BuyersLab
PLATINUM
TESTED SOLUTION
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Lexmark Markvision Enterprise 4

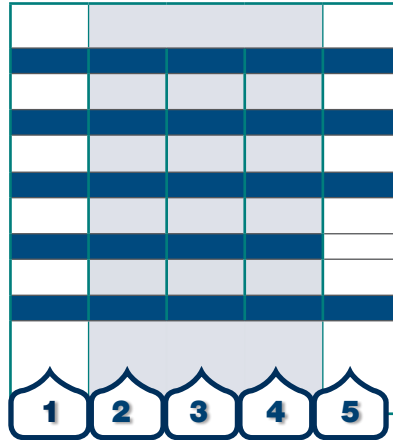|	1	2	3	4	5
FEATURES & PRODUCTIVITY					
USABILITY					
IT ADMIN & SECURITY					
SUPPORT & TRAINING					
VALUE					

scale: 1-5, where 3 = typical for this class of product and 5 = world class

Product Snapshot

Product: Markvision Enterprise

Version: 4.0.0

Software Developer: Lexmark International, Inc**.**

Web: www.lexmark.com

Phone: 1-800-539-6275

For more information on Lexmark Markvision Enterprise 4 and related solutions, see Keypoint Intelligence's comprehensive coverage at Keypointintellgence.com/ Solutions

About Buyers Lab: Since 1961, Buyers Lab has been a leading test laboratory in the world of digital imaging equipment. Buyers Lab is completely independent in all of its testing processes and subsequent reporting. All of Buyers Lab's product evaluations are conducted by highly experienced employees in its on-site testing facilities in the United Kingdom and United States where hundreds of new copiers, printers, wide-format devices, scanners, and multi-function (MFP) products are evaluated and reported on each year.

OVERVIEW

Lexmark Markvision Enterprise (MVE) is a free fleet-management utility that lets IT department and help-desk personnel monitor the status of networked printers and MFPs, regardless of manufacturer. For Lexmark devices, IT personnel can monitor device status, manage settings, deploy firmware and embedded MFP applications, and see and interact with a device's operator panel—all remotely from within the utility. MVE also features a roles-based user scheme that allows various personnel in an organization—IT administrators, help-desk staff, facilities managers and so on—to quickly access device information and program functions pertinent to them.

KEYPOINT INTELLIGENCE

MAY 2021

CHIEF BENEFITS

NEARLY EFFORTLESS SETUP – MVE includes Firebird, a SQL-compatible database, and can be installed in minutes.

PROACTIVE EMAIL ALERTS – The solution sends automatic email alerts if a device jams, needs toner or paper, or requires service.

STREAMLINED REMOTE MANAGEMENT – For Lexmark devices under management, users can configure device settings, clone settings from one device to like devices, install new firmware, and perform other administrative tasks without being at the MFP.

AUTOMATIC ENFORCEMENT OF SECURITY POLICIES – The utility can be used to configure all general and security settings on a managed Lexmark device, automatically check conformance to those policies, and change settings as necessary to enforce those policies if a device is out of conformance.

APPLY DEVICE SETTINGS ON THE FLY – MVE can also automatically assign and enforce a configuration on newly discovered Lexmark devices without manual intervention, or automatically remediate the settings of an existing device that has fallen out of compliance, which ensures all devices on the network meet the organization's security policies and are in line with other desired default settings. A single common configuration can be created and automatically applied to current and legacy devices, making it easier for administrators to assure security of newly added printers.

REMOTE OPERATOR PANEL – The solution enables IT personnel see and interact with a Lexmark device's control panel from within MVE.

ROLES-BASED ADMINISTRATION – The intuitive, web-based UI is designed to give quick access to the info each type of user needs, without them having to wade through menus not relevant to their jobs.

OUR TAKE

Staid and steady, there is nothing all that thrilling about most network device management utilities. They show IT staff the status of devices, track consumables, allow some degree of remote management, and ping the proper personnel if there is a problem. With Markvision Enterprise (MVE), however, Lexmark reimagined what a fleet-management tool could be.

The most notable innovation in MVE compared to traditional fleet-management tools is the use of what Lexmark calls Configurations—a bundle of settings and policies that can be saved and subsequently applied to devices as needed. Typical management programs allow bulk management of only a limited number of settings, but MVE Configurations can contain general settings for device functions (copy, print, fax, scan, send) as well as more advanced security and network settings. Configurations can even contain a desired firmware version, embedded applications to be deployed to the device, and Certificate Authority certificates (certificate management capabilities are available thanks to integration with Microsoft CA Server and OpenXPKI). The solution also enables administrators to create common configurations that can be automatically applied to current and legacy Lexmark models when MVE detects their addition to the network. These capabilities greatly simplifies fleet management tasks, since they allow IT administrators to maintain a single configuration that can then be applied to multiple (or all) Lexmark devices, rather than multiple policies.

A further strength is the ability of the program to keep devices in conformance with the desired Configuration policies automatically. Via routine checks, the program can identify machines that are out of compliance and remediate the settings, as necessary. The feature can also be used to automatically assign and enforce
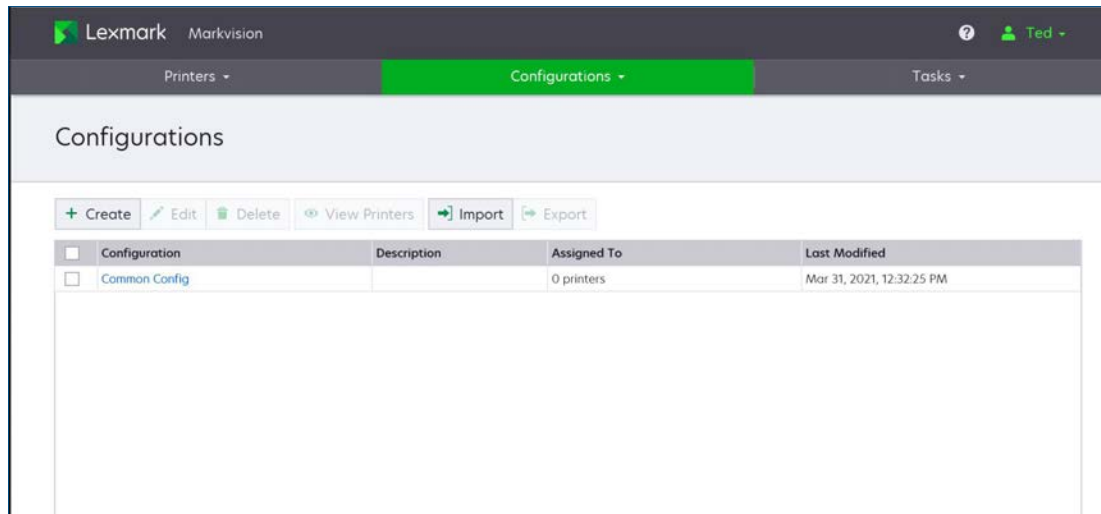
a Configuration on newly discovered Lexmark devices without manual intervention. These abilities ensure that all devices on the network meet the organization's security policies and are in line with other desired default settings. Also, with most device management utilities, an administrator creates specific groups—all color devices, for example, or all devices at a given location—and adds devices to each as appropriate. These groupings are typically displayed in a folder-tree structure that users can then navigate to display devices in each group. With MVE, however, users can see the devices they need to know about on the fly by constructing a search query. The parameters that can be searched on are incredibly granular, and searches can be saved to be run later. This ensures that all devices that meet the criteria are shown, rather than relying on a static group that might be missing new devices that someone forgot to add to a particular group.

MVE does have shortcomings compared to some other device management utilities. Most notable is lack of support for monitoring printers/MFPs connected locally to PCs. Unlike other OEM-developed fleet management solutions, MVE does not enable administrators to configure print management settings at the end-user level. Also, a few management platforms now offer dedicated mobile apps that deliver the programs' functionality in a smartphone-friendly format, rather than relying simply on the phone's browser. But overall, MVE offers a great deal of time-saving features and is a must for any organization that has deployed Lexmark output devices

Features & Productivity

MVE offers an excellent—and in many ways unique—feature set for a fleet management program.

- MVE's Configurations feature can be used to lay out all settings on a managed Lexmark device, including general settings for device functions (copy, print, fax, scan, send) as well as more advanced security and network settings. Configurations can even contain a desired firmware version, embedded applications to be deployed to the device, and Certificate Authority certificates. The solution can also automate device certificate management via integrations with Microsoft CA Server and OpenXPKI.

The main thrust of MVE 4 is its "Configurations" paradigm, which lets an administrator create, assign, and enforce groups of settings to ensure that all devices are following the company's desired policies.

- The program can then automatically remediate the settings of an existing device that has fallen out of compliance or assign and enforce a configuration on newly discovered Lexmark devices without manual intervention, which ensures all devices on the network meet the organization's security policies and are in line with other desired default settings.

- MVE delivers three complementary toolsets to streamline device management: The Printers dropdown-tab handles device discovery and organization, information collection, asset tracking and inventory reporting. The Configurations dropdown tab supports remote access to device settings, firmware, and applications, as well as the creation and enforcement of policies to ensure devices remain in compliance with the organization's desired configuration settings.

- The software automatically discovers devices and collects device information.

- In MVE, the Printers and Configuration views can be customized to show a wealth of information (there are over 100 selectable attributes spread across 13 attribute types). For example, you can create a custom view for printers that includes the device's IP address, system name, hostname, model name, serial number, state (managed, managed but missing from the network, unmanaged or retired), contact name, location, and asset tag. You could also build custom views for Configuration information, including the device's IP address, system name and model name, and icons that show whether a device is in compliance with the desired copy, email/FTP, fax, print, firmware, network, security and other settings at-a-glance. Different standard views can also be selected, each with their own collection of attributes.
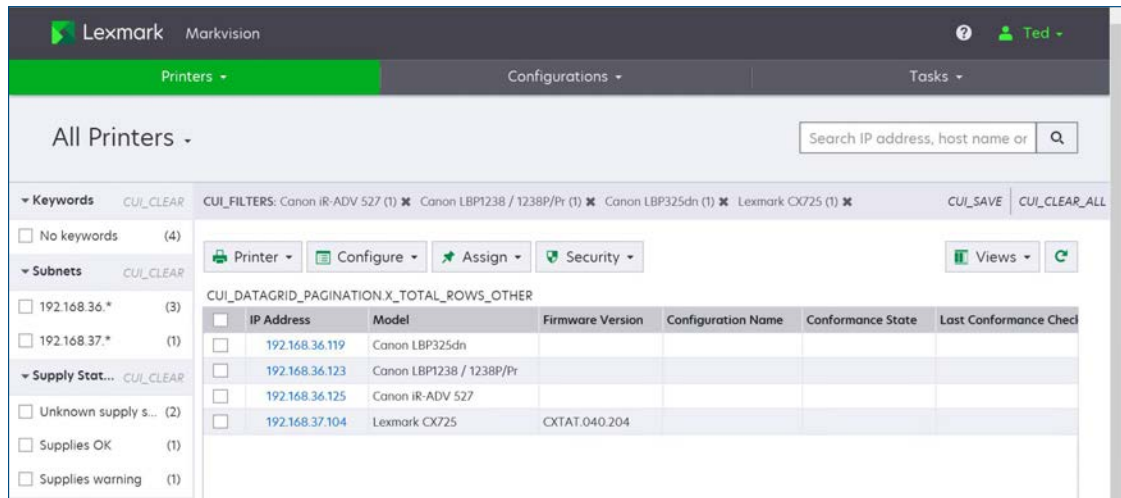
The printers tab provides users with at-a-glance information

- In addition to the IP address and model name data, the Tasks tab device list offers a Printer Status column with an iconic representation of the device's status: a green checkmark for okay, a yellow exclamation point for needs attention or a red "x" for an error that needs attention. This way, the help desk staff can see which devices need attention (or soon will) at-a-glance. Similarly, the Supply Status column shows icons for consumables status, and the device list also shows if the device is in compliance in the various areas shown on the Policies tab. Admins can import a list of IP addresses to a CSV file for further convenience.

- As is typical of device management utilities, information for third-party devices is limited by information provided by the public MIB (Management Information Base) of the device. For example, some device makers do not report consumables levels in the public MIB, but reserve that data for the private MIB accessible only to programs they allow.

- Administrators can configure email alerts for 148 conditions. But as granular as these alerts can get, limitations on what MIB data can be read can render these options useless.

- Besides monitoring network devices, MVE allows administrators to better manage the Lexmark devices in their fleets. Devices discovered by the utility can be assigned to one of three "lifecycle states": Managed (which includes the device in all tasks supported by the program), Unmanaged (which excludes the device from activities performed by users) and Retired (which includes formerly Managed devices that have been taken out of service; this state is handy should an end user re-connect an old printer without IT consent).

- MVE takes a policy-enforcement approach to managing Lexmark devices. An administrator can start with a Common Configuration that will automatically be assigned to new Lexmark printers and MFPs when MVE detects them on the network. Custom Configurations can be created and applied to individual devices and/or groups of devices, as necessary. The configurations not only save IT managers time, but they also help ensure all devices are in conformance with how an organization wants the devices set, even when multiple or new IT staff members are the ones placing devices in the field. Furthermore, these configurations can help a business trim output expenses. For example, a template can specify that the group of devices be set to print in duplex mode by default (to cut down on paper use) or in toner-saving draft mode. MVE will flag any device that is out of compliance, and the administrator or other IT staff can then push the correct settings out to the device. Conveniently, administrators can even set a scheduled event to have MVE automatically sweep the network for out-of-conformance devices and change their settings back to what they should be.

- MVE allows administrators to update device firmware and automatically ensure devices are kept at the correct firmware level. And unlike some utilities, MVE allows administrators to remotely deploy Lexmark solutions to compatible devices on the network.

- The solution comes with five preconfigured "views" (Configuration, Event, Security, Service Desk and Standard), each of which displays pertinent device information. For instance, the Security view displays each device and its firmware version, configuration name, conformance state, last conformance check, disk encryption, disk wiping mode. Users can also build customized views that display information related to each device's capabilities, configuration, dates, events, firmware, identification, options, printer statistics, solutions, status, and supplies.

- Administrators can slice and dice any of the capabilities, configuration, dates, events, firmware, identification, options, printer statistics, solutions, status, and supplies information collected by MVE, and compile them into a virtually unlimited amount of reports using the Views section.

- MVE offers the tracking of total print, copy, fax, scan pages, including if they were monochrome or color jobs.

- When exporting a configuration, MVE will omit any user credentials.

- While device discovery is impressive, unlike with a few competitive solutions, locally connected devices cannot be discovered by the utility. Only network-connected devices can be discovered.

- The solution maintains a log of every action in MVE. Logs display information about the time, task ID, action type, username, and category, plus a message. Administrators can filter the list by time period (last 24 hours, seven days, or 30 days), category (information), and types (discovery, data export, event, system configuration, and user). Logs can be exported to .csv for further analysis.

- Unlike many fleet management utilities, MVE does not monitor usage or allow administrators to manage print settings at the end-user level. This means that businesses cannot get a granular view of which specific users or user groups are driving up print costs or enforce policies to curb that usage and cost.

USABILITY

The user interface is clean, well-organized, intuitive to use and easy to navigate. The relative simplicity of MVE's interface creates a comfortable work environment, while still providing powerful fleet management tools.

- By default, the utility includes pre-built search choices for finding devices by subnet, color capability, manufacturer, multifunction abilities, model name and a few others. Clicking on a hyperlink beneath these categories—Lexmark from the manufacturer entry, for example—runs the search and displays the devices matching it in the central working pane.

- Users can easily build very granular custom searches and save them to the Saved Search and Searches list, which can be especially helpful for large organizations with hundreds to thousands of devices to monitor and manage. The header area contains the top-level dropdown-tabs—Printers, Configurations, and Tasks—that organize the program's functions for various types of users. Below the header, panes on the left show the list of available bookmarked searches and search results. The main working area of the UI shows the list of devices that match the selected search.

- As noted, the utility supports role-based access to the program's functions and data based on a user's log-in credentials. An Admin user can access and perform tasks in all MVE's functional areas, including adding more users to the system and configuring system settings.

- The roles-based nature of MVE allows each View to have its own information pertinent to the user, and custom Views can be created to suit other needs. These Views also double as reports, as any Views can be exported to various formats for sharing the information with others.

- The Configurations tab lets an IT administrator define and then manage the settings of Lexmark devices in the fleet. Users can assign a defined policy that specifies the configuration settings for each model, and easily monitor whether devices follow the policies (and enforce the policies when necessary). Those charged with keeping

devices operational and helping end-users with printer-related problems will spend their time on the Tasks tab. Here, a user can remotely monitor a device, manage settings, check policy conformance, drill down into the device's embedded Web page and even see and interact with a supported Lexmark device's control panel.

- While using MVE is intuitive, the utility lacks the convenience of drag-and-drop functionality for managing devices.

- Status bars for supplies now match the color of the supply, and expresses the amount remaining in a percent to make it easier to read.

- Optional user-entered descriptions can be added to configurations, discovery profiles, events, actions, saved searches, and views to reduce confusion.

- While using MVE is intuitive, the utility lacks the convenience of drag-and-drop functionality for managing devices.

- Unlike with other solutions, there is no mobile app for Lexmark Markvision Enterprise.

- Unlike most network device management utilities, MVE does away with the concept of devices grouped in folders, instead offering a list of bookmarked searches that can be executed in real time.

IT Admin/Security

INSTALLATION / CONFIGURATION

- MVE is nearly effortless to install and set up. The utility is available as a free download from Lexmark's dedicated Markvision Web site and took roughly 30 seconds to download over a broadband connection. The installation package contains all the components needed to get up and running, including Firebird, and an open-source SQL database engine; alternately, an administrator can select to use an existing Microsoft SQL Server database during setup.
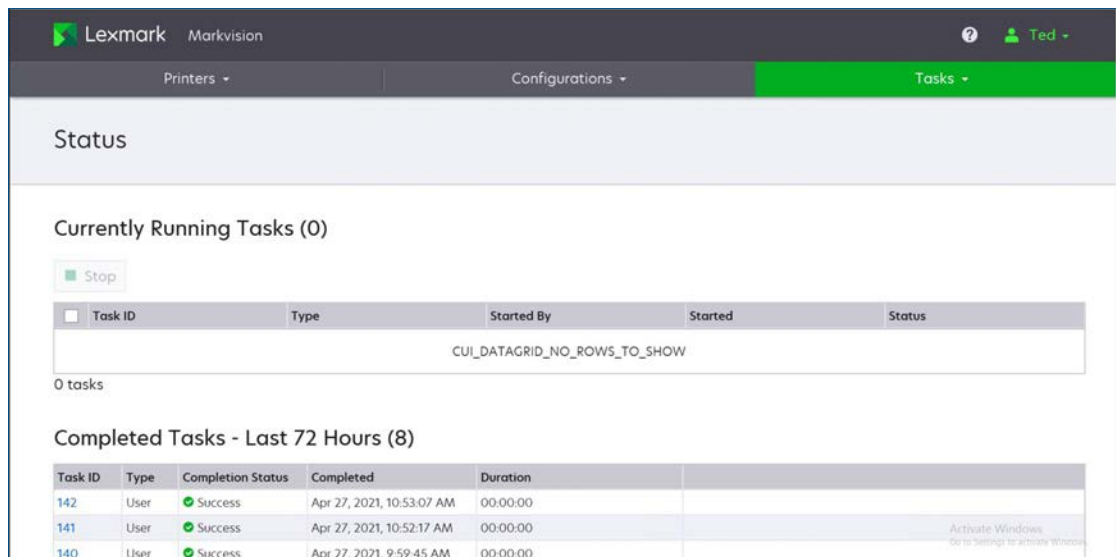
The Tasks page shows a log of all actions that have been performed in the program.

- The discovery process can be scheduled with the Schedule Event function. Admins can set discoveries for every weekday, once a week, every other week, and monthly if they would like. Additionally, new devices added to the network are automatically discovered, saving admins a great deal of time and effort.

- Newly discovered devices can have Configurations automatically assigned and enforced without user intervention as part of the discovery profile, ensuring all devices on the network are configured as soon as they are found.

- Conveniently, administrators can use an organization's LDAP server to authenticate users via their existing Windows IDs and passwords, which eliminates the need for users to maintain a separate login ID and password just for the utility.

ONGOING ADMINISTRATION

- Once installed, extensive maintenance of the solution should not be necessary. The straightforward nature of the software makes for a painless user experience.

SECURITY

MVE supports login for administrators to prevent unauthorized use of the solution. Additionally, different users within IT can be granted different levels of access: admin, printers, configurations, event manager and service desk. A user can be granted access to any one or all three. Kerberos accounts are supported, too.

SUPPORT & TRAINING

- Lexmark offers an Administrator Guide and Database Guide in PDF format. A complete table of contents and index, with hyperlinks to the associated sections, is found to the left of the electronic manual's pages. Lexmark also offers an online user guide.

VALUE

MVE is a free download available from Lexmark's site. With its time-saving functionality and potential money-saving insight it can provide into a fleet, it represents a terrific value-add for customers with Lexmark devices in their fleets.

STRENGTHS

- **Nearly effortless installation**

- **Set and enforce device-configuration attributes including general settings and security settings**

- **Device configurations can be automatically assigned and enforced on newly discovered devices without manual intervention to ensure organization security policies are maintained**

- **Roles-based user permissions enables easy access to pertinent data and tasks, while restricting access to features and functionalities that are no relevant to the user's job function**

- **Web search/bookmark model for creating dynamic custom device groupings**

- **Deploy firmware and embedded applications remotely**

- **See and interact with device control panels remotely**

- **New devices added to the network are automatically discovered and added to the database**

- **Support for setting color print permissions by host or user (on newer Lexmark devices where color print is a permission that can be assigned to a group)**

- **Reports that show devices that are not in conformance with desired settings can be automatically generated and sent via email, which aids in meeting security audit policies**

WEAKNESSES

- **No support for monitoring USB-connected local devices**

- **No dedicated mobile app for receiving alerts and accessing other functionality via smartphone**

- **Administrators cannot control device settings at the end-user level**

PRODUCT PROFILE

Versions:	MVE is available in one edition, which delivers all the program's functionality without the need for add-ons.
Pricing:	MVE is a free download from Lexmark's website.
Devices:	Maximum number of devices supported: According to Lexmark, it conducted testing of MVE reliably with 20,000 devices.
Server:	2-GHz dual-core processor, 4 GB RAM, 60 GB hard drive; Microsoft Windows XP, Windows Server 2003 R2, Windows Server 2008 R2, Windows Server 2012 R2, Windows Server 2016, Windows 7.
Client:	Any device running Google Chrome, Microsoft Internet Explorer 7 or later, Mozilla Firefox 3.x, Apple Safari 4.x
Mobile Device Compatibility:	None
Compatible Output Hardware:	For device monitoring, MVE is compatible with any networked printer or MFP equipped with an industry standard MIB. It offers more complete monitoring and management support for Lexmark devices on the network.
Software Integration:	MVE integrates with Active Directory for adding users. The program can generate alerts and send those notifications via email or via a command-line application (such as powershell.exe) for integration with other platforms.
Availability:	Worldwide
Languages:	English, Spanish, German, Italian, French, Brazilian-Portuguese and simplified Chinese.