Important user information

Read this document and the documents listed in the additional resources section about installation, configuration, and operation of this equipment before you install, configure, operate, or maintain this product. Users are required to familiarize themselves with installation and wiring instructions in addition to requirements of all applicable codes, laws, and standards.

Activities including installation, adjustments, putting into service, use, assembly, disassembly, and maintenance are required to be carried out by suitably trained personnel in accordance with applicable code of practice. If this equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

In no event will Rockwell Automation, Inc. be responsible or liable for indirect or consequential damages resulting from the use or application of this equipment.

The examples and diagrams in this manual are included solely for illustrative purposes. Because of the many variables and requirements associated with any particular installation, Rockwell Automation, Inc. cannot assume responsibility or liability for actual use based on the examples and diagrams.

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Throughout this manual, when necessary, we use notes to make you aware of safety considerations.

| WARNING: | Identifies information about practices or circumstances that can cause an explosion in a hazardous environment, which may lead to personal injury or death, property damage, or economic loss. |
| ATTENTION: | Identifies information about practices or circumstances that can lead to personal injury or death, property damage, or economic loss. Attendons help you identify a hazard, avoid a hazard, and recognize the consequence |
| Important: | Identifies information that is critical for successful application and understanding of the product. |

Labels may also be on or inside the equipment to provide specific precautions.

| SHOCK HAZARD: | Labels may be on or inside the equipment, for example, a drive or motor, to alert people that dangerous voltage may be present. |
| BURN HAZARD: | Labels may be on or inside the equipment, for example, a drive or motor, to alert people that surfaces may reach dangerous temperatures. |
| ARC FLASH HAZARD: | Labels may be on or inside the equipment, for example, a motor control center, to alert people to potential Arc Flash. Arc Flash will cause severe injury or death. Wear proper Personal Protective Equipment (PPE). Follow ALL Regulatory requirements for safe work practices and for Personal Protective Equipment (PPE). |
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ControlFLASH Plus and FactoryTalk AssetCentre interaction

ControlFLASH Plus error codes
Preface

Purpose of this manual
This quick start guide describes how to use the ControlFLASH Plus™ software to upgrade device firmware.

Who should use this manual
You should use this manual if you need to maintain firmware revisions. Refer to your product release notes to determine whether it supports firmware updates via ControlFLASH Plus.

You should also have the following knowledge:

- A basic understanding of networking concepts.
- A basic familiarity of FactoryTalk® Linx™ software.

Access help
There is additional information in the help for this application. Access help by clicking the ? Help button that appears at the top right corner of the ControlFLASH Plus software window.

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You can view the Rockwell Automation End-User License Agreement ("EULA") by opening the License.rtf file located in your product's install folder on your hard drive.

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The software included in this product contains copyrighted software that is licensed under one or more open source licenses. Copies of those licenses are included with the software. Corresponding Source code for open source packages included in this product are located at their respective web site(s).

Alternately, obtain complete Corresponding Source code by contacting Rockwell Automation via the Contact form on the Rockwell Automation website: http://www.rockwellautomation.com/global/about-us/contact/contact.page
Please include "Open Source" as part of the request text.
A full list of all open source software used in this product and their corresponding licenses can be found in the OPENSOURCE folder included with these Release Notes. The default installed location of these licenses is C:\Program Files (x86)\Common Files\Rockwell\Help\ControlFLASH Plus\ReleaseNotes\OPENSOURCE\index.htm.

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Warranty

This product is warranted in accordance with the product license. The product’s performance may be affected by system configuration, the application being performed, operator control, maintenance, and other related factors. Rockwell Automation is not responsible for these intervening factors. The instructions in this document do not cover all the details or variations in the equipment, procedure, or process described, nor do they provide directions for meeting every possible contingency during installation, operation, or maintenance. This product’s implementation may vary among users.

This document is current as of the time of release of the product; however, the accompanying software may have changed since the release. Rockwell Automation, Inc. reserves the right to change any information contained in this document or the software at any time without prior notice. It is your responsibility to obtain the most current information available from Rockwell when installing or using this product.
Environmental compliance

Rockwell Automation maintains current product environmental information on its website at

Contact Rockwell Automation

Customer Support Telephone — 1.888.382.1583

Online Support — http://www.rockwellautomation.com/support/
Start with ControlFLASH Plus

This chapter helps you get started with using the ControlFLASH Plus software.

**ControlFLASH Plus overview**

ControlFLASH Plus™ is a software tool used for electronically changing firmware revisions in hardware devices. It provides an intuitive, easy-to-use interface that can:

- Flash one or multiple devices within a single operation.
- Manage firmware revisions and firmware locations.
- Download firmware revisions from the Product Compatibility and Download Center.
- Manage and use devices’ revisions favorite.

**Important:** ControlFLASH Plus only supports the firmware update for devices supporting the Common Industrial Protocol (CIP). To perform updates of non-CIP devices, use the ControlFLASH tool.

**System requirements**

ControlFLASH Plus works within the system requirements of all Rockwell Automation software products. For the latest information regarding software platform support, refer to Rockwell Automation Product Compatibility and Download Center.

**Hardware requirements**

- An Intel® Core 2 Duo processor running at 2.8 GHz or faster or another processor with equivalent specifications
- 4 GB or more memory RAM
- At least 16GB of available hard drive space

**Software requirements**

**Operating systems**

ControlFLASH Plus has been tested on the following operating systems:

- Windows® 7 Professional with Service Pack 1 (32-bit, 64-bit)
- Windows 7 Enterprise with Service Pack 1 (32-bit, 64-bit)
• Windows 10 Professional (64-bit)
• Windows 10 Enterprise (64-bit)

See the Windows Lifecycle FAQ and Windows as a Service (WaaS) topics on the Microsoft® Web site for details regarding servicing requirements and other important information.

• Windows 10 Semi-Annual Channel v1709, v1803, and v1809
Windows 10 Semi-Annual Channel is governed by the Microsoft Modern Lifecycle Policy. Refer to the Microsoft Web site for details.

• Windows 10 IoT Enterprise 2016 Long-Term Servicing Channel
Windows 10 Long-Term Servicing Channel is governed by the Microsoft Fixed Lifecycle Policy. Refer to the Microsoft Web site for details.

• Windows Server® 2012 Standard (64-bit)
• Windows Server 2012 R2 Standard (64-bit)
• Windows Server 2012 Datacenter Edition (64-bit)
• Windows Server 2012 R2 Datacenter Edition (64-bit)
• Windows Server 2016 Standard Edition (64-bit)
• Windows Server 2016 Datacenter Edition (64-bit)
• Windows Server 2019 Standard Edition (64-bit)
• Windows Server 2019 Datacenter Edition (64-bit)

Preferred operating systems

Preferred operating systems are prioritized for support, testing, and post-release patch qualifications. These operating systems are preferred for this release:

• Windows 10 Professional (64-bit)
• Windows 7 Professional with Service Pack 1 (64-bit)
• Windows Server 2016 Standard (64-bit)
• Windows Server 2012 R2 Standard (64-bit)

High Resolution Display Support

Windows 10 build 1703 or later is the recommended operating system if running this software with a 2K or 4K High Resolution Display.
Rockwell Automation Test Environment

Rockwell Automation tests software products under a standard configuration of operating systems and antivirus software. For additional information see the Rockwell Automation Knowledgebase article 35330 Rockwell Software Products and Antivirus Software (https://rockwellautomation.custhelp.com/app/answers/detail/a_id/35330).

Additional software

The following communications software must be installed before running ControlFLASH Plus:

- FactoryTalk® Linx™ version 6.00.00 or later.
  We provide the installation package that includes FactoryTalk Linx in ControlFLASH Plus version 2.00.00 or later.

Supported browsers

The following web browsers have been tested and are supported for use with this release:

- Google® Chrome™ browser 76
- Internet Explorer® 11
- Mozilla® Firefox® 68

Before you begin

Before using ControlFLASH Plus, you need to:

- Install FactoryTalk® Linx™ version 6.00.00 or later.
  Tip: We provide the installation package that includes FactoryTalk Linx in ControlFLASH Plus version 2.00.00 and later.
- Configure communication drivers in the FactoryTalk Linx software.
- Verify that your communications drivers work correctly.
Install ControlFLASH Plus

You can download the installation packages from Rockwell Automation Product Compatibility and Download Center (PCDC). We provide two installation packages:

- If you have installed FactoryTalk Linx 6.00.00 or later, download the stand-alone installation package.

  **Tip:** To flash Micro810® or Micro820™ over USB, you need to download and install FactoryTalk Linx 6.10.00 or later.

- If you don’t have FactoryTalk Linx installed, download the installation package with FactoryTalk Linx.

To install ControlFLASH Plus through the installation package, complete the following operations:

- Download and install FactoryTalk Linx version 6.00.00 or later
- Locate and download the installation package on page 15
- Install ControlFLASH Plus on page 16

Follow these instructions below:

1. From Internet Explorer, go to the PCDC website:
   
   [http://compatibility.rockwellautomation.com/Pages/home.aspx](http://compatibility.rockwellautomation.com/Pages/home.aspx)

   To use this site, you must register and log in.

2. In the **Downloads** area, click **Find Downloads**.

3. In the **Find Downloads** page, enter **ControlFLASH Plus** and click **Search**.
4. Select the row of **ControlFLASH Plus** and click **Downloads** to continue.

5. In this page, click the **Show downloads** icon to show the available downloads.

6. In the **Available Downloads** page, select **ControlFLASH Plus** and click **Downloads**.

7. Follow instructions on the web to download the installation package.

**Install ControlFLASH Plus**

When the installation completes, FactoryTalk® Security is enabled by default. When started, ControlFLASH Plus logs on to the FactoryTalk Network Directory.

To install ControlFLASH Plus, follow the steps below:

- **Step 1: Launch the Setup wizard and start the installation** on page 16
- **Step 2: Read and accept license agreements** on page 19
- **Step 3: Start the installation** on page 20
- **Step 4: Finish the installation** on page 21
- **Step 5: View the release notes** on page 23

1. Close all open programs.

2. In the ControlFLASH Plus installation package, double-click **Setup.exe**.

3. If Microsoft .NET Framework 4.0 or later is not installed on your computer, the **Microsoft .NET Framework Setup** dialog box shows. Click **Install**.

4. (Optional) On the **ControlFLASH Plus Setup** page, select a language to be shown during the installation process. By default, your system language is selected.
Click **Release notes** to view the ControlFLASH Plus Release Notes in your browser.
5. To install the software using the recommended installation location, click **Install now** and skip to **Step 2: Read and accept license agreements** on page 19.

6. To select which components to install and change installation location, click **Customize**.

   If you download the installation package that only includes ControlFLASH Plus and FactoryTalk Updater, the other components won't show.

7. On the **Customize** page, select the components. There may be three options shown:
   
   - **Mandatory** (grayed-out and selected check box) indicates software that will be automatically installed as part of the selected application.
   - **Recommended** (selected check box) indicates software that Rockwell recommends for the application. You may decide to clear the check box so the software does not install.
   - **Optional** (clear check box) indicates software that you may wish to include depending on your system. Select the box to include the
software during installation. To change the installation location, click **Customize**.

8. Click **Install**.

**Step 2: Read and accept license agreements**

End-user license agreements (EULA) spell out your rights and responsibilities. Depending on the components being installed, there may be more than one license agreement on this page. The individual license agreements are listed above the text box.
Some software products may be delivered or made available only after you agree to the terms and conditions of each of the license agreements.

1. On the End User License Agreements page, select each agreement and read the agreement carefully.

2. When all license agreements have been read, click Accept All.

   Tip: If you click Decline, you will return to the ControlFLASH Plus Setup page.

Step 3: Start the installation
After accepting the license agreements, the Setup wizard automatically installs the software and does not require any input.

![Installation Complete]

**Step 4: Finish the installation**

The installation completes.

- To view the installation details, click **Installation Summary**.
- To receive the latest product updates and patch notification, click **Register for updates**.
To install the latest version of Adobe® Acrobat® Reader®, click **Download it free** and follow the on-screen instructions.

Restart the computer to complete the installation.
Tip: After installing the software, you can repair, modify, or uninstall the software from the Setup wizard or Windows Control Panel.

If you also install FactoryTalk Updater on your computer, use it to check the latest version of ControlFLASH Plus from the Product Compatibility and Download Center.

![FactoryTalk Updater](image)

**Step 5: View the release notes**

After ControlFLASH Plus is installed, view the release notes to learn about the system requirements, system features, anomalies, and application notes for this release.

1. Click **Start > All Programs > FLASH Programming Tools > ControlFLASH Plus**.

2. After ControlFLASH Plus is opened, click **Settings**.

3. In the **Settings** dialog box, click **About > ControlFLASH Plus Release Notes**.

4. The release notes will be opened with the browser.

**Install ControlFLASH Plus with command-line parameters**

ControlFLASH Plus supports silent or unattended installation using command-line parameters. Silent installation runs in a quiet mode without any user interface, while unattended installation runs in a quiet simple mode and shows progress through the UI. Unattended installation does not accept any input, but still shows error or restart messages.

Use command-line parameters to perform a silent or unattended installation of ControlFLASH Plus.

The command-line installation requires the administrator permission. The steps may vary slightly depending on your operating system.
To perform silent or unattended installation:

1. Close all Windows programs.

2. Open the Command Prompt window.

3. In the Command Prompt window, navigate to $D$: where $D$: is the drive containing the ControlFLASH Plus installation package.

   In this example, type $D: \text{ and press Enter.}$

   Tip: If User Account Control dialog box shows, click Yes.

4. Type a command with the following syntax and press Enter.

   ```
   Setup.exe [/Q | /QS] /IAcceptAllLicenseTerms [/AutoRestart] 
   [/SetupLanguage=language] [/Record] [/Playback] 
   [/InstallDrive=drive]
   ```

   For more information about parameters, type `Setup.exe /?` or see Command-line parameters for silent or unattended installation on page 24.

### Command-line parameters for silent or unattended installation

**Unattended or silent install**

Use command-line parameters to perform an unattended or silent installation of the software.

**Command-line parameters**

The following table identifies the installation command-line parameters. Command-line parameters are case-insensitive. However, if a specified value includes a space, be sure to enclose the value in quotation marks (for example, "value with spaces").

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>/?</td>
<td>Displays the usage options for installation parameters.</td>
</tr>
<tr>
<td>/Q</td>
<td>Silent Install, install runs in a quiet mode without any user interface. When using this parameter, your IT tool or script should check the error codes, and respond as needed. For example, if the installation returns error code 1641, then the IT tool or script should restart the computer and relaunch the installation after restart.</td>
</tr>
<tr>
<td>/QS</td>
<td>Unattended Install, install runs in a quiet simple mode and shows progress through the UI, it does not accept any input but still shows error or restart messages. When using this parameter, you will not have to check the error codes, and the installation will stop and display a prompt if there are error or restart messages. For example, if an immediate restart is required to complete the install, a restart message will be displayed for you to confirm the restart. Installation resumes automatically from the point of interruption after restart.</td>
</tr>
</tbody>
</table>

For more information about parameters, type `Setup.exe /?` or see Command-line parameters for silent or unattended installation on page 24.
### Parameter Description

- **/IAcceptAllLicenseTerms** Acknowledges acceptance of the license terms. This parameter is required for /Q or /QS parameters.
- **/AutoRestart** Automatically restarts the computer after the installation is complete. Used when a restart is required to complete the installation. This parameter is optional. If this parameter is not used silent install (/Q) will return either error code 1641 or 3010 if a restart is required, and unattended install (/QS) will result in a confirmation prompt that must be agreed to before the installation is completed.
- **/SetupLanguage="value"** Specifies which language will be displayed during install process. The value must be one of the following:
  - ENU
  - CHS
  - DEU
  - ESP
  - FRA
  - ITA
  - JPN
  - KOR
  - PTB
  This parameter is optional. If this parameter is not used, the default language is the current user or operating system user interface language.
- **/Record** Records the installation options chosen to a recording file. This parameter is optional.
- **/Playback** Plays back a recording file to specify the installation options. This parameter is optional.
- **/IgnoreWarning** Specifies that the setup ignores warnings and continues. This parameter is optional. If it is not specified, the setup exits when a warning occurs.
- **/Uninstall** Uninstalls the product.
- **/Repair** Runs a repair operation on the installed products. This parameter is optional.
- **/InstallLocation="value"** Specifies the install location. This parameter is optional. If this parameter is not used, the default install location is "C:\Program Files (x86)\Rockwell Software". Some software restricts the installer to only change the drive the software is installed on. Use /? to determine which parameter is supported.
- **/InstallDrive="value"** Specifies the install drive. This parameter is optional. If this parameter is not used, the default install drive is C.

### Error codes

The following table identifies the error codes that can be returned by an installation.

<table>
<thead>
<tr>
<th>Error Code</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERROR_SUCCESS</td>
<td>0</td>
<td>The installation completed successfully.</td>
</tr>
<tr>
<td>ERROR_INVALID_PARAMETER</td>
<td>87</td>
<td>One of the parameters was invalid.</td>
</tr>
<tr>
<td>ERROR_INSTALL_USEREXIT</td>
<td>1602</td>
<td>The installation was cancelled by the user.</td>
</tr>
<tr>
<td>Error Code</td>
<td>Value</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>---------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>ERROR_INSTALL_FAILURE</td>
<td>1603</td>
<td>A fatal error occurred during installation.</td>
</tr>
<tr>
<td>ERROR_BAD_CONFIGURATION</td>
<td>1610</td>
<td>The configuration data for this product is corrupt. Contact your support personnel.</td>
</tr>
<tr>
<td>ERROR_SUCCESS_REBOOT_INITIATED</td>
<td>1641</td>
<td>The installer has initiated a restart. After restart installation will continue.</td>
</tr>
<tr>
<td>ERROR_SUCCESS_REBOOT_REQUIRED</td>
<td>3010</td>
<td>A restart is required to complete the installation. After restart the product is successfully installed.</td>
</tr>
<tr>
<td>ERROR_SUCCESS_RELAUNCH_REQUIRED</td>
<td>3012</td>
<td>Restart pending. Restart computer for installation to continue.</td>
</tr>
<tr>
<td>ERROR_SUCCESS_NOT_APPLICABLE</td>
<td>3013</td>
<td>The installation cannot proceed because the products are already installed.</td>
</tr>
</tbody>
</table>
Chapter 3

Explore the ControlFLASH Plus user interface

This chapter introduces the user interface of ControlFLASH Plus, including:

- Components on the ControlFLASH Plus window
- Settings dialog box
- Flash Devices tab
- Manage Firmware tab
- Manage Favorites tab

The following table explains the items in the ControlFLASH Plus window and their meanings.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash Devices tab</td>
<td>Allows you to browse devices, select firmware revisions, and start a flash operation. When ControlFLASH Plus can access the Product Compatibility and Download Center, you can select a device’s firmware revisions from the Product Compatibility and Download Center. To download the firmware revisions, sign in to the Product Compatibility and Download Center.</td>
</tr>
<tr>
<td>Manage Firmware tab</td>
<td>Shows devices’ firmware revisions in the monitored folders. When ControlFLASH Plus can access the Product Compatibility and Download Center, you can select the firmware revisions from the Product Compatibility and Download Center. To download firmware revisions, sign in to the Product Compatibility and Download Center. It also allows you to delete one or multiple unused firmware revisions.</td>
</tr>
<tr>
<td>Manage Favorites tab</td>
<td>Allows you to create, view, manage, and make changes to the favorite lists.</td>
</tr>
</tbody>
</table>
Chapter 3  Explore the ControlFLASH Plus user interface

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
</table>
| ? Help     | Opens the ControlFLASH Plus online help.  
*Tip:* To access the ControlFLASH Plus Quick Start Guide, click Start > All Programs > FLASH Programming Tools > ControlFLASH Plus Quick Start Guide. |
|  события   | Opens the Settings dialog box.                                                                                                               |
| 刷新固件    | Refreshes the firmware as found in the monitored folders.  
*Tip:* To save time, refresh firmware after installing all non-DMK firmware kits.       |
| • Disconnected from the Download Center | Shows the connection status indicator to the Product Compatibility and Download Center with different colors.  
- Red  
  ControlFLASH Plus cannot access the Product Compatibility and Download Center. In most cases, when you don't have the Internet connectivity, this will occur.  
- Green  
  ControlFLASH Plus can access the Product Compatibility and Download Center, you have signed in, and it allows you to download firmware revisions.  
- Yellow  
  ControlFLASH Plus can access the Product Compatibility and Download Center and Sign in shows. To download firmware revisions, sign in to the Product Compatibility and Download Center. |
| • Connected to Download Center       |                                                                                                                                           |
| • Download Center available         |                                                                                                                                              |

**Settings dialog box**

Use the **Settings** dialog box to configure the settings for ControlFLASH Plus, including:

- General
- Reports
- Security
- Firmware Locations
- About

**Sign in to the Product Compatibility and Download Center**

When connected to the Internet, sign in to the Product Compatibility and Download Center to download firmware revisions and view firmware revisions' Important Notice.

**To sign in to the Product Compatibility and Download Center**

1. In the lower left of the ControlFLASH Plus window, select **Sign in**.
   
   **Tip:** In the Settings dialog box, select **General**, and then select **Sign in**.

2. In the **Sign in** webpage, enter a registered account and its password.

3. (optional) To view firmware revisions' Important Notice easily, select **Keep me signed in** to enable single signed on.

4. Select **Sign in**.
Sign out of the Product Compatibility and Download Center

After signing out of the Product Compatibility and Download Center, downloading firmware revisions and viewing firmware revisions’ Important Notice from the Product Compatibility and Download Center is not allowed.

To sign out of the Product Compatibility and Download Center

1. In the ControlFLASH Plus window, select Settings.
2. In the Settings dialog box, select General.
3. Select Sign out.

The following table lists the options in the General tab and their meanings.

<table>
<thead>
<tr>
<th>Options</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Flash</strong></td>
<td>Uses Flash to configure whether one selected revision will always be applied</td>
</tr>
<tr>
<td></td>
<td>to all devices of the same type and the default behavior of the Select Revision for All dialog box.</td>
</tr>
<tr>
<td>Let me choose each time (show messages)</td>
<td>When selecting a firmware revision in the Flash To column of the Flash Devices tab, with this option selected, a confirmation dialog box always opens giving you options to decide if you want to apply the revision to all devices of the same type.</td>
</tr>
<tr>
<td>Yes, always select for all devices (do not show messages)</td>
<td>When selecting a firmware revision in the Flash To column of the Flash Devices tab, with this option selected, the selected revision will always be applied to all devices of the same type without showing a confirmation dialog box.</td>
</tr>
</tbody>
</table>
Options | Description
--- | ---
No, never select for all devices (do not show messages) | When selecting a firmware revision in the Flash To column of the Flash Devices tab, with this option selected, the selected revision will not be applied to other devices of the same type without showing a confirmation dialog box. The confirmation dialog box has a check box used to turn off this function.
Enable enhanced concurrent flashing algorithm | With this check box selected, the enhanced concurrent flashing is turned on to flash up to 20 devices regardless of the topology. With this mode turned on, devices in parent/children relationships and the ones connected on Ethernet linear/DLR topologies are also flashed concurrently. This check box is selected by default.
Enable application log for troubleshooting | With this check box selected, the default path for application logs appears and ControlFLASH Plus generates logs anytime it is started and stopped.
Tip: When application errors occurred during operations, you can view the application logs to find causes of the errors.
Sign in | Selects this button to open the Product Compatibility and Download Center sign-in webpage. When you are signed in, the account shows.
Sign out | Selects this button to sign out of the Product Compatibility and Download Center.

**Enable application log**

When an application error occurred during operations, view the application log to check causes of the error.

**To enable application log**

1. In the ControlFLASH Plus window, select Settings.
2. In the Settings dialog box, select the General tab.
3. On the General tab, select the Enable application log for troubleshooting check box.

    The default path for application logs shows and you are prompt with a dialog box indicating that when launching ControlFLASH Plus next time, application logging will begin.
4. Select Close.

    Tip: The application logs will be created on application start and stopped at application stop. Select the path link to open the default folder for application logs.

**Reports tab**

Use the Reports tab to configure the automatic saving settings for reports of each flash operation, including:

- Option to turn on or off the automatic saving
- Location of the saved report
With the **Save a report for each flash operation automatically** check box selected, a report summarizing the flash result is automatically saved when a flash operation completes.

To change the report location, click **Change**. The default location is `C:\Users\<Username>\Documents\ControlFLASH Plus\Reports`.

The following table explains each item on the **Reports** tab.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Turns on or off the automatic save of reports.</td>
</tr>
<tr>
<td>2</td>
<td>Shows the location of automatically saved reports.</td>
</tr>
<tr>
<td>3</td>
<td>Changes the location of automatically saved reports.</td>
</tr>
</tbody>
</table>

### View a flash report

Once a flash operation completes, you can view the CSV report file summarizing the result of the operation.

**To view a flash report**

1. After a flash operation completes, click **Close** when you are prompted with the **Flash Results** dialog box.

2. If auto-save is off, click **Create Report**.

   If auto-save is on, go to step 5.
3. In the **Save as** dialog box, navigate to the location used to save the report.

   **Tip:** The default name of the report follows the format as `ControlFLASH Plus Report <year_month_day_hour_minute_second>`.

4. Click **Save**.

5. Click **Show Reports**.

6. Double-click the report to open it.

**Security tab**

Use the **Security** tab to log on to or off from FactoryTalk Security and view the current user. ControlFLASH Plus uses the FactoryTalk Security single sign-on feature. Single sign-on logs on as the Windows-linked user currently logged on to the computer. If single sign-on is disabled, a notification message shows at the top of the **Flash Devices** tab. Clicking the message opens the **Security** tab prompting the user to log on.

You can log on as another user by logging off and then logging back on.

- To log off, click **Log off**. Once logged off, no flash operations can be performed.
- To log on, enter the user name and password, then click **Log on**. If the user has no permission to the flash operation, no flash operations can be performed.

For more information on single sign-on, see the *FactoryTalk Services Platform Help*. 

![Security tab diagram](image-url)
The following table explains each item on the Security tab.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Shows the logged-on user name.</td>
</tr>
<tr>
<td>2</td>
<td>Shows the authenticated status.</td>
</tr>
<tr>
<td>3</td>
<td>Refreshes the information of the logged-on user authentication.</td>
</tr>
<tr>
<td>4</td>
<td>Logs off from the system.</td>
</tr>
</tbody>
</table>

Firmware Locations tab

Use the Firmware Locations tab to view and manage the file locations that ControlFLASH Plus monitors for revision files.

- To add a monitored location, click Add Location, select the target folder, and then click OK. Click OK in the Settings dialog box to save the change.

  Tip: If you use the download manager to download firmware revisions from the Product Compatibility and Download Center, the default or customized path of the firmware revisions will be added to the location list automatically.

- To set a default monitored location, click ✔️ at the end of the location. Select Set as download location, and then click OK in the Settings dialog box to save the change.

- To remove a monitored location, in the location list, click ✔️ at the end of the location. Select Remove, and then click OK in the Settings dialog box to save the change.

- To open a monitored download location, click the location in the location list.
Tip:  
- Once a monitored download location is set as default, its is disabled.
- The following locations are listed by default and cannot be removed:
  - C:\Program Files (x86)\ControlFLASH
  - C:\Users\<Username>\Downloads\RA
  - C:\Users\Public\Documents\Rockwell Automation\Firmware Kits

The following table explains each item on the Firmware Locations tab.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Adds a monitored location.</td>
</tr>
<tr>
<td>2</td>
<td>Removes a monitored location.</td>
</tr>
<tr>
<td>3</td>
<td>Sets a monitored location as default download location.</td>
</tr>
</tbody>
</table>

Add a monitored folder to customize the path for saving the firmware revisions.

**To add a monitored folder**

1. Select Settings.
2. In the Setting dialog box, click the Firmware Locations tab.
3. Click Add Location.
4. In the Browse For Folder dialog box, select a folder.
5. Select OK.

**About tab**

Use the About tab to view the software version, copyright information, Rockwell Automation end user license agreement, ControlFLASH Plus Release Notes, and the installed drivers.

- To view the Rockwell Automation end user license agreement, click **Software License Agreement**.
- To view the release notes, click **ControlFLASH Plus Release Notes**.

The following table explains each item on the Security tab.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Shows the software version.</td>
</tr>
<tr>
<td>2</td>
<td>Shows the copyright.</td>
</tr>
<tr>
<td>3</td>
<td>Opens the Rockwell Automation end user license agreement.</td>
</tr>
<tr>
<td>4</td>
<td>Opens the ControlFLASH Plus Release Notes.</td>
</tr>
<tr>
<td>5</td>
<td>Lists the installed drivers, including driver name, version, and description.</td>
</tr>
</tbody>
</table>

**Flash Devices tab**

The Flash Devices tab shows by default when ControlFLASH Plus is opened. Use the Flash Devices tab to:

- Open the Network Browser to configure a starting browse path and select the number of levels to browse.
- Download firmware revisions from the Product and Compatibility and Download Center.
- Upgrade or downgrade device firmware.

The following table explains each item on the Flash Devices tab when ControlFLASH Plus can access the Product Compatibility and Download Center.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Shows the starting browse path as configured in the Network Browser. By default, it shows the highest node of the network topology. For subsequent uses, it shows the last selected path in the previous session.</td>
</tr>
<tr>
<td>2</td>
<td>Filters one or more device types in a flashing session. The device list is filtered immediately as text included in the device name is entered. The amount of selected devices, filtered devices, and all devices shows on the left of the Filter by device box. An orange highlight indicates that a filter is active.</td>
</tr>
</tbody>
</table>
| 3    | Accelerates the device selection in the list with the following options:  
- All  
  Selects all devices whose selected Flash To revisions are equal to, greater than, or less than the current revision.  
- Upgrades Only  
  Selects devices whose selected Flash To revisions are greater than the current revision.  
- Upgrades and Downgrades  
  Selects devices whose selected Flash To revisions are greater or less than the current revision. This option doesn't select devices whose selected Flash To revisions are equal to their current ones, which avoids unnecessary firmware updates.  
Make sure the Flash To revisions are set before using the selection accelerator. |
| Device | The Device column shows the network topology as returned by the browsing path. Network and chassis node names are shown in lighter gray to maintain the hierarchy. An orange highlight on the left border of this column indicates that a filter is active. |
| Address | The Address column shows the address of the device, for example, slot number for devices located in backplanes. The complete address will be shown as a tooltip when hovering over a device's address or slot number. |
### Item Description

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>In Device</strong></td>
<td>The <strong>In Device</strong> column shows each device’s current firmware revision.</td>
</tr>
<tr>
<td><strong>Flash To</strong></td>
<td>The <strong>Flash To</strong> column shows the revisions available on the computer and from the Product Compatibility and Download Center. When ControlFLASH Plus is disconnected to the Product Compatibility and Download Center, the firmware revisions that you select from the Product Compatibility and Download Center will be remained but unavailable. Once connected to the Internet, the firmware revision becomes available.</td>
</tr>
</tbody>
</table>
| **Latest on Computer** | Accelerates the revision selection in the **Flash To** column with the following options:  
- **Latest from Download Center**: Selects all the latest firmware revisions from the Product Compatibility and Download Center. When you have not signed in to the Product Compatibility and Download Center or you don’t have internet connectivity to the Product Compatibility and Download Center, the connection status indicator with the Product Compatibility and Download Center will be shown next to **Latest from Download Center**.  
- **Latest on Computer**: Selects all the latest firmware revisions found in the monitored folders that can include remote computers.  
- **Favorite lists**: Selects a combination of devices and revisions as specified in one of the favorite lists. |
| 4 | Allows you to select the row of device. |
| 5 | Lists the available firmware revisions on the computer and from the Product Compatibility and Download Center. When firmware revisions are found in the Product Compatibility and Download Center, the download arrow shows.  
- When the download arrow is blue, it indicates that you are signed in to the Product Compatibility and Download Center and you can download the firmware revisions.  
- When the download arrow is gray, it indicates that ControlFLASH Plus can access the Product Compatibility and Download Center and you are signed out. To download firmware revisions, sign in to the Product Compatibility and Download Center. |
| 6 | Views the firmware revisions’ Release Notes found in the Product Compatibility and Download Center. |
| 7 | Views the firmware revisions’ Important Notice found in the Product Compatibility and Download Center.  
**Tip**: To view the firmware revisions’ Important Notice, sign in to the Product Compatibility and Download Center. |
| 8 | Views the copyright information of the firmware revision. |
| Create Favorite List | Creates a favorite list based on the current device and revision selections. This is turned on only when at least one device is selected. |
| Next | Starts the flash workflow. This is turned on only when at least one device is selected. |

### Manage Firmware tab
Use the Manage Firmware tab to manage firmware revisions located in the monitored folders. When you are signed in to the Product Compatibility and Download Center, it also allows you to download firmware revisions and view the firmware revisions' Important Notice from the Product Compatibility and Download Center.

The following table explains each item on the Manage Firmware tab when ControlFLASH Plus can access the Product Compatibility and Download Center.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add Firmware Revisions</td>
<td>Opens the Add Firmware Revisions dialog box to download firmware revisions from the Product Compatibility and Download Center. When ControlFLASH Plus loses connection to the Product Compatibility and Download Center, Add Firmware Revisions doesn’t show.</td>
</tr>
<tr>
<td>Delete Revisions</td>
<td>Turns on the delete firmware revisions mode. Deleting unused firmware revisions improves application's inventory building performance.</td>
</tr>
<tr>
<td>Export Revisions</td>
<td>Opens the Save As dialog box to export the firmware inventory.</td>
</tr>
<tr>
<td>Device</td>
<td>Shows the individual catalog number of the device. When ControlFLASH Plus can access the Product Compatibility and Download Center and a device’s firmware revisions was found in the Product Compatibility and Download Center, + shows:</td>
</tr>
<tr>
<td></td>
<td>• If signed in to the Product Compatibility and Download Center, you can use the Add Firmware Revisions dialog box to search, select, and download firmware revisions.</td>
</tr>
<tr>
<td></td>
<td>• If signed out of the Product Compatibility and Download Center, you are allowed to use the Add Firmware Revisions dialog box to search and select firmware revisions only.</td>
</tr>
<tr>
<td></td>
<td>Tip: When a device’s firmware revisions are all downloaded from the Product Compatibility and Download Center, + disappears after refreshing firmware.</td>
</tr>
<tr>
<td></td>
<td>An orange highlight on the left border of this column indicates that a filter is active.</td>
</tr>
<tr>
<td>Vendor</td>
<td>Shows the name of the device vendor.</td>
</tr>
<tr>
<td>Item</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Lifecycle Status</td>
<td>Shows the device's lifecycle status found in the Product Compatibility and Download Center.</td>
</tr>
<tr>
<td></td>
<td>- <strong>Active</strong></td>
</tr>
<tr>
<td></td>
<td>- <strong>Active Mature</strong></td>
</tr>
<tr>
<td></td>
<td>- <strong>End Of Life</strong></td>
</tr>
<tr>
<td></td>
<td>- <strong>Discontinued</strong></td>
</tr>
<tr>
<td></td>
<td>- <strong>Multiple lifecycle statuses found</strong></td>
</tr>
<tr>
<td>Tip</td>
<td>When ControlFLASH Plus loses connection to the Product Compatibility and Download Center, the lifecycle statuses doesn't show. You can visit <a href="https://www.rockwellautomation.com/global/support/product-compatibility-migration/lifecycle-status/overview.page">https://www.rockwellautomation.com/global/support/product-compatibility-migration/lifecycle-status/overview.page</a> for more information.</td>
</tr>
<tr>
<td>Revisions</td>
<td>Shows the following information:</td>
</tr>
<tr>
<td></td>
<td>- The device's available firmware revisions as found in the monitored folders</td>
</tr>
<tr>
<td></td>
<td>- The firmware revisions' Release Notes and Important Notice found in the Product Compatibility and Download Center.</td>
</tr>
<tr>
<td></td>
<td>When ControlFLASH Plus loses connection to the Product Compatibility and Download Center, the firmware revisions from the Product Compatibility and Download Center and the icons of the Release Notes and Important Notice don't show.</td>
</tr>
<tr>
<td>File Path</td>
<td>Shows the file location of each firmware revision. Click a path link in the File Path column to show the file in a folder. When download starts, a progress bar appears. Select Cancel to cancel the download. Select Retry to restart a cancelled download.</td>
</tr>
<tr>
<td>1</td>
<td>Filters one or more device types in a flashing session. The device list is filtered immediately as text included in the device name is entered. The amount of filtered devices and all devices shows on the left of the Filter by device box. An orange highlight indicates that a filter is active.</td>
</tr>
<tr>
<td>2</td>
<td>Click 1 to view the copyright information of the firmware revision.</td>
</tr>
<tr>
<td>3</td>
<td>Opens the firmware revision’s Important Notice found in the Product Compatibility and Download Center.</td>
</tr>
<tr>
<td></td>
<td>Tip: To view the firmware revisions’ Important Notice, sign in to the Product Compatibility and Download Center.</td>
</tr>
<tr>
<td>4</td>
<td>Opens the firmware revision’s Release Notes found in the Product Compatibility and Download Center.</td>
</tr>
<tr>
<td>5</td>
<td>Opens the Add Firmware Revisions dialog box for a specific device.</td>
</tr>
</tbody>
</table>

**Manage Favorites tab**
Use the **Manage Favorites** tab to manage favorite lists. A favorite list includes devices and corresponding revisions that can be used to quickly select target revisions during flash operations. Use the import and export functions to share favorite lists with others.

The following table explains each item on the **Manage Favorites** tab.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Favorite Lists</td>
<td>Shows the favorite lists.</td>
</tr>
<tr>
<td>Export all</td>
<td>Creates a CFF (ControlFLASH Favorites) file including all the favorite lists.</td>
</tr>
<tr>
<td>Import</td>
<td>Imports a CFF file that is exported with one or more favorite lists.</td>
</tr>
<tr>
<td></td>
<td>If an imported list has the same name as an existing one, the imported list name is appended with a number to ensure uniqueness.</td>
</tr>
<tr>
<td>1</td>
<td>Allows you to create a favorite list.</td>
</tr>
<tr>
<td>2</td>
<td>Shows the favorite list or lists.</td>
</tr>
<tr>
<td>3</td>
<td>Shows the name of the selected favorite list and the amount of included devices.</td>
</tr>
<tr>
<td>4</td>
<td>Filters the favorite lists immediately as text included in the favorite list name is entered.</td>
</tr>
<tr>
<td></td>
<td>The amount of filtered and all favorite lists shows on the left of the <strong>Filter by favorite list</strong> box.</td>
</tr>
<tr>
<td></td>
<td>An orange highlight indicates that a filter is active.</td>
</tr>
<tr>
<td>Add devices</td>
<td>Adds devices to the selected favorite list.</td>
</tr>
<tr>
<td>Copy</td>
<td>Creates a copy of the selected favorite list.</td>
</tr>
<tr>
<td>Export</td>
<td>Creates a file including the selected favorite list.</td>
</tr>
<tr>
<td>Delete</td>
<td>Deletes the selected favorite list.</td>
</tr>
<tr>
<td>Device</td>
<td>Shows the catalog number of the device.</td>
</tr>
<tr>
<td>Firmware Revision</td>
<td>Shows the device’s available firmware revisions as found in the monitored folders.</td>
</tr>
<tr>
<td></td>
<td>Click the revision to select another one for the device in the favorite list.</td>
</tr>
<tr>
<td>5</td>
<td>Click ✗ to remove the device from the favorite list.</td>
</tr>
</tbody>
</table>
Chapter 4

Browse devices

When ControlFLASH Plus is started for the first time, the Browsing from path is not configured. You need to configure the browsing path in the Network Browser. After you set the path for the first time, ControlFLASH Plus will use the last selected path setting.

Once a starting browse path is configured, ControlFLASH Plus uses the configured browsing path and number of levels to populate the devices list. The devices are shown with the current versions of firmware and available compatible firmware versions are shown in the Flash To column. The topology is refreshed when opening ControlFLASH Plus or changing the browsing path in the Network Browser.

When updating topology and devices, you may cancel progress by clicking the Cancel button. Clicking the Cancel button opens the Network Browser for you to select another Browsing from path.
Network Browser

Use the general settings of the **Network Browser** to specify network configuration items and browser display information. Resize the **Network Browser** to see more or less of a network topology. For more information about **Network Browser**, visit [https://literature.rockwellautomation.com/idc/groups/literature/documents/gr/lnxent-gr001_en-e.pdf](https://literature.rockwellautomation.com/idc/groups/literature/documents/gr/lnxent-gr001_en-e.pdf).

The following table explains each item in the **Network Browser** and their meanings.

<table>
<thead>
<tr>
<th>Settings</th>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto discover</td>
<td><img src="auto_discover_icon.png" alt="Icon" /></td>
<td>Enables the <strong>Network Browser</strong> to continuously discover the selected device or network branch.</td>
</tr>
<tr>
<td>Add Driver</td>
<td><img src="add_driver_icon.png" alt="Icon" /></td>
<td>Adds a driver on the computer to provide communications to a network.</td>
</tr>
<tr>
<td>Advanced Settings</td>
<td><img src="advanced_settings_icon.png" alt="Icon" /></td>
<td>Opens <strong>Advanced Settings</strong> to configure network discovery settings.</td>
</tr>
<tr>
<td>Zoom</td>
<td><img src="zoom_icon.png" alt="Icon" /></td>
<td>Increases (zoom in) or decreases (zoom out) the view of the network topology tree.</td>
</tr>
<tr>
<td>Help</td>
<td><img src="help_icon.png" alt="Icon" /></td>
<td>Opens the help topics.</td>
</tr>
<tr>
<td>Auto upload</td>
<td><img src="auto_upload_icon.png" alt="Icon" /></td>
<td>Enables the <strong>Network Browser</strong> to automatically upload and register EDS files for unknown devices in the selected device and its child devices.</td>
</tr>
</tbody>
</table>
### Search

<table>
<thead>
<tr>
<th><strong>Search</strong></th>
<th>Provides a filtered list of devices upon the searching criteria.</th>
</tr>
</thead>
</table>

### Anchor

<table>
<thead>
<tr>
<th><strong>Anchor</strong></th>
<th>Re-roots a view in the network topology tree to give focus on a specific node and the corresponding children of that node.</th>
</tr>
</thead>
</table>

### Refresh

<table>
<thead>
<tr>
<th><strong>Refresh</strong></th>
<th>Instructs the browser to perform a discover cycle of the selected device or network branch immediately and update the network topology tree with the results. Refresh is only active when <strong>Auto discover</strong> is not activated.</th>
</tr>
</thead>
</table>

### Property

| **Property** | Used to perform the following:  
• Show properties for a selected device.  
• Launch driver configuration for a selected driver.  
• Launch the bridged network configuration for the selected bridged network configuration.  
• Adjust device settings in the topology, such as editing the name of the driver, adjusting the discovery method, and copying and pasting **Device List/Range** items. |
|--------------|----------------------------------------------------------------------------------------------------------------------------------|

### Delete

| **Delete** | Used to remove a device from the network topology view in a computer. Observe these guidelines to gain a better understanding of the delete command:  
• Deleting a device from the network topology tree does not remove the device from the network. After closing the **Network Browser**, all devices on the network return to the view when the **Network Browser** launches and discovers the devices.  
• Deleting a driver from the network topology tree permanently removes the driver and all its child nodes.  
• Deleting a module with a network branch also removes the child nodes. |
|-------------|----------------------------------------------------------------------------------------------------------------------------------|

### Manual upload

<table>
<thead>
<tr>
<th><strong>Manual upload</strong></th>
<th>Uploads and registers the EDS file from a selected device.</th>
</tr>
</thead>
</table>

### CIP Security Indicator

| **CIP Security Indicator** | When the icon is in the tool bar, it works as a switch to show or hide the CIP Security configuration status of a device.  
When the icon is in front of a device, it shows the device supports CIP Security and no configuration has been taken yet. |
|---------------------------|--------------------------------------------------------------|

<table>
<thead>
<tr>
<th><strong>CIP Security Indicator</strong></th>
<th>Means the device is in the CIP security configuration process.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>CIP Security Indicator</strong></th>
<th>Means the device is successfully configured with CIP security.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>Choose number of levels to browse</strong></th>
<th>Expands the number list to choose the level number for browsing multiple devices. A network node or a device node will not be identified as a level. The default number is 2.</th>
</tr>
</thead>
</table>

### Starting browse path and number of browse levels

Clicking on the **Flash Devices** tab opens the **Network Browser**. Use this dialog box to select a node in the **Network Browser** tree as a starting point for browsing devices. Clicking **OK** refreshes the device list on the **Flash Devices** tab. The dialog box allows you to choose the number of levels that should be browsed. The maximum number of levels to browse is 3. The default value of levels to browse is 2.
Add a driver for Local or Remote Broadcast

To add a driver for Local or Remote Broadcast

1. In the Network Browser, select the root node.

2. In the Add Driver dialog box, select a driver, and then select OK.

3. To configure the physical port of the computer and the tuning settings, select the Advanced tab.

4. Select Apply.
The new driver appears in the network topology tree.

![Add Driver dialog box](image)

5. Select the **General** tab, and in the **Name** box, enter a name for the driver.

6. In the **Discovery Method** list, select **Broadcast**.

7. To add a driver for Local Broadcast, select **Local Broadcast**. Skip to step 9.

![Add Driver dialog box](image)

To add a driver for Remote Broadcast, select **Remote Broadcast**.
8. (optional) With Remote Broadcast selected, in the IP Address and the Subnet Mask fields, enter the addressing information for the driver distribution.

9. Select OK.

---

Add a driver with a Device List/Range

When adding a driver, use a list or range of IP addresses to make sure broadcast messages reach the desired devices.

To add a driver with a Device List/Range

1. In the Network Browser, select 📑.
2. In the **Add Driver** dialog box, select a driver, and then select **OK**.

3. To configure the physical port of the computer and the tuning settings, select the **Advanced** tab.

4. Select **Apply**.

The new driver appears in the network topology tree.

5. Select the **General** tab, and in the **Name** box, enter a name for the driver.

6. In the **Discovery Method** list, select **Device List/Range**.
7. Select Add New, and then in the box under Device List/Range, enter the desired subnet range.

8. Select .

9. Select OK.

---

**Open the Configure Driver dialog box**

Open the Configure Driver dialog box to edit the properties for a driver.

**To open the Configure Driver dialog box**

1. In the Network Browser, select a driver.

2. Select .

**Add a bridge**

Create a bridge to enable Network Browser to detect devices on another network and perform diagnostic and configuration functions on those devices.
To add a bridge

1. In the **Network Browser** dialog box, below a bridged module, select the Ethernet network, and then select ![Bridge Module]

2. In the **General** tab, enter a name for the bridge, and then select **Add New**.

3. In the address box, enter the addressing information.
4. Select ▼

5. Select the Advanced tab to configure the browsing discovery options for the bridge.
6. Select **OK**.

**Bridge Configuration**

- **Poll Timeout**
- **Maximum concurrent packets to this network**
- **Poll interval between browse cycles**
- **Enable discovery using subnet mask**
- **Reset the tuning**

### Populate the devices list

Use the **Network Browser** to browse a single device or multiple devices.

**To populate the device list**

1. On the **Flash Devices** tab, select **Network Browser** to open the **Network Browser**.
2. Expand each level of the node which contains the node you want in order for the devices on that level to be shown on the **Flash Devices** tab.
3. To browse a single device, select a device node. Skip to step 5.
Tip: The SERCOS interface node is identified as a single device, but it has sub-devices when shown on the Flash Devices tab.

To browse multiple devices, select a network or a backplane node.

4. (optional) When browsing multiple devices, in the Choose number of levels to browse list, select the number of levels.
Tip: When the browsed devices are shown on in the Flash Devices tab, a backplane or a network node will not be identified as a level, but the devices under them.

5. Select OK.

The following example shows that when you select 3, devices of the first three levels are shown on the Flash Devices tab.
Generating the device topology

The devices list is generated differently depending on what is chosen as the starting node.

When a device (for example 1756-L85E) is selected, only the device itself is shown in the devices list.

Tip: A bridge node is also treated as a device node, for example, 1756-ENBT/A.

When a bus is selected, such as a backplane ("1756-A10/A"), a network ("Ethernet"), or a FactoryTalk Linx driver ("AB_ETH-2"), all items under the bus, up to the number of levels configured, are shown in the devices list.

Prepare the networks for flashing

1. Choose an appropriate time after all processes can be stopped to remove the device or devices from service.

2. Verify that the device or devices on the network are properly connected and that communications bandwidth is available.

Tip: It's not recommended to perform the flash operation while running a process. Before flashing, choose an appropriate time to remove your device or devices from service.
Chapter 5

Flash scheduling

ControlFLASH Plus determines the flash scheduling depending on the devices’ flashing configuration, their topology and parent-child relationships.

ControlFLASH Plus version 3.00.00 supports enhanced concurrent flashing of up to 20 devices regardless of their topology. This capability is turned on by default. The enhanced concurrent flashing extends the sorts of devices that can be flashed concurrently compared to earlier versions of the tool. Specifically:

- Devices with parent-child relationships are now flashed concurrently.
- Devices on Ethernet linear/DLR topologies are now flashed concurrently.

Exceptions are automatically managed by ControlFLASH Plus:

- Parent/children devices are flashed sequentially (For example, 1756-DNB).
- Devices on Ethernet linear/DLR topologies are flashed sequentially (For example, PowerFlex Drives).
- Devices on a SERCOS network are updated sequentially.

Note: Future versions of the PowerFlex firmware will allow for concurrent flashing.

When using ControlFLASH Plus version 2.00.00 or earlier, or when the enhanced concurrent flashing is turned off, the tool can flash up to 20 devices concurrently based on their topology except for the following cases:

- Parent/children devices are updated sequentially. First the parent devices are flashed concurrently, and then the children devices are flashed. Children devices may be flashed concurrently depending on their topology.
- Peer devices on linear buses are updated sequentially. Examples of linear buses include Ethernet Linear/DLR (not Star) and SERCOS.
- Devices with multiple active ports in a chassis are updated sequentially. Example of a device with multiple active ports would be a 1756-EN2TR with two network connections.
Chapter 6

Flash devices

This chapter tells you how to update firmware by using ControlFLASH Plus.

Before you begin, make sure that you have prepared your system for flashing. If you need help, refer to the back cover of this publication for support information.

Use ControlFLASH Plus to flash firmware revisions on one or multiple devices.

**Important:**
- ControlFLASH Plus only supports the firmware update for devices supporting the Common Industrial Protocol (CIP). To perform updates of non-CIP devices, use the legacy ControlFLASH tool.
- Make sure to specify the correct revision that you want to upgrade for your device. Otherwise, an unpredictable result may occur. Check on the Rockwell Automation Product Compatibility and Download Center or with your technical support representative if you are unsure about making the update.
- To avoid the flash operation from being interrupted, make sure the computer is powered to run throughout the operation and is not configured to enter or manually put into sleep mode.

**To flash devices**

1. (optional) On the **Flash Devices** tab, click to set up the browsing path on the network. The last selected path will be selected by default for subsequent uses.

2. On the **Flash Devices** tab, select one or multiple devices by selecting the check box on the left column.

   **Tip:** To select devices, enter the device name in the **Filter by device** text box. Devices are filtered as you enter text.

3. In the **Flash To** column, select the revisions to update the selected device.

   **Note:** When a Safety controller is selected, the check box of its partners will be selected and disabled automatically, and the revision of its partner will be changed as the Safety controller’s.

4. Click **Next**.
Note: If any of the selected revisions need to be downloaded from the Product Compatibility and Download Center, the Download Center License Agreement dialog box opens. Select Accept.

After the download completes, check the non-DMK firmware revisions and the incompatible ones. Select Non-DMK firmware must be installed manually to locate the file in the monitored folder and install all the non-DMK firmware kits manually, and then select Refresh Firmware. Select Next.

In the case that a dialog box prompts you as to whether you want to trust or not trust the publisher of a DMK, you can do so at this time. By trusting the publisher, the publisher’s certificate will be added to your system’s trusted publishers list. Administrator privileges are required to add new certificates in the trusted publishers list.

5. Read and understand all warning messages shown before proceeding.

6. Click Flash.

Tip: When the operation completes:
- Click Done to return to the beginning of the flash workflow.
- Click Retry to flash devices whose flash operations have failed or were canceled.
Filter devices on the Flash Devices tab

The device list is filtered immediately as text included in the device name is entered in the Filter by device box.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Shows the text you are entering.</td>
</tr>
<tr>
<td>2</td>
<td>Shows the amount of filtered and total devices.</td>
</tr>
<tr>
<td>3</td>
<td>Highlights the filtered devices in orange. Devices whose name includes the entered text will be shown.</td>
</tr>
</tbody>
</table>

Cancel download operations

After the download starts, clicking on the bottom right of the Flash Devices tab will cancel all firmware revisions' download and clicking at the end of the progress bar will cancel a firmware revision's download.
When you cancel a download operation, all the downloaded files will be removed.

**Cancel flash operations**

After the flash operation starts, clicking the **Cancel** button will cancel all pending device updates. All device updates already started will not be cancelled, but will proceed to completion as normal.

In the following example, the update of **1756-L8SE** is in progress while the rest of the devices are pending. Clicking **Cancel** will only cancel the updates of devices in the **Pending** status.

**Retry canceled or failed flash operations**

The following example shows that four devices are updated successfully, while the update of **1756-L75** failed and the update of **1756-L63** was canceled.
Click **Retry** will restart canceled and failed flash operations.
Chapter 7

Manage firmware

Use the Manage Firmware tab to manage firmware revisions located in the monitored folders. When you are signed in to the Product Compatibility and Download Center, it also allows you to download firmware revisions and view the firmware revisions’ Important Notice from the Product Compatibility and Download Center.

For more information about this tab, refer to Manage Firmware tab on page 37.

The device list is filtered immediately as text included in the device name is entered in the Filter by device box.

The following table explains each item when filtering the devices on the Manage Firmware tab.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Shows the text you are entering.</td>
</tr>
<tr>
<td>2</td>
<td>Shows the amount of filtered and total devices.</td>
</tr>
<tr>
<td>3</td>
<td>Highlights the filtered devices in orange. Devices whose name includes the entered text will be shown.</td>
</tr>
</tbody>
</table>
## Add Firmware Revisions dialog box

The following table explains each item in the **Add Firmware Revisions** dialog box.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Shows the text you are entering.</td>
</tr>
<tr>
<td>2</td>
<td>Shows the number of the filtered devices.</td>
</tr>
<tr>
<td>3</td>
<td>Allows you to select the firmware revision.</td>
</tr>
<tr>
<td>4</td>
<td>Indicates that the firmware revision is found in the Product Compatibility and Download Center. To download the firmware revision, sign in to the Product Compatibility and Download Center.</td>
</tr>
<tr>
<td>5</td>
<td>Opens the firmware revision's Release Notes found in the Product Compatibility and Download Center.</td>
</tr>
<tr>
<td>6</td>
<td>Opens the firmware revision's Important Notice found in the Product Compatibility and Download Center. <strong>Tip:</strong> To view the firmware revisions' Important Notice, sign in to the Product Compatibility and Download Center.</td>
</tr>
<tr>
<td>7</td>
<td>Views the firmware revisions you selected.</td>
</tr>
<tr>
<td>8</td>
<td>Selects a device's all firmware revisions from the Product Compatibility and Download Center.</td>
</tr>
<tr>
<td><strong>Download</strong></td>
<td>Selects this button to download the selected firmware revisions from the Product Compatibility and Download Center.</td>
</tr>
<tr>
<td><strong>Cancel</strong></td>
<td>Selects this button to return to the <strong>Manage Firmware</strong> tab.</td>
</tr>
</tbody>
</table>

## Add firmware revisions

After signing in to the Product Compatibility and Download Center, use the **Add Firmware Revisions** dialog box to download firmware revisions and view firmware revisions' Important Notice.

### To add firmware revisions

1. On the **Manage Firmware** tab, select **Add Firmware Revisions** or **+** in the **Device** column.
2. In the **Add Firmware Revisions** dialog box, search devices, and then select firmware revisions as needed.

3. (optional) Select ![Release Notes](image) to view the firmware revisions' Release Notes or select ![Important Notice](image) to view the firmware revisions' Important Notice.

4. (optional) Select **View selected revisions** to view the firmware revisions you select.

5. Select **Download**.

   **Tip:** When the operation completes:
   - If it is a DMK file, the revision will appear in the **Revisions** column automatically.
   - If it is a non-DMK file, select **Non-DMK firmware must be installed manually** to locate the firmware in the monitored folder, and then install the firmware manually. The revision will appear in the **Revisions** column after refreshing firmware.

### Delete firmware revisions
Delete one or multiple unused firmware revisions in a single operation to improve inventory building performance.

**To delete firmware revisions**

1. On the **Manage Firmware** tab, select ![Delete Revisions](image) to turn on the delete mode.

2. Select the check boxes of firmware revisions you want to delete.

   **Tip:** Select a device’s check box to select all its firmware revisions. Check box will appear dimmed, if you don’t select all the firmware revisions of a device.

3. Select **Delete**.

   The **Delete** is turned off when flashing devices or downloading firmware revisions.

4. When prompts, confirm the firmware revisions list.

5. Select **Delete**.

   If the deletion fails, check the permissions of the firmware.

### Export firmware inventory
Export firmware inventory to create a backup for the firmware revisions’ information.

**To export firmware inventory**

1. On the **Manage Firmware** tab, select ![Export Revisions](image).
2. In the **Save As** dialog box, select a path and enter a name for the exported file.

3. Select **Save**.
Manage favorite lists

Use the Manage Favorites tab to manage favorite lists. A favorite list includes devices and corresponding revisions that can be used to quickly select target revisions during flash operations. Use the import and export functions to share favorite lists with others.

For more information about the Manage Favorites tab, refer to Manage Favorites tab on page 39.

The favorite list is filtered immediately as text included in the favorite list name is entered in the Filter by device box.

The following table explains each item when filtering the favorite list on the Manage Favorites tab.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Shows the text you are entering.</td>
</tr>
<tr>
<td>2</td>
<td>Shows the amount of filtered and total favorite lists.</td>
</tr>
<tr>
<td>3</td>
<td>Shows the filtered favorite list or lists. Favorite lists whose name includes the entered text will be shown.</td>
</tr>
</tbody>
</table>
FactoryTalk security in ControlFLASH Plus

FactoryTalk® security is designed to provide a layer of application security. Its purpose is to protect against internal threats that are either malicious or accidental by limiting access to only those individuals who legitimately need access to specific automation assets.

FactoryTalk security allows centralized administration of user accounts and access permissions. Security information, including user authentication and authorization, can be shared across all software products and hardware devices on a particular computer, throughout a plant, or across an entire enterprise.

FactoryTalk security services are fully integrated into the FactoryTalk Directory. When the ControlFLASH Plus installation completes, FactoryTalk Security is enabled by default. When launched, ControlFLASH Plus logs on to the FactoryTalk Network Directory.

In case you need to configure security policies for ControlFLASH Plus, use the following steps to do so.

**To configure ControlFLASH Plus policy**

1. Select Start > All Programs > Rockwell Software > FactoryTalk Administration Console.

2. In the Select FactoryTalk Directory dialog box, select Network, and click OK.


   **Tip:** ControlFLASH Plus and ControlFLASH™ use the same product policy settings.

4. In the Feature Security Properties dialog box, click the browse button next to the Firmware: Update item.

5. In the Configure Securable Action dialog box, view or configure the permissions for a user or group.
About the co-existence of ControlFLASH and ControlFLASH Plus

- ControlFLASH and ControlFLASH Plus can be installed and run on the same computer.
- ControlFLASH and ControlFLASH Plus share the same product policy setting in FactoryTalk Administration Console that is ControlFlash.
- Uninstalling ControlFLASH will cause legacy MSI firmware kits to become inaccessible to ControlFLASH Plus. To recover legacy firmware kits that have become inaccessible to ControlFLASH Plus, simply install the latest version of ControlFLASH.
Device Management Kit

A Device Management Kit (DMK) is a file that contains firmware update files for one or more devices.

A DMK file contains:

- All files necessary to perform firmware upgrade of a single or multiple catalogs.
- Digital signature files for validation.
- Release Notes if it was included in the file.

Place DMK files in folders monitored by ControlFLASH Plus and the software will search all the monitored folders whenever it looks for available revisions. The monitored folders can be added on the Firmware Locations tab of the Settings dialog box.

**Tip:** We don't recommend that you store DMK files in the legacy ControlFLASH installation folder, because in rare cases, DMK files in that folder can be deleted.

**Verification method of DMK's publisher**

The publisher of certificate has been changed for the DMK kits of Rockwell Automation since November 2019.

The new DMK kits are:

- Signed by by the publisher Rockwell Automation and the publisher is issued by a new certificate authority.
- Signed by a third party company.

If the new DMK’s publisher is not a member of your computer’s Trusted Publishers, you can trust the publisher.

**Note:** The administrator privilege is required to do so.
Chapter 11

ControlFLASH Plus and FactoryTalk AssetCentre interaction

ControlFLASH Plus uses FactoryTalk AssetCentre to log user actions such as flashing a device or starting the application. The following information is included in the log:

- Windows credentials
- Device being flashed
- Path to the device being flashed
- Status of the operation

The following information is also available in the ControlFLASH Plus log file.

Information monitoring

In FactoryTalk-enabled software products, information such as system events and user actions are recorded in the Event Log and Audit Log.

Event Log

The Event Log shows database information regarding events that occur in the system. Events are generally system-initiated. For example, an upload occurred as scheduled, or an alarm condition occurred. Only events that occur in FactoryTalk-enabled products are recorded in the Event Log.

Audit Log

The Audit Log shows database information regarding actions that users perform in the system, such as editing a Logix Designer project or checking-out a file from the FactoryTalk AssetCentre database. Audit records are generated by FactoryTalk-enabled products.

FactoryTalk AssetCentre

FactoryTalk AssetCentre offers a centralized repository for tracking and auditing the changes made to a plant-wide system. Any information related to an application is logged in to the FactoryTalk AssetCentre server.

The details of the log usually contain the following fields:

- Date/Time
- User Name
- User Description (full user name, based on user information held in a security token or domain name; required for audit messages)
• Severity of message (error, warning, information, audit)
• Audience for message (operator, engineer, developer, FactoryTalk AssetCentre)
• Message text (text or resource ID that resolves to text when retrieved or passed between machine boundaries)
• Argument list (optional placeholders in message text)

Any additional details, apart from the basic fields listed here, can also be logged on to FactoryTalk AssetCentre server. For example, the resource field of the Audit log is not a part of the basic message format and is considered an additional field.

The following ControlFLASH Plus activities are logged:

• Flash burn started. Includes the following details:
  • Date/Time the flash began
  • Firmware Revision, both From and To
  • Username
  • Path to the device being flashed
  • Device Target Module Name and Identifier
  • Flash Burn Status (Success/Failure)

The ControlFLASH Plus activities are logged only if the client is properly configured with FactoryTalk AssetCentre server. ControlFLASH Plus logs the current windows user login. ControlFLASH Plus software activities are logged into the log_AuditEventLog table of the FactoryTalk AssetCentre server.

If the connection between the client and server is lost while ControlFLASH Plus is used, all of the events are cached into a local log and are then updated into FactoryTalk AssetCentre server when the connection resumes.

The connectivity of the client to FactoryTalk AssetCentre server, if present, is identified with the help of the following registry entry.

\HKEY_LOCAL_MACHINE\SOFTWARE\Rockwell Software\FactoryTalk AssetCentreClient\EventLog

Key- Server
Value- (Server Name)

This registry search is done during the launch of the ControlFLASH Plus application.
Logging the device update status

The update status (Success or Failure) is logged into the FactoryTalk AssetCentre server. You can view the reasons for the Success or Failure in the ControlFLASH Plus log. The status of the update process is logged into FactoryTalk AssetCentre with the following details:

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date and Time</td>
<td>Date and Time at which the update process has finished for the device.</td>
</tr>
<tr>
<td>Source</td>
<td>Application name, for example, ControlFLASH Plus</td>
</tr>
<tr>
<td>Location</td>
<td>Computer name on which ControlFLASH Plus is being executed.</td>
</tr>
<tr>
<td>Resource</td>
<td>Name of the resource that is ControlFLASH Plus.</td>
</tr>
<tr>
<td>Username</td>
<td>FTAssetSecurity Login, if present, else Windows login</td>
</tr>
</tbody>
</table>
| Message Text | If update succeed:  
The device “device name” is SUCCESSFULLY updated from version “x.x” to “y.y” and the path to the device being flashed is “device path”.  
If update failed:  
The update process of the device “device name” from version x.x to y.y FAILED and the path to the device being flashed is “device path”. |
## ControlFLASH Plus error codes

This appendix describes common error messages you may see when running the ControlFLASH Plus software.

<table>
<thead>
<tr>
<th>Error Message</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application Internal Error</td>
<td>Occurs when a critical error appears. For example, the installation is corrupted.</td>
</tr>
<tr>
<td>Application is already running.</td>
<td>An error occurred while more than one ControlFLASH Plus application is running.</td>
</tr>
<tr>
<td>URL Port Error</td>
<td>An error occurred when no free URL ports exist.</td>
</tr>
<tr>
<td>Application Close Error</td>
<td>An error occurred when closing the application during the flashing process.</td>
</tr>
<tr>
<td>Communication Error</td>
<td>An error occurred while the ControlFLASH Plus software tried to communicate with the target device. Verify that:</td>
</tr>
<tr>
<td></td>
<td>• All cable connections are secure.</td>
</tr>
<tr>
<td></td>
<td>• The target device has power.</td>
</tr>
<tr>
<td></td>
<td>• FactoryTalk Linx software is properly configured.</td>
</tr>
<tr>
<td>Data File Error</td>
<td>The data file used in programming could not be read. Check with a technical support representative to obtain a new data file.</td>
</tr>
<tr>
<td>Failed to communicate to the target device. You do not have the permission to perform this operation.</td>
<td>The error might be caused because that:</td>
</tr>
<tr>
<td></td>
<td>• The security authority identifier of the target device does not match the identifier in FactoryTalk Services Platform. Make sure you have the permission to perform the operation.</td>
</tr>
<tr>
<td></td>
<td>• The slot used for the controller is not a trusted slot. Make sure to use a trusted slot for the controller.</td>
</tr>
<tr>
<td>DMK digital signature verification</td>
<td>The digital signature of the DMK file is not valid. Verify that:</td>
</tr>
<tr>
<td></td>
<td>• The DMK file contains a valid digital signature.</td>
</tr>
<tr>
<td></td>
<td>• The root certificate of the DMK file is trusted.</td>
</tr>
<tr>
<td></td>
<td>• The DMK file is signed by a trusted publisher and issuer.</td>
</tr>
<tr>
<td>Instance Validation Error</td>
<td>The target device did not report enough information to be properly identified. Check with a technical support representative for help in resolving this problem.</td>
</tr>
<tr>
<td>Load Driver Error</td>
<td>The ControlFLASH Plus software could not find an essential support file for the selected catalog number. Check with your technical support representative to verify that the correct drivers is loaded.</td>
</tr>
<tr>
<td>Load Device Error</td>
<td>The ControlFLASH Plus software could not load properties from devices.</td>
</tr>
<tr>
<td>Mode Error</td>
<td>The target device is in a mode in which it cannot be programmed. Place the device into the appropriate mode.</td>
</tr>
<tr>
<td>FactoryTalk Security Error</td>
<td>The error occurred when failed to verify the user in the FactoryTalk Security service.</td>
</tr>
<tr>
<td>FactoryTalk Linx not installed</td>
<td>Make sure FactoryTalk Linx version 6.00.00 or later is installed.</td>
</tr>
<tr>
<td>FactoryTalk Linx Load Error</td>
<td>An error occurred while the ControlFLASH Plus software tried to install the network protocol driver (DTL32.DLL). Verify that FactoryTalk Linx software is properly installed and configured.</td>
</tr>
<tr>
<td>Script File Error</td>
<td>The script file associated with the selected upgrade is corrupt. Check with a technical support representative to obtain a new script file.</td>
</tr>
<tr>
<td>Could not fetch dynamic install driver information.</td>
<td>An error occurred when data about the installed driver cannot be obtained.</td>
</tr>
<tr>
<td>Error Message</td>
<td>Description</td>
</tr>
<tr>
<td>------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Could not fetch configuration.</td>
<td>Configuration of the application is not valid. Try to reinstall the application.</td>
</tr>
<tr>
<td>Could not fetch determination if the user has permissions.</td>
<td>Cannot obtain user permissions from FactoryTalk Security.</td>
</tr>
<tr>
<td>Could not fetch determination if single sign-on is enabled.</td>
<td>Cannot obtain information if single sign-on (SSO) is enabled on the machine.</td>
</tr>
<tr>
<td>Could not parse response of single sign-on logging.</td>
<td>The information obtained from FactoryTalk Security about the single sign-on user is not valid.</td>
</tr>
<tr>
<td>Could not log on the single sign-on user.</td>
<td>The single sign-on user cannot log onto FactoryTalk Security.</td>
</tr>
<tr>
<td>Could not parse response of the user's logging.</td>
<td>The information obtained from FactoryTalk Security about the user is not valid.</td>
</tr>
<tr>
<td>Could not log on the user.</td>
<td>The user cannot log onto FactoryTalk Security.</td>
</tr>
<tr>
<td>Could not log off the current user.</td>
<td>The user cannot be logged off from the FactoryTalk Security.</td>
</tr>
<tr>
<td>User &lt;Username&gt; cannot be authenticated. Contact your administrator for more information.</td>
<td>Wrong credentials are passed to FactoryTalk Security logon.</td>
</tr>
<tr>
<td>Could not open a file.</td>
<td>The referred help file does not exist or is not accessible.</td>
</tr>
<tr>
<td>Could not get the help folder.</td>
<td>The folder with help files does not exist or is not accessible.</td>
</tr>
<tr>
<td>Could not open the folder.</td>
<td>The folder for reports is not accessible.</td>
</tr>
<tr>
<td>The favorite lists cannot be imported.</td>
<td>Cannot import favorite lists (the favorite lists are probably corrupted).</td>
</tr>
<tr>
<td>The favorite lists cannot be exported.</td>
<td>Cannot export favorite lists (the target folder is probably not accessible).</td>
</tr>
<tr>
<td>A favorite list's name cannot contain any of the following characters: &lt;, &gt;, *, /, ,</td>
<td>Invalid characters are used in the favorite list name.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Cannot apply the favorite list to all devices. Please check the list before proceeding with the flash operation.</td>
<td>Warns users that not all revisions used in the favorite list are available on the computer or compatible with particular devices.</td>
</tr>
<tr>
<td>Multiple Flash To revisions are selected for a single device type. Select one revision for each device type to create a favorite list.</td>
<td>This error occurs when creating a favorite list with the selected devices and for one device type there are multiple selected devices with different revisions.</td>
</tr>
<tr>
<td>The name of the favorite list is already used.</td>
<td>This error occurs when the given name of the favorite list already exists.</td>
</tr>
<tr>
<td>The firmware you want to delete cannot be deleted.</td>
<td>The firmware files to be deleted are not accessible.</td>
</tr>
</tbody>
</table>
Rockwell Automation supports

Use the following resources to access support information.

<table>
<thead>
<tr>
<th>Technical Support Center</th>
<th>Knowledgebase Articles, How-to Videos, FAQs, Chat, User Forums, and Product Notification Updates</th>
<th><a href="https://rockwellautomation.custhelp.com">https://rockwellautomation.custhelp.com</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Dial Codes</td>
<td>Find the Direct Dial Code for your product. Use the code to route your call directly to a technical support engineer.</td>
<td><a href="http://www.rockwellautomation.com/global/support/direct-dial.page">http://www.rockwellautomation.com/global/support/direct-dial.page</a></td>
</tr>
</tbody>
</table>

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Your comments will help us serve your documentation needs better. If you have any suggestions on how to improve this document, complete the How Are We Doing? form at http://literature.rockwellautomation.com/idc/groups/literature/documents/du/ra-du002.-en-e.pdf.


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