Select **Supply Low** and **Supply Empty**, and then click  to add them to the Selected Events: list.
- 6 Click **Next** when you're ready to continue.
- 7 Select the devices you want to monitor, and then click .
- 8 Select **Execute a Command Line on the MarkVision Server**, and then click .
- 9 Enter the path to the automated ordering system program in the Command Path: field.
- 10 Select the keywords to pass to the automated ordering system, and then click  to add them to the **Command Line Parameters:** field.

**Note:** Make sure you insert the keywords in the correct order.

- 11 Click  when you're ready to continue.
- 12 From the Filter Type screen, choose **Trigger on Active**.
- 13 Under the **Delay Time** option, enter **10**, and then select **Day(s)** from the list box.
- 14 Click , and then complete the remaining steps.

## ***Setting up a SMTP mail server***



MarkVision Messenger lets you set up and store your SMTP parameters to use for all your e-mail messages.

To set up a SMTP mail server:






- 1 From the MarkVision Messenger Home screen, click **SMTP Setup**.
- 2 Enter your mail server information in the **SMTP Mail Server:** field.
- 3 Enter your e-mail information in the **From:** field.
- 4 Click **Done** to return to the MarkVision Messenger Home screen.


## Setting up the Tivoli event adapter

The Tivoli event adapter lets administrators monitor printer events across a range of devices in real time. In order to send device status alerts to Tivoli, you must create an action in MarkVision Messenger.

- 1 Click **Create New** on the MarkVision Messenger Home screen.
- 2 Enter a name for the adapter, and if desired, input a description and any notes. Click .
- 3 Select the type of alert that you want to send an event to the Tivoli event server, and then click .

**Note:** The Tivoli event adapter will be available in a subsequent section of the wizard only if the type of events selected on this screen are Device Status Alerts.

- 4 Select the type of event that will trigger the action from the Event scroll box, and then use the arrow buttons to move the event to the Selected Events box. Click .
- 5 Choose the method of device selection. Click .
- 6 Select **Send Device Status Alerts to a Tivoli Event Server** from the dialog box, and then click .
- 7 Enter your Tivoli configuration settings, and then click .
- 8 Determine when the action should execute, and then click .

A summary of the action that you have created is displayed. If you are satisfied with the action, click **Yes** and then  to enable the Tivoli event adapter.

**Note:** After creating a Tivoli event adapter in MarkVision Messenger, you must then configure the Tivoli server for Messenger alerts. Refer to your Tivoli documentation for details on how to configure your Tivoli server.



# 7 Troubleshooting

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## ***Problems with user accounts and account groups***

### ***Error reading account***

When you log in, MarkVision validates your account by requiring a user name and password.

At login, if you see:

#### **A message that indicates there was an error reading accounts**

##### **Possible causes**

- The user name or password you entered is invalid. See [Error reading password](#).
- You have logged in to the wrong MarkVision Server.
- The MarkVision Server is not running.
- The file containing your account information is corrupt.
- There is a problem verifying the account information with the LDAP server (if LDAP authentication has been enabled).

##### **User actions**

Contact your administrator.

##### **Administrator actions**

From the Services control panel, verify that the MarkVision Server is running on the Web server.

If the service is not running:

- 1 Stop and restart the service.
- 2 Ask the user to attempt to log in again.

If the service is running:

- 1 Log in to MarkVision using the default administrator username and password.
- 2 Reconfigure or add the user's account (User Accounts and Groups task).

- 3 Ask the user to attempt to log in again.

If LDAP authentication is enabled, verify that all LDAP settings are correct both in MVP and on the LDAP server. User account names should be consistent with the account listings in your LDAP server's directory service.

## ***Error reading password***

When you log in, MarkVision validates your account by requiring a user name and password.

At login, if you see:

### **A message that indicates there was an error reading the password.**

#### **Possible causes**

- The MarkVision Server is not running on the Web server.
- The file containing your password is corrupt.
- You have incorrectly typed in your password. Passwords are case sensitive.
- If you are using LDAP authentication, your LDAP server settings may be configured incorrectly.

#### **User actions**

- Ask your administrator to reset your password.
- If LDAP authentication is being used, ask your administrator to check the LDAP server settings.

#### **Administrator actions**

From the Service control panel, verify that the MarkVision Server is running on the Web server. If it is not running, stop and restart the service.

If the service is running, reset the user's password:

- 1 Click **User Accounts and Groups** from the All Tasks menu.
- 2 Select the appropriate account, and then click **Edit**.
- 3 Change the password information as necessary.
- 4 Ask the user to log in again.

If you are using LDAP authentication, make sure that LDAP authentication is configured correctly both in MVP and your LDAP server.

## ***Forgotten password***

When you log in, MarkVision validates your account by requiring a user name and password.

## If you have forgotten your password

### User actions

Ask your administrator to reset your password.

### Administrator actions

Reset the user's password.

- 1 Click **User Accounts and Groups** from the All Tasks menu.
- 2 Select the appropriate account.
- 3 Change the password information as necessary.

## *Problems with network devices*

### *MarkVision is unable to find a network device*

- 1 Make sure the printer is turned on and is ready.
- 2 Make sure the LAN cable is plugged into both the print server and into the LAN, and is working properly.
- 3 If you are using an INA:
  - Make sure the print server is properly installed and enabled. Print a setup page for the printer. See your print server documentation for instructions. The print server should appear in the list of attachments on the setup page.
  - Make sure TCP/IP on the print server is activated. The protocol must be active for the print server and MarkVision to work. You can do this from the printer operator panel.
- 4 If you are using an ENA:
  - Check the print server lights. Refer to your print server documentation for instructions.
  - Print a setup page from the print server. Refer to your print server documentation for instructions.
- 5 Make sure the SNMP community name you supplied to MarkVision is the same as the one set in the print server.
- 6 PING the print server.
  - If PING works, check the IP address, netmask, and gateway to make sure they are correct. Turn the printer off, and then PING again to check for duplicate IP addresses.
  - If PING does not work, check the setup page you printed to be sure IP is enabled.
  - If TCP/IP is enabled, check the IP address, netmask, and gateway to be sure they are correct.
  - Make sure bridges and routers are functioning correctly.

- Make sure all the physical connections among the print server, the printer, and the network are working.
- 7 Turn the printer and the print server off, and then on again. Turn the printer on first so when you turn on the print server, it can determine whether the printer is enabled for NPA.

### ***“Device not responding” message appears***

- 1 Make sure the printer is turned on and is ready.
- 2 Make sure the LAN cable is plugged into both the print server and into the LAN, and is working properly.
- 3 If you are using an INA:
  - Make sure the print server is properly installed and enabled. Print a setup page for the printer. Refer to your print server documentation for instructions. The print server should appear in the list of attachments on the setup page.
  - Make sure TCP/IP is activated on the print server. The protocol must be active for the print server and MarkVision to work. You can do this from the printer operator panel. Refer to your print server documentation for instructions.
- 4 If you are using an ENA:
  - Check the print server lights. Refer to your print server documentation for instructions.
  - Print a setup page from the print server. Refer to your print server documentation for instructions.
- 5 PING the print server.
  - If PING works, check the IP address, netmask, and gateway to make sure they are correct. Turn the printer off, and then PING again to check for duplicate IP addresses.
  - If PING does not work, check the setup page you printed to be sure TCP/IP is enabled.
  - If TCP/IP is enabled, check the IP address, netmask, and gateway to be sure they are correct.
  - Make sure bridges and routers are functioning correctly.
  - Make sure all the physical connections among the print server, the printer, and the network are working.
- 6 Use MarkVision to see if the server can contact the printer.
- 7 Compare the IP address of the print server to the address stored for the network printer in the name server or /hosts file. If the addresses do not match, edit the /hosts file or update the name server to correct the address.
- 8 Print a setup page from the print server. If the page prints, the connection between the print server and the printer is working correctly. If the page does not print, check all physical connections.

## ***Printer information appears incorrect***

Occasionally, the printer may lose contact with MarkVision because something happens to the printer. For example, if the printer is turned off, the information in MarkVision is not updated until the printer is turned back on.

If MarkVision displays printer or print server information that appears to be incorrect, refresh the printer and print server.

## ***No printer icon(s) appear***

When you log in to MarkVision and see:

### **A message that indicates there was an error reading printers.**

#### **Possible causes**

- The MarkVision Service is not running on the server.
- The file that stores your printers has been corrupted.

#### **User actions**

Contact your administrator.

#### **Administrator actions**

From the Services control panel, verify that the MarkVision Server is running on the Web server. If it is not running, stop and restart service. If the service is running, ask the user to repopulate the folder with printers. Select the printer, and then click **Edit**. Use filters or manually select printers.

### **Printers are missing from folders (no login error messages).**

#### **Possible causes**

The file that stores your printers has been deleted from the Web server.

#### **User actions**

Repopulate your folder with printers. Select the printer, and then click **Edit user filters** or manually select printers.

## ***Problems with MarkVision Messenger***

### ***Cannot access MarkVision Messenger***

#### **Possible causes:**

- The URL you entered is incorrect.

- The MarkVision Web Server service is not running correctly.
- The MarkVision Web Server is not your default Web server, and you have forgotten to add port 9180 in your address.

**User actions:**

- Verify that you entered the URL correctly.
- Contact your administrator.

**Administrator actions:**

- Verify that the user is using the correct URL address.
- Restart the MarkVision Web Server service to verify that it is running correctly.

### ***No e-mail notification***

**Possible causes:**

- The e-mail address you entered is incorrect.
- The MarkVision Web Server service is not running correctly.

**User actions:**

- Verify that the e-mail address in the To: field of the Compose SMTP E-mail screen is correct.
- Verify that the SMTP mail server and mail path are correct.
- Contact your administrator.

**Administrator actions:**

- Review the system log.
- Verify that the mail server is running.
- Restart the MarkVision Web Server service to verify that it is running correctly.

### ***MarkVision Messenger does not work properly while Apache is installed***

MarkVision Messenger works on two ports by default: 8007 and 8009. If Apache is installed and listens on either of these ports, Messenger will not function properly. When installing, first check for port availability, and then assign the appropriate port to Messenger.

## ***Problems with actions***

### ***Cannot create a new action***

**Possible cause:**

The MarkVision Web Server service is not running correctly.

**User action:**

Contact your administrator.

**Administrator action:**

- Verify that the MarkVision Web Server service is running correctly.
- Restart the service.
- Ask the user to log in again and attempt to create an action.

### ***Cannot enable an action***

**Possible cause:**

Another user has selected the action.

**User action:**

Try again later, or contact the user who has selected the action.

### ***Cannot disable an action***

**Possible cause:**

Another user has selected the action.

**User action:**

Try again later, or contact the user who has selected the action.

### ***Cannot modify an action***

**Possible causes:**

- The action is enabled by another user.
- Another user has selected the action.

**User action:**

Try again later, or contact the user who has selected the action.

***Cannot delete an action*****Possible causes:**

- The action is enabled by another user.
- Another user has selected the action.

**User action:**

Try again later, or contact the user who has selected the action.

***Action did not work*****Possible causes:**

- The command line contains an error.
- The wrong device is selected.
- The wrong event is selected.
- The selected device is not operating.
- The MarkVision Web Server service is not running correctly.

**User actions:**

- Click the action name to review a detailed summary and verify its accuracy.
- Contact your administrator.

**Administrator actions:**

- Verify that the selected device is operating correctly.
- Review the system log.
- Restart the MarkVision Web Server service to verify that it is running correctly.

***Action has unexpected results*****Possible causes:**

- The command line contains an error.
- The wrong event is selected.
- The MarkVision Web Server service is not running correctly.



**User actions:**

- Click the action name to review a detailed summary and verify its accuracy.
- Contact your administrator.

**Administrator action:**

- Review the system log.
- Restart the MarkVision Web Server service to verify that it is running correctly.

***Action list is empty*****Possible causes:**

- No actions are available.
- All available actions are listed as *private* by other users.
- The MarkVision Web Server service is not running correctly.

**User action:**

Contact your administrator.

**Administrator action:**

Restart the MarkVision Web Server service to verify that it is running correctly.

***No private actions listed***

Private actions are associated with individual usernames. Therefore, you can only see those associated with your username.

**Possible causes:**

- No private actions are associated with the username you used to log into MarkVision Messenger.
- The MarkVision Web Server service is not running correctly.

**User actions:**

- Use a different username to log in and check for that user's private actions.
- Contact your administrator.

**Administrator action:**

Restart the MarkVision Web Server service to verify that it is running correctly.

## ***Miscellaneous problems***

### ***The client and server cannot communicate***

If there is a firewall installed on the network, and the MarkVision Client and the Server exist on opposite sides of the firewall, the client will not be able to communicate with the server; MVP will stop responding after the initial request. For the best results, only use an instance of the client that exists inside the firewall.

### ***No folder(s)***

If MarkVision does not display your folders, and during login you see:

#### **A message that indicates there was an error reading folders**

##### **Possible causes:**

- The MarkVision Server is not running on the web server.
- The file that stores your folders has been corrupted.

##### **User actions:**

Contact your administrator.

##### **Administrator actions:**

- From the services control panel, verify that the MarkVision Server is running on the web server. If it is not running, stop and restart service. If the service is running, ask the user to recreate their folders (Folder Configuration task - Add).

#### **All folders are missing (no login error messages)**

##### **Possible causes:**

The file that stores your folders has been corrupted.

##### **User actions:**

Recreate the folders (Folder Configuration task - Add).

### ***Out of available memory***

If the MarkVision Professional Web Client performs poorly, crashes, or gives you a memory error, you may need to change your system Java plug-in settings. The Java plug-in uses 16MB of RAM regardless of how much physical or virtual memory is available. You can improve performance by increasing the memory available to MarkVision.

## User actions

To change the Java plug-in settings:

- 1 In Windows, access the Java plug-in settings from the **Control Panel**.
- 2 In the **Java Runtime Parameters** box, type:

```
-ms16m -mx64m
```

**Note:** The entry "-ms16m" reserves 16MB memory when the application starts. The entry "-mx64m" reserves a maximum of 64MB available RAM. If your system has more memory, you can specify a larger amount.

For additional Java troubleshooting, refer to the MarkVision README file.

## ***Cannot enter characters in printers in a different language***

In some situations, a user may need to enter information in a printer in a different language than the MVP client is currently using. MVP 11.0 has some limitations configuring or entering specific characters for devices in a language that MVP does not support. In these situations, you must enter the characters manually, without using MVP.

## ***Some settings that have been configured in MarkVision Professional revert to their previous state after the MarkVision Server is rebooted***

MarkVision Professional saves configured system settings at a regular interval. As a result, configurable settings, such as Administrative Settings, Device Policies, folders, filters, and User Accounts and Groups, will not persist until the regular save interval has occurred. To ensure that configured settings remain in place, wait at least 10 minutes after making any changes to the settings before stopping the MarkVision Server.

# 8

## Frequently Asked Questions

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### *How do I get to the server after installing?*

#### **Accessing the MarkVision Professional Server with the MarkVision Application**

In application form, the client is installed locally so it can be launched just like any other program installed on the machine. For example, in Windows environments, you can double-click the **MarkVision Professional** icon on the desktop. This version of the client does not use a Web browser.

After starting the application:

- Enter the hostname or IP address of the machine running the MarkVision Server, and then click **Connect**. You can also click **Browse** to locate your server.
- If user accounts are enabled, you are prompted to enter the name of a user account and its password.
- Click **Login**.

#### **Accessing the MarkVision Professional Server with the MarkVision Web Client**

Since the MarkVision Web Client is browser based, you need to open your browser and point it to the MarkVision URL. If MarkVision Professional is your default Web server, the URL is:

`http://<your server>/markvision`

where *<your server>* is the IP address or hostname of the machine that is running the MarkVision Server.

If MarkVision Professional is not your default Web server, the URL is:

`http://<your server>:9180/markvision`

Note that because this URL uses a non-standard port number, in most browsers, you need to type the "http://" in the beginning of the URL.

**Note:** The "markvision" part of the URL is case-sensitive; it must be entered in all lowercase letters.

The MarkVision Web Client launches a browser window from which MarkVision Professional runs as a Java applet. If you have not already enabled your browser to support Sun's Java Runtime Environment (JRE), you must do so at this time. In order to run the Web Client, you must first enable your Web browser to support JRE by installing the Java plug-in. In Windows environments, the

plug-in is provided and you are automatically prompted to install it the first time you run the MarkVision Web Client.

## ***How do I discover printers?***

Device discovery in MarkVision Professional 11.0 is now managed through the use of discovery profiles. During MVP Setup, a default device discovery profile is typically established. If you do not currently have any discovery profiles created, see [Creating discovery profiles](#). Once you have some discovery profiles to work with, you can use the Manage Discovery Profiles task to discover your devices.

### **Manage Discovery Profiles task**

The Manage Discovery Profiles task can be selected from either the All Tasks list or by clicking **MarkVision → Device Discovery → Manage Discovery Profiles**.

- 1** Go to **MarkVision → Device Discovery → Manage Discovery Profiles**.
- 2** Select the profile from the **Discovery Profiles** window that encompasses the devices that you want to discover.
- 3** Click **Start**.
- 4** MVP communicates with the devices included in the selected profile. To stop a discovery at any time, click **Stop Discovery**.

**Note:** Performing a discovery with the Full Discovery profile, or any profile that includes all of the devices on your network, requires a large amount of CPU usage. Running a full discovery can render the MarkVision Server virtually unusable while the discovery is executing.

For a more in-depth look at discovering devices, see [Adding and removing devices](#).

### **Quick Find task**

The Quick Find task is capable of initially discovering devices and filtering a device search for previously discovered devices.

While searching by TCP/IP address, multiple devices can be discovered using a wildcard variable when typing in the criteria for the TCP/IP address. You can use a zero (0) or asterisk (\*) as a wildcard character when performing a Quick Find based on a network subnet. For example, in order to find all the printers on the 122 subnet, the user would type in the address value 138.188.122.0. This would find devices with IP addresses of 138.188.122.2, 138.188.122.3, 138.188.122.4, and so on.

**Note:** If you enter a TCP/IP address, MarkVision Professional first checks the list of devices already discovered. If the address is not in the list, MarkVision Professional initiates a device discovery to find it.

**Note:** IPX discoveries can only be performed using the Device Discovery task.

## Adding devices

In some situations you may want to discover some devices without creating a profile. In these situations you can use the **Add Devices** task to discover individual or small groups of devices.

### To use the Add Devices task:

- 1 Select **Add Devices** from the All Tasks menu, or select **MarkVision** → **Device Discovery** → **Add Devices** on the MVP Home screen.
- 2 Select a specific device or devices from the list of existing devices on the screen, or click **Add** to enter a new device address, and then click **OK**.
- 3 Click **Start** to begin the discovery.

You can also select the **Exclude** tab to select devices from an existing profile that you *do not* want to include in the discovery.

Select the **Advanced** tab to reset additional discovery settings.

**Note:** You can save any new groups of devices that you establish with the Add Devices task as a new discovery profile by clicking **Save as Profile**.

## *Is IPX supported?*

### IPX management support

IPX management support is only available for a MarkVision Server running on a Windows NT, Windows 2000, Windows XP, or Windows 2003 Server workstation. UNIX Clients can connect to a Windows-based MarkVision Server to manage printers with the IPX protocol.

IPX protocol support must be installed on the Windows NT, Windows 2000, Windows XP, or Windows 2003 Server workstation. If IPX protocol support is not installed, the IPX option is disabled. The NetWare protocol for the supported print server must be active to be discovered.

**Note:** Not all devices are available through IPX support.

### IPX printer installation support

The easiest way to configure the print server for NetWare jobs in non-NDPS and non-NEPS environments is to use the Network Printer Utility for NetWare (Interwin). The Network Printer Utility (Interwin) automatically creates all the necessary NetWare objects (print queue objects, print server objects, and printer objects).

## *Is there any way to speed up device discoveries?*

The time MarkVision Professional takes to discover devices varies, depending on the scope of the discovery. A device discovery spanning multiple subnets (133.122.0.0) requires more time than a device discovery spanning a single subnet (133.122.123.0).

From the Scheduling task, the MarkVision Server can be set to perform network discoveries once, daily, weekly, or monthly. Device discoveries can be scheduled to occur at off times, when network traffic is less busy, and routinely scheduled device discoveries ensure that the list of devices MarkVision Professional manages is current.

For a more in depth look at discovering devices, see [Adding and removing devices](#).

## ***What are the differences between the Application and the Web Client?***

### **Differences between the MarkVision Application and the MarkVision Web Client**

The MarkVision Application and Web Client are essentially the same program. All folders, filters, devices, and so on that are managed by the MarkVision Server are available to users of either the application or the client, provided that the user has been granted access.

The Web Client requires the installation of the Java browser plug-in. Since the Web Client runs through a Web browser, you can use it to access the MarkVision Server from any computer on your network.

## ***What do the lines through some devices mean?***

Because the nature of MarkVision Professional is such that all tasks are available all of the time, it is possible to choose devices that do not support a given task. For example, not all printers can report their toner/ink levels. When this occurs, the name of the device incapable of the selected task has a line through it.

If a device that does not support the current task is selected, MarkVision Professional responds in the following way:

- For a single device selection, the message **Device Incapable of Task** is displayed.
- When multiple devices are selected, and one or more of them do not support the current task, either of the following occurs:
  - For read-only tasks (such as status and toner levels), MarkVision Professional displays the **Device Incapable of Task** message in place of the task information for that device. All supported devices have their appropriate information displayed.
  - For multi-device configuration tasks, MarkVision Professional warns you that some of the devices will not be affected by the task because they do not support the function or feature that is being configured.

## ***Why are some devices displayed in red text?***

Devices that are displayed in red text are password protected. In order to gain access to a password protected device, you can use the Enter Device Password task to gain access to a protected device

for the duration of the current Client session. The Enter Device Password task is located under **MarkVision → Enter Device Password** or in the All Tasks list.

An administrator also has the option to add a device's password to the Manage Global Password list. If a user has access to the Manage Global Passwords list task, they will in turn have access to every device that MarkVision manages that has a password included in the list.

Because the Manage Global Passwords list task provides access to valuable device passwords, access to the task should be limited to administrative personnel.

## ***How do I create a filter and apply it to a folder?***

Filters provide an easy way to view devices of a certain type or status.

### **Create a filter**

- 1** From the menu bar, select **MarkVision → Filters**. The Filter Creation window appears.
- 2** Click **New**.
- 3** Give your filter a meaningful name.
- 4** Under the Name dialog box, select either **Basic** or **Advanced**.

- **If you select Basic**

Select the filter conditions. If you select more than one condition, you can specify whether a device must meet any or all conditions in order to be included in the folder. If All is selected, a device must meet all conditions. If Any is selected, a device must meet at least one condition to be included in the folder.

- **If you select Advanced**

You can create conditions by first selecting a parameter, then selecting a logical operation, and then selecting or typing in a value.

For example, if you wanted to "filter out" all color printers, you would:

- 1** From the parameter box, select **Color**.
- 2** From the operation box, select **Equal To**.
- 3** From the value box, select **Monochrome**.

Likewise, if you wanted to "filter in" all printers with Job Timeouts greater than or equal to 90 seconds, you would:

- 1** From the parameter box, select **Job Timeout**.
- 2** From the operation box, select **Greater Than Or Equal To**.
- 3** From the value box, type in **90**.

**Note:** Some values (such as the 90 seconds in the previous example) must be manually typed.



As in the Basic filter configuration, if All is selected, a device must meet all conditions. If Any is selected, a device must meet at least one condition to be included in the folder. If only one condition is specified, the Any and All radio buttons will be grayed out.

For a more in-depth look at filters, see [Using filters](#).

### Apply a filter to a folder

- 1 From the menu bar, click **MarkVision** → **Folders**. The folder configuration window appears.
- 2 Select the folder you want to configure. If you have already applied a filter to this folder, the filter settings appear.
- 3 If you want to apply a previously created filter, click **Load Filter...**, and then choose the filter.

**Note:** Manual selection overrides filters. For example, if you apply the filter **Color Equal To Monochrome**, and you have already manually selected various color printers, those manually selected printers remain in the folder.

## What is MarkVision Messenger?

MarkVision Messenger is a browser-based tool that helps to automate responses to printer problems or events. MarkVision Messenger lets you create Actions to automate many printer administration tasks. Using its intuitive wizard-based interface, you can configure Actions to:

- E-mail someone when a specific device condition occurs, such as **Toner Low**.
- Keep a log of paper jams.

To use MarkVision Messenger, click **Actions** → **MarkVision Messenger Launch** or, from a Web browser, enter the URL:

```
http://<your server>/messenger
```

where <your server> is the IP address or hostname of the machine that is running the MarkVision Server.





**Note:** If MarkVision Professional is not your default Web server, the MarkVision Messenger address is:


```
http://<your server>:9180/messenger
```

The "messenger" part of the URL is case-sensitive; it must be entered in all lowercase letters.

## How do you create actions?

The following steps are an example of how to create an Action in MarkVision Messenger. This sample Action sends an e-mail message to a fictional address, (paper@jam.com) whenever a printer monitored by the MarkVision Server enters a Paper Jam state.

- 1 After logging in to MarkVision Messenger, click **Create New**.
  - Type in the name of the Action (required).
  - Type in a description of the Action (optional).
  - Type in notes about your Action (optional).
- 2 Click the **Next** arrow icon.
- 3 Choose whether to make your Action **private** (the Action is only available to you) or **public** (the Action is available to all users), and then click the **Next** arrow icon.
- 4 Choose the event that will trigger the Action. For this example, select **Paper Jam** from the Events list, and then click the  to add **Paper Jam** to the Selected Events box.
- 5 Click .
- 6 Select your method of device selection. You can choose to:
  - Monitor All Devices on the MarkVision Server
  - Monitor Devices in a Specified Folder
  - Monitor Selected Devices
- 7 For this example, click **Monitor All Devices on the MarkVision Server**, and then click the **Next** arrow icon.
- 8 Select the type of command your Action will execute. For our example, click **Send SMTP E-mail**, and then click the **Next** arrow icon.
- 9 In the SMTP Mail Server box, enter your SMTP Mail Server (mailserver.mycompany.com, for example). In the From: box, enter your e-mail address. Click .
- 10 Compose your e-mail message.
  - In the To: box, type the fictional **paper@jam.com**.
  - If you want to carbon copy (Cc) someone, type the appropriate address in the Cc: box.
  - For this example, type **Paper Jam** in the Subject: box.
  - In the Body: box, type: **There is a paper jam at: source.ipAddress, model: source.model**, and then click .

**Note:** Both `source.ipAddress` and `source.model` are Keywords. Select them from the Keywords list and move them to the **Body:** box by clicking . The `source.ipAddress` keyword contains the TCP/IP network address (if applicable) of the print server to which the printer is attached. The `source.model` keyword contains the model name of the printer. Many keywords are available in MarkVision

Messenger, and a description of each is in the Keyword Detail box, directly under the Keywords list.

**11** Select the type of filter for your action:

- **Trigger on Active** sends an e-mail whenever a printer enters a Paper Jam state.
- **Trigger on Either Active or Clear** sends an e-mail whenever a printer enters or exits a Paper Jam state.
- **Custom** lets you create your own filter script.

For this example, click **Trigger on Active**, and then click the **Next** arrow icon.

**12** You will now see a summary of your action. Click **Yes** to enable the Action.

### Results of this example

If a printer monitored by MarkVision Professional enters a Paper Jam state, an e-mail will be sent to the fictional paper@jam.com. The subject will be "Paper Jam," and the body will be similar to:

There is a paper jam at: 123.123.123.123, model: generic printer.

In this example, 123.123.123.123 is the TCP/IP network address of the print server to which the printer is attached, and generic printer is the model name of the printer.

## ***Where is the README file?***

If MarkVision Professional was installed in the default location, the README text file can be found in:

### For Windows users:

- Click **Start** → **Programs** → **Lexmark** → **MarkVision Professional** → **MarkVision Professional ReadMe**

### For UNIX users:

- /usr/markvision/docs/readme

### For both Windows and UNIX users:

- You can link to the README file at:

**http://<your server>/markvision**

where <your server> is the IP address or hostname of the machine that is running the MarkVision Server.

**Note:** If MarkVision Professional is not your default Web server, you need to change the URL to:

**http://<your server>:9180/markvision**

## ***How do I change the MarkVision Web Server port?***

The port upon which the MarkVision Web Server responds to web requests is also configurable. It may become necessary to do this if you want to simplify the Web Client URL to make requests on port 80, the standard port for web browsers, eliminating the need to specify 9180 in the MarkVision URL.

For Windows-based machines, the MarkVision Web Server port may be changed by editing the server.xml file, located in the following path:

**C:\Program Files\MarkVision Server\mvp-tomcat\conf\server.xml**

Within the server.xml file, locate the following tag section:

```
<!-- changed to 9180 for non-default web server -->
<http10connector
    port="9180"
    secure="false"
    maxThreads="100"
    maxSpareThreads="50"
    minSpareThreads="10" />
```

Copy the section and paste it below the original. Under this heading, change the **port=** value to 80 and save the changes. In order for the changes to become operational, you must stop and restart the web server service. This will allow the MarkVision Web Server to accept requests from both ports.

**Note:** The MarkVision Web Server can only be set to listen to port 80 provided no other web server is currently using the port. Do not remove the prior section containing 9180 as some functions of MarkVision may require this port.

To change the MarkVision Web Server port for UNIX or Macintosh operating systems, run the setup.mvj server script, which is included in your operating system's install package.

## ***Where can I find additional Tivoli support for MarkVision?***

If you use Tivoli with MarkVision Professional, the new Tivoli Plus module is available for download at the following URL:

[www.lexmark.com](http://www.lexmark.com) .

## ***Are sensitive files displayed when viewing encrypted hard disk drives?***

If you use the Storage Devices task to securely view an encrypted hard disk drive, the only information that is available is file name, file type, file size, and the date that a file was saved on the hard disk. The contents of any files saved on the hard disk will not be displayed.