



xMAP INTELLIFLEX[®] System Administrator Guide



RUO For Research Use Only.
Not for use in diagnostic procedures.
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OVERVIEW

The xMAP INTELLIFLEX® System includes a custom integrated computer running Microsoft® Windows® 10 Internet of Things (IoT) Enterprise Long-Term Servicing Channel (LTSC, v1809) in kiosk mode; no external PC is required. Prior to installation, Luminex asks that customers identify on-site users who will be responsible for the system at a privileged operating system (OS) administrator level. Luminex will supply the identified users with administrator-level access to the underlying OS. This access level is intended to support configuration necessary for security and integration purposes. Day-to-day instrument usage does not require ongoing access to the underlying OS; perform instrument end-user maintenance and operational tasks under accounts which do not provide OS-administrator access.

The intent of this document is to provide xMAP INTELLIFLEX OS administrators responsible for system security and configuration with a comprehensive informational resource, including:

- Guidance on accessing the underlying operating system.
- Best-practices and recommendations.
- Cautions and warnings about potentially harmful configurations.
- General performance and security information additional to the computing elements of the xMAP INTELLIFLEX instrument.
- Links to supplementary content.

Where relevant, this document will indicate to which xMAP INTELLIFLEX Software version(s) guidance applies. A list of released software versions, including support status and changes, is available at: <http://www.luminexcorp.com/intelliflex/changes>

This document may be updated without notice. For the latest version of this document, or for questions not answered here, please contact Luminex Technical Support (support@luminexcorp.com or by the methods listed on the last page of this document).

Additional administrator documents are available upon request from Luminex Technical Support:

- **MDS²** - standard-format Manufacturer Disclosure Statement for Medical Device Security documentation.
- **xMAP INTELLIFLEX Network Connection and Data Flow** – simple diagram overview of system connectivity.

End-user documentation is available online at <http://www.luminexcorp.com/intelliflex/#documentation>.



This document is unable to provide a comprehensive list of all configuration elements which may adversely affect the system. Administrators are provided with **full** control over the OS and **changes outside of the guidance in this document may lead to adverse effects**. Users who elect to make changes outside of the intended use should be advised of the following:

- Luminex strongly recommends that users independently validate that the system continues to conform to their needs following any changes.

- Changes outside of those described here may render the system inoperable or cause other abnormal behavior.
- If post-installation changes to the PC render the instrument inoperable, it may be necessary for Luminex Support or Service personnel to revert the system to its initial system state via re-imaging or hard drive replacement in order to properly support the system. **Such methods may lead to the loss of acquired data.** Administrators are strongly advised to export any critical data from the xMAP INTELLIFLEX system before making operating system changes, and to be prepared to roll-back changes if necessary.



This document assumes basic functional familiarity with system administration concepts and methods, such as command-line usage. If uncertain of how to apply guidance defined here, contact Luminex Technical Support before proceeding.

Where command-line usage is indicated, this document uses a grey background format, with placeholder values to be provided by the administrator shown in italics; non-italicized text must be entered exactly as shown. For example:

```
C:\Windows\system32\lmnx action -password password
```



Luminex strongly recommends users to refrain from using `lmnx` commands outside of the recommended ones by Luminex in this guide. Usage of a non-approved command may render the system inoperable or cause other abnormal behavior.



USER INFORMATION AND ACCESSING WINDOWS




To comply with cybersecurity best practices, Luminex does not retain administrator-level access to the xMAP INTELLIFLEX Instrument. Accordingly, Luminex cannot provide a method to reset the system. If the administrator password is lost, the only recovery method will be to revert the instrument to its initial factory state: a factory reset will permanently remove all data and settings present on the instrument. Users must take into consideration that the default password for admin expires 90 days after the instrument is manufactured. Therefore, it is the user's responsibility to create and maintain an admin password before it expires.



Topic	Applies To	Notes
Pre-defined user accounts	1.0	<p>The instrument is configured with two predefined local Microsoft® Windows® accounts:</p> <ol style="list-style-type: none"> 1. INTELLIFLEX User <ul style="list-style-type: none"> ○ User: intelliflex ○ Display name: INTELLIFLEX User ○ Default password: user ○ Intended use: upon startup, the xMAP INTELLIFLEX system automatically logs into the software in kiosk mode as INTELLIFLEX User. This account is intended for day-to-day instrument operation and has the following restrictions: <ul style="list-style-type: none"> ▪ Underlying Windows session has no administrative permissions. ▪ User has no method to access the underlying OS. ▪ User has no access to Service features within the xMAP INTELLIFLEX Software. ▪ User is unable to delete acquired xMAP INTELLIFLEX data. 2. Admin <ul style="list-style-type: none"> ○ User: admin ○ Display name: Admin ○ Default password: admin ○ Intended use: <ul style="list-style-type: none"> ▪ The admin account is intended for infrequent configuration tasks. ▪ The Administrator account provides access to Service features of the xMAP INTELLIFLEX Software. These



Topic	Applies To	Notes
		<p>features are not intended for customer use and should only be accessed by Luminex Field Service personnel.</p> <ul style="list-style-type: none"> ▪ After performing actions as the administrator, users must restart the instrument to properly continue use under the INTELLIFLEX User account. ▪ See subsequent sections of this document for guidance on logging in as an administrator.
Pre-defined user accounts	1.1 2.0	<p>The instrument is configured with four* predefined local Microsoft Windows accounts:</p> <ol style="list-style-type: none"> 1. User: LuminexFieldService <ul style="list-style-type: none"> • A dedicated account for use only by Luminex Field Service Engineers to perform required system maintenance. • May not be modified by the administrator, although administrators are provided with optional methods to restrict access. • See Luminex Service Access for more details. • The LuminexFieldService account signs into Windows with standard user permissions and is able to access a user-level Windows desktop. 2. User: admin <ul style="list-style-type: none"> • Default password: admin (expires 90 days after instrument manufacture) • The admin account is intended for infrequent configuration tasks within the xMAP INTELLIFLEX Software interface or within the underlying OS, including configuring users and administering the Global settings page of the xMAP INTELLIFLEX interface. • After performing actions as the administrator, restart the instrument to properly continue use under an xMAP INTELLIFLEX User account. • The admin account signs into Windows with administrator permissions and is able to access an administrator-level Windows desktop. 3. User: lablead <ul style="list-style-type: none"> • Default password: password (expires 90 days after instrument manufacture) • The Lab Lead account is intended for day-to-day instrument use operations, including operations, which define the parameters of instrument acquisitions. • The lablead account signs into Windows with standard user permissions and has no direct access to the underlying OS, only to the xMAP INTELLIFLEX Software running in kiosk mode.

Topic	Applies To	Notes
		<p>4. User: operator</p> <ul style="list-style-type: none"> • Default password: password (expires 90 days after instrument manufacture) • The Operator account is intended for day-to-day instrument use operations, including operations required to maintain the instrument. • The operator account signs into Windows with standard user permissions and has no direct access to the underlying OS, only to the xMAP INTELLIFLEX Software running in kiosk mode. <p>Refer to the <i>xMAP INTELLIFLEX System User Manual</i> and the Authorizations page of the xMAP INTELLIFLEX Software interface for additional details on pre-defined accounts.</p> <p>*Instruments which are updated from software version 1.0 to 1.1 will include an additional fifth predefined account. The 'INTELLIFLEX User' (password: user) account previously present in xMAP INTELLIFLEX v1.0 will remain present and active with Operator-level permissions. Administrators may delete this user account at their discretion.</p> <p> The default built-in accounts can be disabled or even removed. NOTE: there is a requirement that at least one Administrator user exists for the instrument at all times.</p> <p> If the LuminexFieldService default account is disabled or has the password changed please be aware that if/when a Luminex field service engineer is on-site to service the Instrument this account will need to be re-enabled or a temporary password set as the field service engineer has no ability to service the instrument without access to the software.</p>
Manage user accounts	1.0	The administrator cannot modify predefined accounts or removed accounts. Modifications to predefined accounts may render the software inoperable.
Manage user accounts	1.1 2.0	<p>xMAP INTELLIFLEX user permissions are managed via membership in four pre-defined Windows groups:</p> <ol style="list-style-type: none"> 1. Administrators (grants Administrator-level access to both Windows and the xMAP INTELLIFLEX Software interface). 2. Luminex Lab Leads (grants Lab Lead-level access to the xMAP INTELLIFLEX Software interface). 3. Users (grants Operator-level access to the xMAP INTELLIFLEX Software interface).

Topic	Applies To	Notes
		<p>4. Luminex Field Technicians (grants user-level access to Windows and access to the Service sections of the xMAP INTELLIFLEX interface software).</p> <p>Administrators can create and manage users either locally (local to the Instrument) or through a connected domain. Only assign users membership in one of the pre-defined groups. If users are assigned membership in multiple groups, they will receive the highest permission level of the groups of which they are members.</p> <p>The xMAP INTELLIFLEX Software interface provides methods to force users to change passwords, configure user lockout variables, etc. See the <i>xMAP INTELLIFLEX System User Manual</i> for more information on managing users from within the xMAP INTELLIFLEX Software interface. Administrators can create users via standard Windows user management tools and may manage permissions by joining users to the groups 'Administrators' or 'Luminex Lab Lead'; all other users receive the default Operator permissions. xMAP INTELLIFLEX Software does not provide a method for administrators to modify individual permissions granted to each user group within the xMAP INTELLIFLEX Software.</p> <p> Administrators should not assign users to the Luminex Field Technicians group. Note that access to the Service portions of the xMAP INTELLIFLEX Software interface requires authentication from Luminex via an offline challenge/response mechanism, so users assigned to the Luminex Field Technicians group will be unable to log-in to the xMAP INTELLIFLEX Software.</p>
Log into the Admin Account	1.0	<ol style="list-style-type: none"> 1. Turn on the xMAP INTELLIFLEX system, which will automatically login with the standard INTELLIFLEX User account. 2. Connect a USB keyboard 3. Press Ctrl+Alt+Del on the keyboard to open the Microsoft Windows menu. 4. Select Sign Out. 5. Swipe up on the touchscreen to display the login screen. 6. Select Admin from the bottom-left. 7. Enter the account password and press Enter on the keyboard.
Log into the Admin Account	1.1 2.0	Logging in as a user with administrator credentials is via the same method as standard user login: enter a username and password as the login prompt.

Topic	Applies To	Notes
Auto-login	1.0	Upon restart, xMAP INTELLIFLEX Software will automatically login with the standard INTELLIFLEX User account. This behavior may not be modified. NOTE: After upgrade from v1.0 to v1.1, the xMAP INTELLIFLEX system will no longer be configured to auto-login. v1.1 administrators may enable auto-login at their discretion. Refer to the <i>xMAP INTELLIFLEX System User Manual</i> for more information.
Auto-login	1.1 2.0	An administrator may optionally provide a username, password, and domain (or leave blank to use a local user) for an auto-login user. The software does not specify an auto-login user by default. If no auto-login user is specified, the system will boot to a login prompt. Refer to the <i>xMAP INTELLIFLEX System User Manual</i> for more information.
Auto-lock	1.0	xMAP INTELLIFLEX Software does not provide a method to automatically lock or log-out of the software.
Auto-lock	1.1 2.0	Administrators may configure the xMAP INTELLIFLEX system to lock after a defined number of minutes. Administrators may also define a 2nd inactivity interval, after which the system will transition from the sign-in page to a system-status page. These methods use underlying Windows features related to custom sign-in pages and screensaver time-outs. Domain or local policy restrictions may adversely affect these methods. See sections on Policies for further details.
Access the Windows Desktop	1.0	Upon login as Admin, a user-level command prompt console will appear. Type <code>explorer</code> in the command prompt console, press Enter on the keyboard to launch the Windows desktop. If desired, navigate to the application 'INTELLIFLEX Touchscreen' in the Windows start menu to launch the xMAP INTELLIFLEX Software. NOTE: The command prompt console, which appears at initial Admin login, operates in standard user mode. Certain actions listed in this document will require the user to manually open an administrator-level command prompt. Refer to "Open an Administrator-Level Command Prompt" for more details.
Access the Windows Desktop	1.1 2.0	When logged into xMAP INTELLIFLEX Software as an administrator, the Windows desktop is accessible from the xMAP INTELLIFLEX Software interface: <ol style="list-style-type: none">1. Select the Main Navigation button at the top-left corner of the interface.2. Select the Desktop button at the bottom-left of the Main Navigation menu, immediately above the red Logout button.
Open an Administrator-	1.0 1.1	<ol style="list-style-type: none">1. From the Windows Desktop (refer to "Access the Windows Desktop" for more details) press Windows+R on the keyboard to open the Run dialog box.


Topic	Applies To	Notes
Level Command Prompt	2.0	2. Enter cmd in the Open field. 3. Press Ctrl+Shift+Enter on the keyboard. 4. Select Yes to allow the app to make changes to the device, if necessary.
Change the Admin Password	1.0	<p>Administrators may change the Admin account password at their discretion, but must do so via a specific command line tool, as the password is used by internal services and tasks.</p> <p>To change the Admin account password:</p> <ol style="list-style-type: none"> 1. Open an Administrator-Level Command Prompt (refer to “Open an Administrator-Level Command Prompt” for more details). 2. Enter the following command, replacing <i>password</i> with the desired new password for the Admin account: <pre>C:\WINDOWS\system32>lmnx changeadminpassword - password password</pre> <p> To comply with cybersecurity best practices, Luminex does not retain administrator-level access to the xMAP INTELLIFLEX Instrument. Accordingly, Luminex cannot provide a method to reset the system, if the administrator password is changed and lost. If the administrator password is changed and lost, the only recovery method will be to revert the instrument to its initial factory state, which will require a Luminex field service engineer to service the instrument and replace some parts on the computer of the instrument. This will result in the removal of any acquired data.</p> <p> Luminex Field Service Engineers (FSEs) require access to the SERVICE pages within the xMAP INTELLIFLEX Software in order to complete maintenance operations. Administrators should be aware that if the Admin account password is changed, the presence of a credentialed administrator will be necessary in order to complete maintenance operations.</p>
Change the Admin Password	1.1, 2.0	<p>Administrator users may use the xMAP INTELLIFLEX Software interface to require other administrators to change their password upon next login. Refer to the <i>xMAP INTELLIFLEX System User Manual</i> for guidance on administering users through the software interface</p> <p>Administrators may change their own password from Windows: Settings > Accounts > Sign-in Options.</p>
Luminex Field Service Access	1.0	<p>Luminex Field Service access uses the shared Administrator account, granting them access to both Windows at the administrator level and to the Service section of the xMAP INTELLIFLEX Software interface.</p>


Topic	Applies To	Notes
		 If the Admin account password is changed, the presence of a credentialed administrator will be necessary in order to complete maintenance operations.
Luminex Field Service Access	1.1 2.0	<p>Luminex Field Service access uses a dedicated LuminexFieldService user account. This account is inaccessible to the OS administrator and does not provide Luminex Field Service Engineers (FSEs) with access to Windows at the administrator-level.</p> <p>Access to this account is controlled by a two-password system:</p> <ol style="list-style-type: none"> 1. A password controlled by the OS administrator. OS administrators may optionally change this password to prevent Luminex FSEs from accessing the instrument without direct approval from the administrator.  Changing this password may delay instrument service. Luminex FSEs will be unable to access required software components without administrator approval. Administrators who choose to change this password for security reasons must be prepared to provide system access when needed by FSEs. Luminex is not responsible for servicing delays caused by changes to this password. <ol style="list-style-type: none"> 2. A challenge-response key. Upon login with the OS password, the Luminex FSE will receive a daily challenge code, which is unique to that instrument. Offline Luminex methods will provide a response. A correct response will provide the FSE with access to the xMAP INTELLIFLEX Software, including Service portions of the software. Non-Luminex users, including the OS administrator, do not have access to the challenge/response system or to the service software. <p>NOTE: Luminex Field Service users have access to the xMAP INTELLIFLEX Software at the Operator level, including access to acquisition data stored on the instrument.</p>
Authentication Logging	1.0	Sign in activity is recorded in Windows security logs, available to the end-user through standard Windows methods.
Authentication Logging	1.1	Sign in activity is recorded in Windows security logs, available to the end-user through standard Windows methods and are also recorded in xMAP INTELLIFLEX System logs, which are viewable and exportable from the xMAP INTELLIFLEX Software interface.
Authentication Logging	2.0	Sign in activity is recorded in Windows security logs, available to the end-user through standard Windows methods. With Electronic Record Compliance licensed and enabled, they are also recorded in xMAP

Topic	Applies To	Notes
		INTELLIFLEX System logs, which are viewable and exportable from the xMAP INTELLIFLEX Software interface.
Account Lockout	1.1 2.0	<p>The xMAP INTELLIFLEX System uses the Windows default Account Lockout Policies. Optionally, the user may configure the lockout settings on a non-domain instrument.</p> <p>To configure:</p> <ol style="list-style-type: none"> 1. Log into the xMAP INTELLIFLEX System with the Admin account 2. Select in the upper left-hand corner of the screen and navigate to CONFIGURATION > GLOBAL. 3. Enter values in the LOCKOUT DURATION, LOCKOUT THRESHOLD, and LOCKOUT OBSERVATION WINDOW. <p>NOTE: Domain policies will override local account lockout policies.</p>

CONFIGURATION RECOMMENDATIONS

Topic	Applies To	Notes
Network Configuration	1.0 1.1 2.0	OS administrators may use standard Microsoft® Windows® tools to configure the network interface (DHCP, DNS, etc.). DHCP server is responsible for assigning a dynamic TCP/IP configuration, but administrator can set the instrument to use a static IP address using Settings app or commands.
Barcode Scanner, Keyboard, Mouse, or Other Ancillary Hardware Additions	1.0 1.1 2.0	<p>OS administrators may use standard Windows methods to add USB or network printers to the system.</p> <p>NOTE: Luminex does not test or validate the system for use with any specific ancillary hardware, and the possibility exists that specific drivers may result in conflicts. While no specific problems are anticipated, Luminex recommends that users validate that the system continues to conform to their needs after installing any additional devices. Luminex recommends using peripherals that can operate as standard HID devices, and that do not require installation of additional drivers.</p>
Regionalization	1.0	The xMAP INTELLIFLEX System does not support regionalization and requires a regionalization setting of US English. Luminex strongly recommends against altering any Windows regionalization settings, as doing so may render the xMAP INTELLIFLEX software unusable.
Regionalization	1.1 2.0	The xMAP INTELLIFLEX System does not support regionalization and requires a regionalization setting of US English. Luminex strongly

Topic	Applies To	Notes
		<p>recommends against altering any Windows regionalization settings, as doing so may render the xMAP INTELLIFLEX software unusable.</p> <p>The xMAP INTELLIFLEX interface (SETTINGS > CONFIGURATION > GLOBAL) provides methods to customize the decimal- and field-separator delimiters used in output data. These methods may be used to configure output data for compatibility with regionalized external applications.</p> <p>These configurations only affect output data; imported data must be provided using US English conventions:</p> <ul style="list-style-type: none"> • Period character (".") for decimal separator • Comma character (";",) for field separator
Date/Time Configuration	1.0 1.1 2.0	<p>OS administrators may use standard Windows methods to configure the system date, time, and time zone.</p> <p> Luminex recommends against making any changes to the date, time, and time zone settings while the system is actively acquiring data or undergoing calibration or performance verification.</p> <p>NOTE: After making any changes to the system clock or calendar, restart the xMAP INTELLIFLEX Instrument.</p>
Email Configuration	1.0	<p>The xMAP INTELLIFLEX Software includes a feature to allow standard users to export system log data as a .ZIP file for troubleshooting purposes. Optionally, the user may configure SMTP information to enable sending this file directly to Luminex Technical Support via email.</p> <p>To configure the functionality to email a .ZIP log file directly to Luminex Technical Support:</p> <ol style="list-style-type: none"> 1. Log into the xMAP INTELLIFLEX System with the Admin account. 2. Select in the upper left-hand corner of the screen and navigate to SETTINGS > SYSTEM SETTINGS. 3. Enter a value in the SmtpServerName, Username, and Password fields.
Email Configuration	1.1 2.0	<p>The xMAP INTELLIFLEX Software includes a feature to allow standard users to export system log data as a .ZIP file for troubleshooting purposes. Optionally, the user may configure SMTP information to enable sending this file directly to Luminex Technical Support via email.</p> <p>To configure the functionality to email a .ZIP log file directly to Luminex Technical Support:</p> <ol style="list-style-type: none"> 1. Log into the xMAP INTELLIFLEX System with an administrator account.


Topic	Applies To	Notes
		<p>2. Select in the upper left-hand corner of the screen and navigate to CONFIGURATION > GLOBAL.</p> <p>3. Enter a value in the SmtpServerName, Username, and Password fields.</p>
Changing the PC Name	1.0 1.1 2.0	<p>OS administrators may use standard Windows methods to change the name of the xMAP INTELLIFLEX PC at their discretion.</p> <p>NOTE: If the customer has more than one xMAP INTELLIFLEX instrument, the instruments should all be given unique network names. Failure to do so may cause the software to fail to start on some of the network attached instruments.</p>
Windows Restore Points	1.0 1.1 2.0	<p>xMAP INTELLIFLEX does not enable Windows restore points by default. Administrators may enable and use Windows restore points at their discretion.</p> <p> Restore operations may permanently delete data acquired after the restore point is used.</p>
Domain Integration	1.1 2.0	<p>Administrators may add the xMAP INTELLIFLEX System to a network domain at their discretion.</p> <p>NOTE: When the System is added to a domain, in order to logon to the Instrument with a Local Machine account the user must precede their username with “.”. As an example assuming the username is “localAdmin”, to logon the user would put for the username “.localAdmin”.</p> <p>Luminex recommends refraining from applying Group Policies to the xMAP INTELLIFLEX instrument directly or via policy related registries unless they are explicitly stated as being acceptable in this guide. Setting such policies may impact the behavior as well as the look and feel of the instrument. The following policies are known to impact the operation of the instrument:</p> <p>Windows Updates/Drivers:</p> <ul style="list-style-type: none"> • <i>Computer Configuration > Administrative Templates > Windows Components > Configure automatic Windows Updates</i> • <i>Computer Configuration > Administrative Templates > Windows Components > Do not include Drivers with Windows Updates</i> • <i>Computer Configuration > Administrative Templates > System > Device Installation > Prevent device metadata retrieval from the Internet</i>

Topic	Applies To	Notes
		<ul style="list-style-type: none"> • <i>Computer Configuration > Administrative Templates > System > Device Installation > Specify search order for device driver source locations</i> <p>Lockout Policies:</p> <ul style="list-style-type: none"> • <i>Computer Configuration > Windows Settings > Security Settings > Account Lockout Policy > Account lockout duration</i> • <i>Computer Configuration > Windows Settings > Security Settings > Account Lockout Policy > Account lockout threshold</i> • <i>Computer Configuration > Windows Settings > Security Settings > Account Lockout Policy > Reset account lockout counter after</i> <p>Screen Saver:</p> <ul style="list-style-type: none"> • <i>User Configuration > Administrative Templates > Control Panel > Personalization > Enable screen saver</i> • <i>User Configuration > Administrative Templates > Control Panel > Personalization > Force specific screen saver</i> • <i>User Configuration > Administrative Templates > Control Panel > Personalization > Screen saver timeout</i> <p>Login Screen/ Desktop Background:</p> <ul style="list-style-type: none"> • <i>Computer Configuration > Administrative Templates > Control Panel > Personalization> Force a specific default lock screen and logon image</i> • <i>Computer Configuration > Administrative Templates > Control Panel > Personalization> Do not display the lock screen</i> • <i>Computer Configuration > Administrative Templates > Control Panel > User Accounts> Apply the default account picture to all users</i> • <i>Computer Configuration > Administrative Templates > Personalization>Prevent changing start menu background</i> <p>User Account Audit:</p> <ul style="list-style-type: none"> • <i>Security Settings > Local Policies > Audit policy > Audit account management</i> • <i>Security Settings > Local Policies > Audit Logon events</i> <p>Domain policies may be used to map network drives for xMAP INTELLIFLEX users.</p>

Topic	Applies To	Notes
Windows Server Update Services (WSUS) Integration	1.1 2.0	<p>Administrators may configure the xMAP INTELLIFLEX System to receive updates from the WSUS server. To configure the xMAP INTELLIFLEX System to connect to the WSUS server:</p> <ol style="list-style-type: none"> 1. Open the Group Policy Editor. 2. Expand <i>Computer Configuration > Administrative Templates > Windows Components</i>, and then select <i>Windows Update</i>. 3. Select <i>Specify intranet Microsoft update service location</i> and then enable the policy. <ol style="list-style-type: none"> a. Under <i>Set the intranet update service for detecting updates</i>, enter the URL for the WSUS server: <i>http://wsusServer[:port]</i>, where <i>wsusServer</i> is the name of WSUS server and <i>port</i> is the port number. b. Under <i>Set the intranet statistics server</i>, enter the same URL. 4. Select <i>Allow signed updates from an intranet Microsoft update service location</i> and then enable the policy. 5. Select <i>Do not allow update deferral polices to cause scans against Windows Update</i> and then enable the policy.

MANAGING DATA AND FILE-SHARING

Topic	Applies To	Notes
Shared Network Folder Access	1.0	<p>The xMAP INTELLIFLEX System provides two methods for accessing network locations for import/export operations:</p> <ol style="list-style-type: none"> 1. When signed in under the standard INTELLIFLEX User account (non-admin), users can navigate to available network locations within file import/export dialog boxes presented by the xMAP INTELLIFLEX Software. The user will be presented with a prompt for network credentials, as needed. These credentials will be saved and used for subsequent import/export operations until the system is restarted or until the user has been logged out. 2. The OS administrator can define a path to be used for automatic file export operations and for export operations from the HISTORY page (which does not present the user with a folder selection dialog box). If the path entered is a secure network location, this requires the OS administrator to both provide the path in the xMAP INTELLIFLEX Software and to execute a specific command line operation to securely cache these credentials for use by the underlying service.

Topic	Applies To	Notes
		<p>To access the network locations for import/export operations as an operating system (OS) administrator:</p> <ol style="list-style-type: none"> 1. Log into the xMAP INTELLIFLEX System with the Admin account. 2. Select in the upper left-hand corner of the screen and navigate to SETTINGS > SYSTEM SETTINGS. 3. Enter a value of True or False in the AutoExportResults field (optional). 4. Enter a value in the DefaultDataExportFormat field to define the data format(s) that will be used for auto-export and export operations from the HISTORY page. NOTE: Multiple, comma-separated values may be entered in this field (for example, Intelliflex,xPONENT_rp1,xPONENT_rp2). 5. Enter a valid path location in the DefaultDataExportDirectory field. NOTE: The entered path can reference a drive letter for a USB device (for example, "D:\Output") or it can use a Universal Naming Convention (UNC) path (for example, "\\ServerName\ShareName"). 6. When using a secured network location, a specific command line operation must be run in order to cache the correct network credentials and enable the xMAP INTELLIFLEX Software to properly output files to the new location. To perform this action: <ol style="list-style-type: none"> a. Open an administrator command prompt (see “Open an Administrator-Level Command Prompt” for more details). b. Enter <code>lmnx network --user DomainName\AccountName --password Password</code> into the administrator command prompt, where <ul style="list-style-type: none"> • <i>DomainName</i> is the name of the domain. • <i>AccountName</i> is the name of the account. • <i>Password</i> is the password for the account. c. Press Enter on the keyboard. <p> Credentials cached through this method are stored in plaintext in the database. The database may be accessible to users with OS access (Administrator, Luminex Field Service). Luminex recommends using dedicated service accounts with minimal privileges for this purpose.</p>
Shared Network Folder Access	1.1	<p>xMAP INTELLIFLEX Software does not provide a method to map network drives while logged in as Lab Lead- or Operator-level users. Network data export may be managed in a variety of ways:</p> <ol style="list-style-type: none"> 1. Users may manually enter a UNC path for manual export operations. If needed, the user will be prompted for access credentials.

Topic	Applies To	Notes
		<p>NOTE: Users must confirm the correct folder is selected when manually entering a UNC path.</p> <p>Domain-connected instruments:</p> <ol style="list-style-type: none"> 2. The domain administrator may give the xMAP INTELLIFLEX PC write access to a network location. The xMAP INTELLIFLEX administrator may configure the xMAP INTELLIFLEX software to automatically export data to this UNC path. 3. The administrator may configure xMAP INTELLIFLEX Software to automatically export to a shared UNC path by performing a command line operation to cache login credentials for that shared location: <ol style="list-style-type: none"> a. Open an administrator command prompt (refer to “Open an Administrator-Level Command Prompt” for more details). b. Enter <code>lmnx network --user DomainName\AccountName --password Password</code> into the administrator command prompt, where <ul style="list-style-type: none"> • <code>DomainName</code> is the name of the domain. • <code>AccountName</code> is the name of the account. • <code>Password</code> is the password for the account. c. Press Enter on the keyboard. <p>NOTE: The credentials for this account are not stored securely. Administrators have access to tools that can recover the user and password information. Only use accounts with limited access for this purpose.</p> <ol style="list-style-type: none"> 4. Domain policy may map one or more network drives for users. Users may manually export data to mapped network drives, or the administrator may configure xMAP INTELLIFLEX Software to automatically export data to a single mapped drive letter.
Shared Network Folder Access	2.0	<p>xMAP INTELLIFLEX Software does not provide a method to map network drives while logged in as Lab Lead- or Operator-level users. Network data export may be managed in a variety of ways:</p> <ul style="list-style-type: none"> • Users may manually enter a UNC path for manual export operations. If needed, the user will be prompted for access credentials. <p>NOTE: Users must confirm the correct folder is selected when manually entering a UNC path.</p> <p>Domain-connected instruments:</p> <ul style="list-style-type: none"> • The domain administrator may give the xMAP INTELLIFLEX PC write access to a network location. The xMAP INTELLIFLEX administrator or lab

Topic	Applies To	Notes
		<p>lead may configure the xMAP INTELLIFLEX software to automatically export data to this UNC path.</p> <p>Domain policy may map one or more network drives for users. Users may manually export data to mapped network drives, or the administrator may configure xMAP INTELLIFLEX software to automatically export data to a single mapped drive letter.</p>
Data Storage	1.0	<p>Data acquired on the instrument is retained in various formats:</p> <ul style="list-style-type: none"> • In an internal, unencrypted SQL Server database. <ul style="list-style-type: none"> ○ Users are not provided with methods to access the database directly. ○ The database is an integral part of the application architecture and may not be moved to an off-instrument location. ○ Data is written to the database and the time of acquisition and is not modified by subsequent operations. ○ ODBC connections are not supported. • Raw fluorescence data is stored on the file system as .LXB files. Such files are non-human readable, are inaccessible to the administrator or end user, and are intermediary files: they are not considered the final result of an acquisition. • Acquisition data may be manually or automatically exported from the instrument as human-readable CSV files in two file formats. This data is considered the final, calculated result from acquisition. Refer to the <i>xMAP INTELLIFLEX System User Manual</i> for more information on file formats.
Data Storage	1.1 2.0	<p>Data acquired on the instrument is retained in various formats:</p> <ul style="list-style-type: none"> • In an internal, unencrypted SQL Server database. <ul style="list-style-type: none"> ○ Users are not provided with methods to access the database directly. ○ The database is an integral part of the application architecture and may not be moved to an off-instrument location. ○ Data is written to the database at the time of acquisition and is not modified by subsequent operations. ○ Administrators are authorized to Read/Write access of the SQL database. However, the only supported access to the data is using the installed xMAP INTELLIFLEX software. ○ ODBC connections are not supported. • Raw fluorescence data is stored on the file system as .LXB files. Such files are non-human readable, are inaccessible to the end user, and are intermediary files: they are not considered the final result of an acquisition. • Acquisition data may be manually or automatically exported from the instrument as human-readable CSV files in two file formats. This data is considered the final, calculated result from acquisition. Refer to the <i>xMAP INTELLIFLEX System User Manual</i> for more information on file formats.

Topic	Applies To	Notes
		<ul style="list-style-type: none"> XLS files, containing both acquisition data and configuration/logging data associated with the acquisition.
Data Export	1.0	<p>xMAP INTELLIFLEX Software supports data output in two file formats:</p> <ol style="list-style-type: none"> xPONENT®-format – where possible, retains compatibility with the existing xPONENT file specification, for use in existing applications compatible with this format. INTELLIFLEX-format – a streamlined and customizable file format. The user may optionally configure the statistical and metadata values to be included in an exported file. Exporting to the INTELLIFLEX file format with all optional values selected is the most complete backup method available to the end user. <p>NOTE: xMAP INTELLIFLEX Software does not provide methods to restore data from exported CSV. Results deleted from the instrument are permanently deleted. Administrators should use caution to ensure that comprehensive data is exported before deleting results from xMAP INTELLIFLEX Software.</p>
Data Export	1.1 2.0	<p>xMAP INTELLIFLEX Software supports data output in three file formats:</p> <ol style="list-style-type: none"> xPONENT-format – where possible, retains compatibility with the existing xPONENT file specification, for use in existing applications compatible with this format. INTELLIFLEX-format – a streamlined and customizable file format. The user may optionally configure the statistical and metadata values to be included in an exported file. Exporting to the INTELLIFLEX file format with all optional values selected is the most complete backup method available to the end user. XLS format – a comprehensive data format with the same customizability of the INTELLIFLEX format (a user may define which metadata and statistical content to include), with additional log data and a comprehensive record of configuration events leading to the acquisition and creation of the data. <p>NOTE: xMAP INTELLIFLEX Software does not provide methods to restore data from exported CSV or XLS. Results deleted from the instrument are permanently deleted. Administrators should use caution to ensure that comprehensive data is exported before deleting results from xMAP INTELLIFLEX Software.</p>
Data Capacity	1.0 1.1 2.0	<p>There is no fixed limit to the number of plates which the instrument may store. The size of data per-plate varies by multiplex and other factors, but is on the approximate order of 5-50mb per 96-well plate. The xMAP INTELLIFLEX PC contains a 512GB hard drive, though a fraction of this capacity is consumed by the application, OS, and system configuration. In general, data storage capacity of the xMAP INTELLIFLEX system is expected to exceed 1 year under common usage conditions. The software will notify the user when storage capacity is approaching a database or file-system limit.</p>
Database Security	1.1 2.0	<p>The Local System Account and any users in the local Administrators group are the only accounts provided direct access to the local SQL Server database. It is the responsibility of the Administrator to maintain security of these accounts and thus of the onboard database.</p>

SYSTEM BACKUP AND RESTORE

Starting with INTELLIFLEX version 2.0, a full system backup may be initiated from both the command line and INTELLIFLEX User Interface. All backups are full system backups, including both the OS state and application data, created with the Windows wadmin utility. The backup creates a folder within the specified path to store the image. The folder is named with the date and time the image was created in the format of: yyyy-MM-dd-T-HH-mm-ss. For example, a folder name may be: 2022-04-28-T-18-28-27, indicating a date of April 28, 2022 and a time of 18:28.27. The time it takes to back-up a system varies depending on several factors. However, a typical backup will require several minutes to complete.

These instructions assume familiarity with using the Windows backup tool and the command line.

A reciprocal command is available to restore the instrument to the backup state of the instrument. The restore feature is only available as a command-line function. The restore feature relies on the lmnx.exe application. This application is copied to the target backup folder when the user interface is used to back-up the system. If the back-up was created by another means, such as the command-line, the lmnx.exe may not be readily available. If this is the case, the lmnx.exe file may be copied from the instrument itself. This file can be found on the INTELLIFLEX instrument in the path "C:\Program Files\Luminex\lmnx X.X.XXX.X" where X.X.XXX.X is the version of the lmnx.exe tool.

NOTE: Backups include all OS and applications settings, including settings established by the Field Service Engineers. It is recommended to take a backup image prior to restoring to an earlier point in order to revert the system back to the most recent settings.

Topic	Applies To	Notes
Backup System from User Interface	2.0	<p>Create a backup via the user interface:</p> <ol style="list-style-type: none"> 1. Log into the xMAP INTELLIFLEX System with the Admin account. 2. Navigate to SETTINGS > ABOUT. 3. Click the Create Windows Backup Image button. 4. Select the appropriate USB, external or network drive and the desired folder for the backup 5. Press the Select button to start the backup process. A message displays indicating the backup is in progress. <p>Click Yes in the User Account Control request if necessary.</p> <p>NOTE: Backup process runs in background in command window. Closing the command window prematurely will show INTELLIFLEX notification error: <i>Failed to create windows backup image, error code: -1073741510</i>. However, the backup process is still running and visible in task manager.</p>

Topic	Applies To	Notes
Backup System from Command-Line	2.0	<p>Create a backup via the command line:</p> <ol style="list-style-type: none"> 1. Open an Administrator-Level Command Prompt (refer to “Open an Administrator-Level Command Prompt” for details). 2. Enter <code>lmnx backup -p BackupDesiredFolder</code> into the administrator command prompt, where <code>BackupDesiredFolder</code> is the folder path to place the backup file (for example, “D:\MyBackups”), and press Enter. <p>NOTE: The default path is D:\ when the <code>-p</code> parameter is not included. The path may be either an attached USB or Network drive. If the path contains spaces, it must be quoted. For example:</p> <pre>lmnx backup -p "D:\Backup Directory"</pre>
System Restore	2.0	<p>Restore a system backup:</p> <ol style="list-style-type: none"> 1. Enter the Windows Recovery Environment: <ol style="list-style-type: none"> a. Click on the Windows Start menu b. Click on the Power button c. Press and hold the Shift button (on the keyboard) and click Restart. 2. Select Troubleshoot. 3. Select Advanced Options then Command Prompt on the next pages that pop up. The system will then restart. 4. Log in as an administrator user. A command prompt at the root directory of X should now be showing. 5. Locate the drive letter where the Windows folder resides. This is the <code>TargetDrive</code>. <p>NOTE: Change the directory by entering the drive name followed by colon (for example <code>E:</code>)</p> <ol style="list-style-type: none"> 6. Find the path to the <code>SourceBackupPath</code> directory. <p>This is the folder named as a timestamp that was created by the backup. For example, if the system backup targeted the “MyBackups” folder on a USB drive and the USB drive is now drive E:\, the path would be “E:\MyBackups\{timestampFolder}”.</p> <ol style="list-style-type: none"> 7. Change directory to the root of the <code>SourceBackupPath</code> drive (E:\ in the example). <p>NOTE: <code>lmnx.exe</code> will be in this directory.</p> <ol style="list-style-type: none"> 8. Type <code>.\lmnx.exe restore -p SourceBackupPath -t TargetDrive</code> (where <code>SourceBackupPath</code> is the path from Step 6 and <code>TargetDrive</code> is the drive from step 5) then press Enter. <p>For example: <code>.\lmnx.exe restore -p E:\MyBackups\2022-04-28-T-18-28-27 -t C:</code> will restore a backup taken at 7:28:27 on</p>

Topic	Applies To	Notes
		<p>4/28/202 to the E:\MyBackups folder. The leading .\ is important, it tells Windows to run lmnx.exe from your current directory.</p> <p>NOTE: The lmnx restore function is not compatible with mapped drives. Use the UNC path when restoring from a network drive. For example:</p> <pre>lmnx.exe restore -p \\MyServer\MyBackups\2022-04-28-T-18-28-27 -t C:</pre> <p>9. Type Exit. 10. Select Continue to Windows 10.</p>

GENERAL SYSTEM INFORMATION AND CAUTIONS

Topic	Applies To	Notes
Ports	1.0 1.1 2.0	Luminex does not specifically disable unused ports. No specific ports are required for standard operation, and operating system (OS) administrators may disable ports at their discretion.
Services	1.0 1.1 2.0	<p>The xMAP INTELLIFLEX System requires the following services to be running and configured for automatic start up:</p> <ul style="list-style-type: none"> • Luminex INTELLIFLEX Services • Luminex INTELLIFLEX IC Services • SQL Server (INTELLIFLEXSQL)
Disabled Windows® Tools	1.1 2.0	Telnet and FTP are disabled by default.
Non-Luminex software dependencies	1.0 1.1 2.0	<ul style="list-style-type: none"> • SQL Server 2016 • .NET Framework v4.8
Install additional software	1.0	Using unauthorized third-party software with the xMAP INTELLIFLEX Software may result in corruption or failure of the xMAP INTELLIFLEX Software. Do not use third-party software on the xMAP INTELLIFLEX System.
Install additional software	1.1 2.0	Luminex does not test or validate the xMAP INTELLIFLEX System with any third- party software. Using unauthorized third-party software with the xMAP INTELLIFLEX Software may result in corruption or failure of the xMAP INTELLIFLEX Software. Do not use third-party software on the xMAP

Topic	Applies To	Notes
		<p>INTELLIFLEX System. Administrators who choose to install any additional software are strongly advised:</p> <ul style="list-style-type: none"> • Validate that system performance continues to conform to your needs, and be prepared to revalidate if such software is updated at a later date. • Be prepared to rollback changes if needed. • Software changes may render xMAP INTELLIFLEX Software inoperable. Restoration to working state may require a complete wipe of the internal hard drive, resulting in the loss of all acquired data. Ensure that all critical data is exported or recorded before applying any software changes.
Operating system updates	1.0	<p>The xMAP INTELLIFLEX System operates on the Long-Term Servicing Channel (LTSC) version of Microsoft® Windows 10 Internet of Things (IoT). This variant of Windows is designed for secure, long-term support. Accordingly, the operating system is configured to receive automatic security updates over a network connection, and will not receive any operating system feature updates. Installing operating system security updates requires a network connection which is capable of accessing Microsoft servers. Administrators may disable automatic updates at their discretion.</p>
Operating system updates	1.1 2.0	<p>The xMAP INTELLIFLEX System is configured to disable automatic Windows updates by default. Administrators may re-enable updates at their discretion, using either standard Windows methods or a dedicated option within the xMAP INTELLIFLEX Software (CONFIGURATION > GLOBAL).</p> <p>xMAP INTELLIFLEX Software is tested in a configuration which receives updates directly from Microsoft. Luminex does not anticipate specific problems with methods to deploy updates through WSUS or otherwise under domain control, but has not validated or tested such methods.</p> <p>Luminex does not test xMAP INTELLIFLEX software for compatibility with specific Windows updates. While Luminex does not anticipate problems, any changes to the tested configuration have the potential to cause performance problems or unexpected errors. Users who enable operating system updates are advised to perform their own validation testing to ensure that system performance continues to conform to their needs, and to be prepared to roll-back updates as needed.</p>
xMAP INTELLIFLEX Software and firmware updates	1.0 1.1 2.0	<p>Updates to the xMAP INTELLIFLEX software are delivered by Luminex in the form of a digitally signed file on a read-only USB drive. Installing xMAP INTELLIFLEX software and firmware updates requires OS administrator level access.</p> <p>Updates are provided on an as-needed schedule determined by Luminex, not at a fixed calendar interval.</p>

Topic	Applies To	Notes
Encryption At Rest	1.0	<ul style="list-style-type: none"> The system does not support hard drive encryption. The system does not support use of encrypted USB drives which require locally-installed software. The installed SQL server database is not encrypted.
Encryption At Rest	1.1 2.0	The file-system is not encrypted by default. As of xMAP INTELLIFLEX Software v1.1, the TPM chip on the system will be enabled. Administrators may enable BitLocker at their discretion.
Encryption In-Transit	1.0 1.1 2.0	The xMAP INTELLIFLEX System does not require any external network interface to operate. Administrators may optionally configure the system for flat-file transfer via standard Windows methods.
TLS (Transport Layer Security)	1.0 1.1	The xMAP INTELLIFLEX System does not support or require any external communication. Internal communication is via TLS 1.2 or higher. TLS 1.0 and TLS 1.1 are enabled by default but are not used. Luminex has not validated disabling TLS 1.0 or TLS 1.1 but does not anticipate any specific adverse consequences from doing so. Administrators who choose to disable TLS 1.0 or TLS 1.1 are advised to validate that system performance continues to conform to their needs.
TLS (Transport Layer Security)	2.0	The xMAP INTELLIFLEX System uses an HTTPS interface for its Automation Clients. This interface is encrypted using TLS 1.2. TLS 1.0 & 1.1 are disabled system-wide via registry settings under HKLM\SYSTEM\CurrentControlSet\Control\SecurityProviders\SCHANNEL\Protocols Luminex recommends to not enable TLS 1.0 or TLS 1.1 through a Group Policy. Note that the Automation API is accessed via port 443 over an SSL connection.
Electronic Certificates	1.0 1.1	The xMAP INTELLIFLEX Software v1.0 and 1.1 software does not use any electronic certificates. Future releases may use Luminex-provided certificates for signing actions. These certificates will not be provided through a recognized certificate authority.
Electronic Certificates	2.0	The xMAP INTELLIFLEX Software v2.0 uses x509 electronic certificates to identify the instrument when creating digital signatures and to verify the validity of license files using the instrument's serial number. To establish the instrument's identity, its certificate is signed by Luminex's private certificate authority.
Hardcoded passwords	1.0	<ul style="list-style-type: none"> The xMAP INTELLIFLEX System is configured with a specific password for OS administrators. OS administrators may optionally change this password. Luminex Field Service Engineers (FSEs) require access to the SERVICE pages within the xMAP INTELLIFLEX software. Access to these pages currently requires the FSE to have administrator access to the system.

Topic	Applies To	Notes
Hardcoded passwords	1.1 2.0	None.
Confidential data	1.0 1.1 2.0	Proper use of the system does not require, and Luminex does not retain or host, any confidential patient information. Various fields in the xMAP INTELLIFLEX software accept free-text data. Data exported from the system, or included in Support Utility files exported for Luminex Technical Support reasons, may include the content of these fields. Luminex recommends that users incorporate administrative controls to prevent entry of any potentially confidential patient information into these free-text fields.
Windows Power Settings	1.0	Luminex does not recommend configuring the operating system to automatically log out or enter any reduced state (for example, the system should not be configured to drop to a reduced power consumption mode). Configuring the system in this way is likely to cause data loss, if the system status changes during acquisition operations. xMAP INTELLIFLEX Software does not support locking or logging out of the active user session while an acquisition is in-progress.
Windows Power Settings	1.1 2.0	Administrators should not modify Windows power-management settings either locally or via domain policy. xMAP INTELLIFLEX System should not be configured to enter any reduced state (for example, the system should not be configured to drop to a reduced power consumption mode). Configuring the system in this way is likely to cause data loss, if the system status changes during acquisition operations. xMAP INTELLIFLEX Software supports methods to automatically or manually log out the active user at any time, including while an acquisition is in progress.
Anti-Virus/Malware Protection	1.0 1.1 2.0	Microsoft Defender is enabled in its default configuration, with no specific, Luminex-applied exclusions. Administrators may disable Defender at their discretion. While Luminex does not anticipate any specific problems from the installation of third party anti-virus or malware protection applications, Luminex does not test or validate xMAP INTELLIFLEX with any specific third party tools. Administrators who choose to install and enable additional antivirus tools are advised: <ul style="list-style-type: none"> • To validate that the system continues to conform to their needs. • Be prepared to rollback changes if needed. • Luminex recommends not performing scans during data-intensive operations, such as during data acquisition operations. • xMAP INTELLIFLEX instrument writes files and data to the C:\ProgramData\Luminex folder. Luminex recommends excluding that folder from scanning.

Topic	Applies To	Notes
		<ul style="list-style-type: none"> xMAP INTELLIFLEX software installs the following services running under the SYSTEM account: “Luminex INTELLIFLEX IC Services” (C:\Program Files (x86)\Luminex\INTELLIFLEX\ICService.exe) and “Luminex INTELLIFLEX Services” (C:\Program Files\Luminex\Intelliflex Services\Luminex.Intelliflex.Service.exe). Luminex recommends whitelisting these services with any anti-virus or malware protection applications.
Network Time/Date	1.0 1.1 2.0	Administrators may connect the xMAP INTELLIFLEX System to a network-time server at their discretion. xMAP INTELLIFLEX Software operations are logged in UTC+offset format.
USB	1.0 1.1 2.0	<p>Users are expected to configure the system for either export to network or export to network, but USB data transfer is not required for system operation.</p> <p>Currently, software updates are delivered by Luminex FSEs via a digitally-signed file on a Luminex-provided USB. Future updates may be made available in a downloadable, customer-installable format, where the customer may provide the file from a network share rather than USB drive.</p>
Remote Access	1.0 1.1 2.0	<p>xMAP INTELLIFLEX does not enable methods to remotely access the system.</p> <p>Luminex personnel have no method to access the instrument remotely.</p> <p>RDP is disabled by default. Enabling and using RDP is not validated by Luminex.</p>

MISCELLANEOUS NOTES FOR ADMINISTRATORS

Topic	Applies To	Notes
Power-off xMAP INTELLIFLEX System	1.1 2.0	If the soft power button on the xMAP INTELLIFLEX System is depressed while the xMAP INTELLIFLEX Software interface is not in the foreground, xMAP INTELLIFLEX will not power off; return to the xMAP INTELLIFLEX Software interface and acknowledge the power-off confirmation in the xMAP INTELLIFLEX Software to properly power down the xMAP INTELLIFLEX System.

Topic	Applies To	Notes
Restart After Configuring Settings	1.1	Changes to the settings available in the CONFIGURATION > GLOBAL page may not take effect until after the instrument has been restarted. Restart the xMAP INTELLIFLEX System after modifying system settings.
Restart After Configuring Settings	2.0	Changes to the following settings available in the CONFIGURATION > GLOBAL page do not take effect until after the instrument has been restarted. <ul style="list-style-type: none"> • Auto Sign-in User Name • Auto Sign-in Password • Auto Sign-in Domain • Automatic Windows Update Restart the xMAP INTELLIFLEX System after modifying these system settings as indicated by the notification message.

SCHEDULED TASKS

The xMAP INTELLIFLEX Software creates several scheduled tasks refer to the actions taken in response to trigger(s). Tasks configured to run based on system status such as being idle for a pre-configured amount of time, on startup, logon, logoff, or only for a specified time.

Task name	Applies To	Description
Check Databases Capacity	1.1 2.0	Checks the size of the databases on the system and rolls over specific ones when they meet a threshold. Runs at 12:00 AM every day.
Condense Results	1.0 1.1 2.0	Removes old result entries from the system after they have been archived. It runs at logon of any user. After triggered, the task runs every day indefinitely.
Delete Temporary Files	1.0 1.1 2.0	Removes diagnostic logs. It runs at logon of any user. After triggered, the task runs every day indefinitely.
Export Queued Files	1.0 1.1 2.0	Assists in moving auto-export files to final destination. It runs at log on of any user. After triggered, the task runs every minute indefinitely.
PurgeUserOnLogonTaskName	1.1 2.0	Purges inactive users. It runs at logon of any user or after an account is unlocked.
ScreenSaverOnLockWorkstationTask	1.1 2.0	Sets screen saver timeout on workstation lock. It runs on workstation lock of any user.

ScreenSaverOnLogonTask	1.1 2.0	Configures screen saver settings on user logon. It runs at log on of any user.
ScreenSaverOnUnlockWorkstationTask	1.1 2.0	Sets screen saver timeout on workstation unlock. It runs on workstation unlock of any user.
Start Data Collector	1.1 2.0	Starts a Windows Data Collector named INTELLIFLEX. This helps support diagnose performance issues when they occur. It runs at logon of any user. After triggered, the task runs every 4 hours indefinitely.

LUMINEX TECHNICAL SUPPORT

Contact Luminex Technical Support by telephone in the U.S. and Canada by calling:

1-877-785-2323 Contact outside the U.S. and Canada by calling: +1 512-381-4397

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Additional information is available on the Luminex website. Search on the desired topic, navigate through menus. Also, review the website's FAQ section. Enter <http://www.luminexcorp.com> in your browser's address field.

This manual can be updated periodically. To ensure that you have a current version, contact Technical Support.

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