THE REYNOLDS COMPANY
ELECTRICAL SUPPLY

TechTalk
Online Seminars

Introduction to Controlflash Plus

September 29, 2021

Online Events

Register to receive a calendar invite

THE REYNOLDS COMPANY
ELECTRICAL SUPPLY

TECH TALK

- **FactoryTalk Linx Gateway**
  Wed, October 13, 2021, 10am
- **E300 Electronic Overload**
  Wed, October 27, 2021, 10am
- **Automation Fair Preview**
  Wed, November 3, 2021. 10am

USER GROUP

- **Introduction to Factorytalk Logix Echo Emulation** Wed, October 20, 2021 @ 10am

YouTube

TRC Talks
a podcast on industrial automation

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Rockwell Automation

PLAN TO ATTEND

NOV 10-11, 2021 • HOUSTON, TEXAS

Automation Fair®

Learn more and register at
www.reynoldsonline.com/automationfair

We are excited to welcome you back to Automation Fair in person!

This year's Automation Fair will feature everything you love from engaging keynote presentations to interactive hands-on labs and technical sessions to industry-centric panel discussions, and our signature exciting show floor showcasing the latest innovations and solutions from Rockwell Automation and members of our PartnerNetwork™.

Your health and safety are our priority and we are working hard to create the safest in-person experience possible. What is certain is that whether you join us in person or virtually, you'll experience the value and power of our IT/OT expertise and have more opportunities than ever before to network with innovation experts, company executives, thought leaders and peers in your field.

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Our Guest Panelists

David Nute
Automation Specialist
The Reynolds Company-Houston

Mike Masterson
Automation Specialist
The Reynolds Company-Houston

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Rockwell Automation

expanding **human possibility**™

ControlFLASH Plus version 4

09 • 29 • 2021

David Nute

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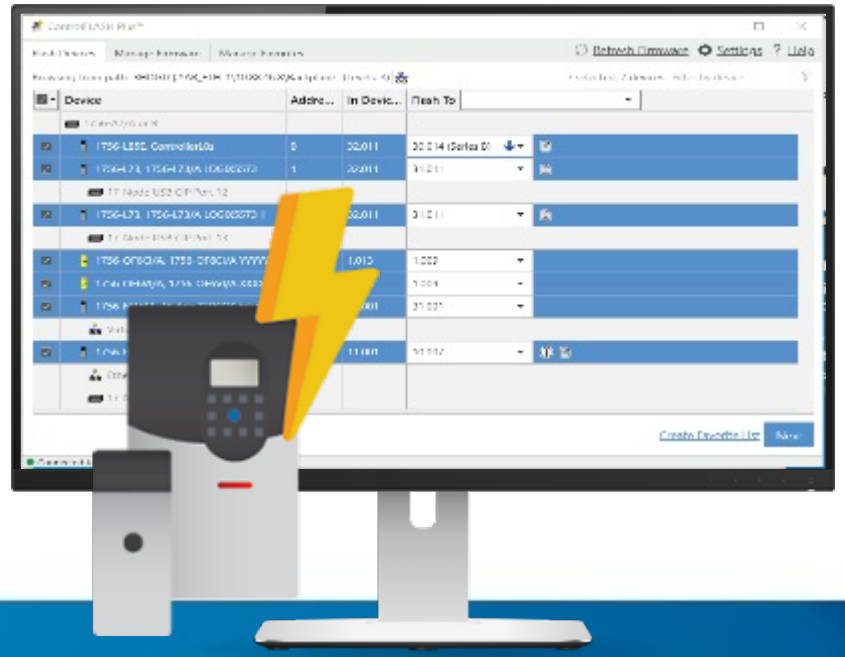
ControlFLASH Plus application



Enhanced productivity

Update single or multiple devices in one session. Concurrent updating allows faster time to market and more uptime.

Better lifecycle management

Seamless data integration with Product Compatibility Download Center (PCDC) makes managing the lifecycle of devices simple. Easily review and download firmware kits, view release notes, important notices and lifecycle state of products at-a-glance.

Enhanced usability

Do more with fewer mouse clicks. Apply favorites to reduce errors and get more consistent results. Modern, easy to use and scalable HTML5 based user interface

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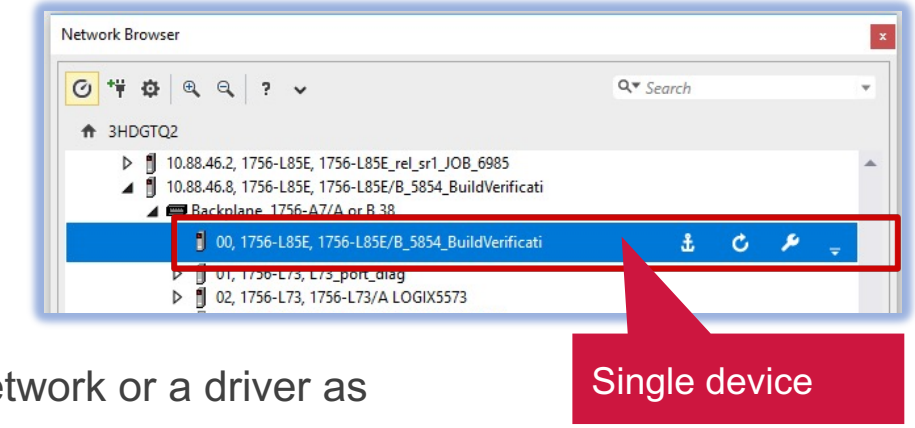
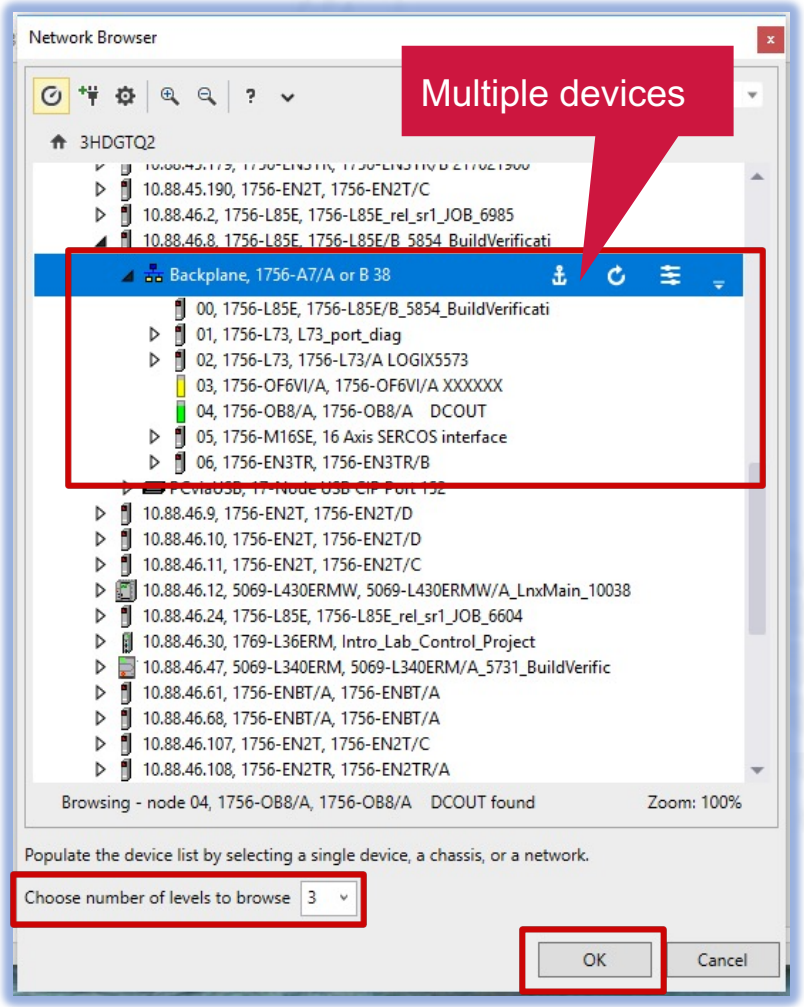
Devices flashing selection rules

- Users can select one device or multiple devices to be added in the Flash Firmware list
- For a single device:
  - Select device
  - Click OK
- For multiple devices:
  - Select a backplane, a network or a driver as the entry point
  - Select how many levels deep (default is 2 and max is 3) to acquire devices' list – trees must be expanded
  - Click OK
- Last path and devices list are saved between sessions





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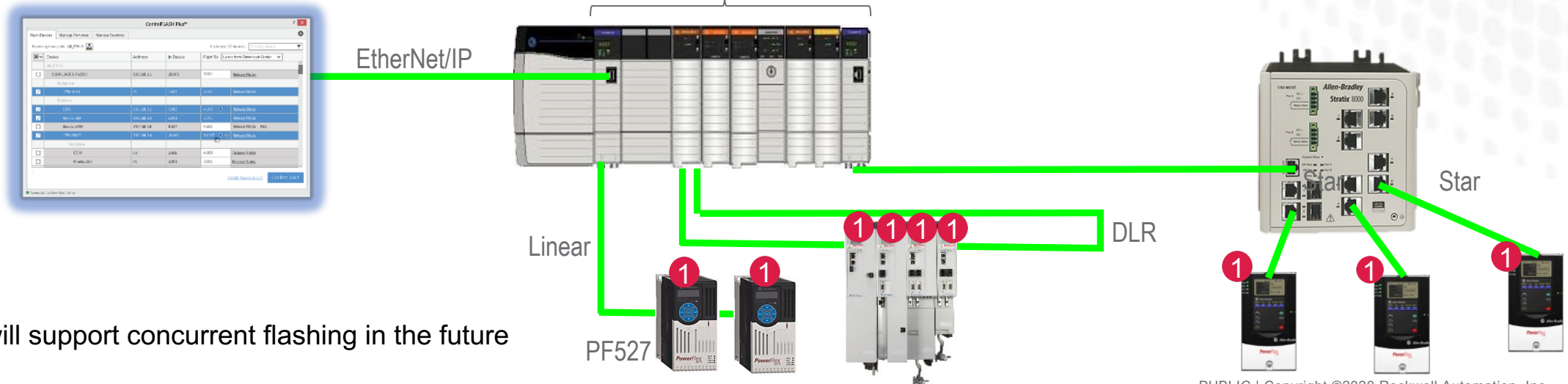
Flash devices – how many devices can be flashed in one session?

- Tool always attempts to flash up to 20 devices concurrently, with the following exceptions:
  - Devices on linear/DLR topologies supporting multiple resets, e.g., E300 are flashed sequentially
  - PowerFlex®* drives, excluding the PF527, on linear/DLR topologies are flashed sequentially
  - The 1756-DNB, 1756-CNB/CNBR, 1715-AENTR modules are updated sequentially, before their children are
  - Devices on SERCOS and 1715 and those implemented as subassemblies are flashed sequentially (e.g., PowerFlex® option modules)
- Tool automatically determines the correct order and sets the flashing schedule



* Some will support concurrent flashing in the future

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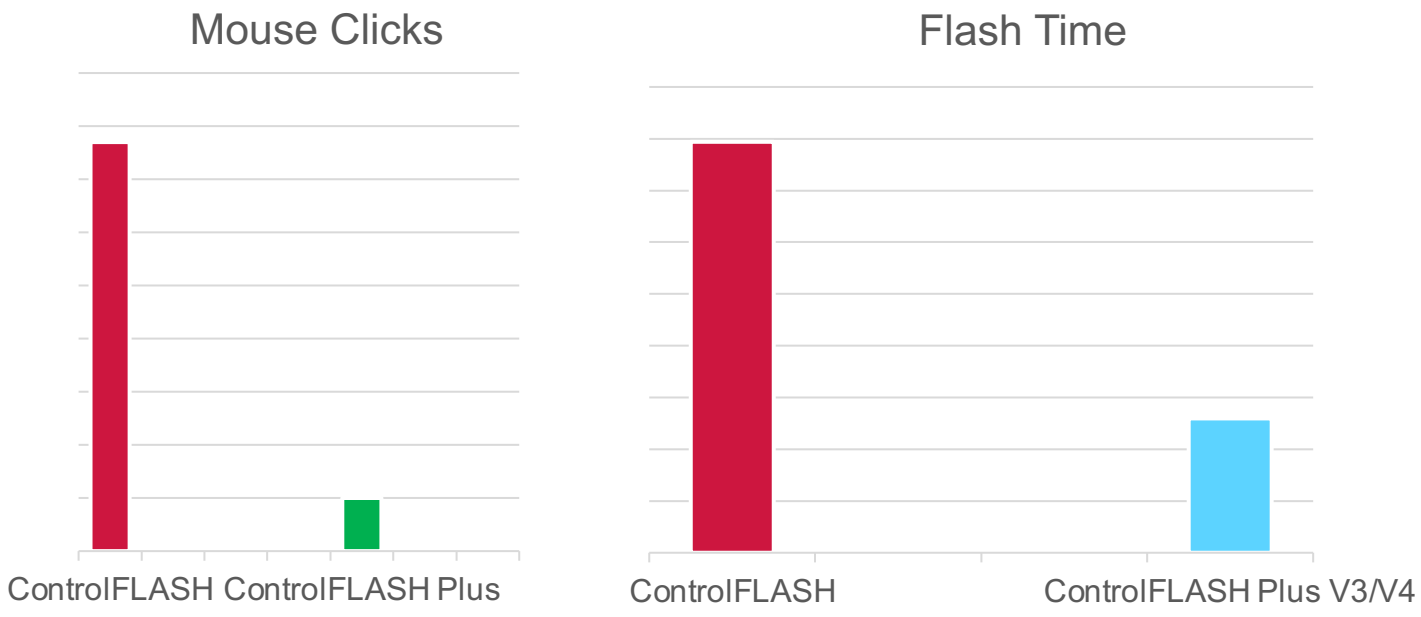
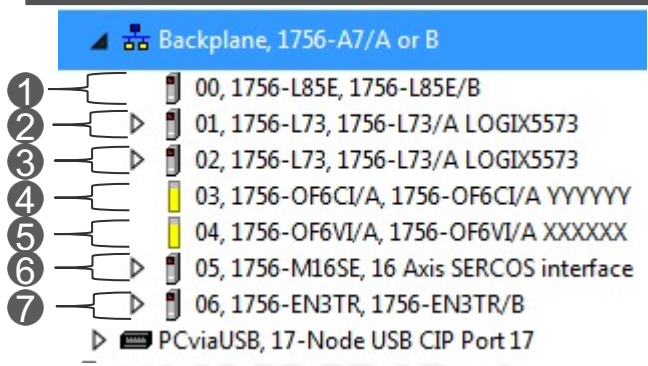
Clicks/Time comparison – example*

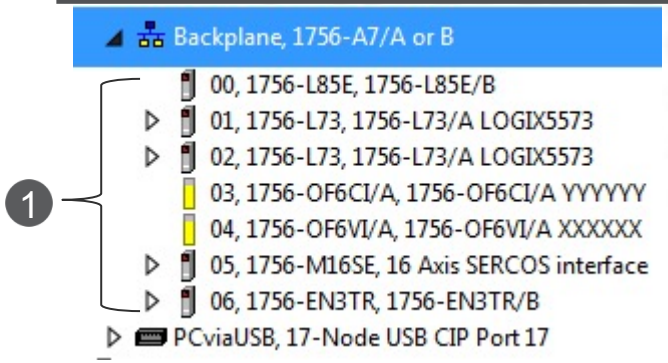
	ControlFLASH	ControlFLASH Plus™ V3/V4
Mouse Clicks	77	10
Flash Time (mm:ss)	26:28	8:39



ControlFLASH flashing order



ControlFLASH Plus V3/V4 flashing order



* Device types, driver, quantity and topology affects results

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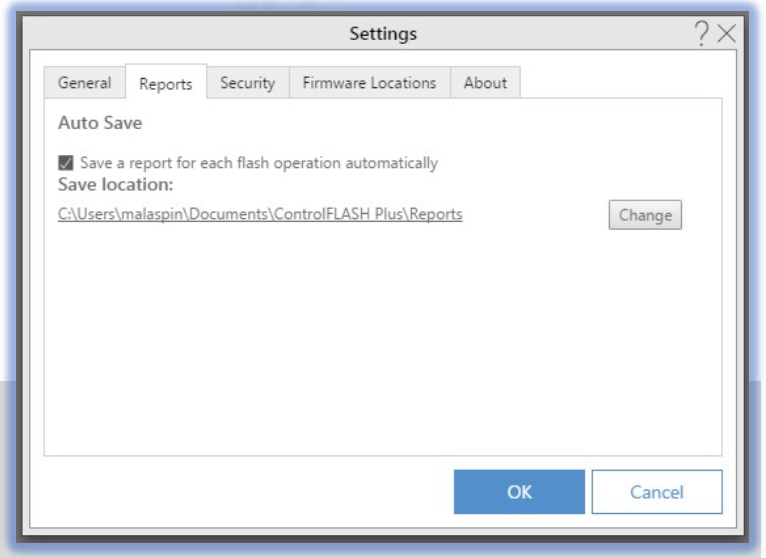
Flash operation reporting

- By default, a report is automatically created at the end of each flash operation
  - Reports location and default behavior can be user configured
- Makes documenting flashing operations simpler



User Name	RA-INT\MALASPIN
Computer Name	NAUSMAY60XTNX1
Date/Time	2/26/2018 9:07

Total	7
Succeeded	6
Failed	1
Canceled	0

Device	SerialNumber	CommPath	FromRevision	ToRevision	File Path	Duration (D.HH:MM:SS)	Status
1756-L85E/B	00c34122	NAUSMAY60XTNX1!Backplane\15\Backplane\0	30.011	30.011	C:\Users\Public\Documents\Rockwell Automation\Firmware Kits\1756-L85E_30.011.dmk	0.00:02:22	Succeeded
1756-OF6VI/A XXXXXX	00028E75	NAUSMAY60XTNX1!Backplane\15\Backplane\4	1.013	1.013	C:\Program Files (x86)\ControlFLASH\0001\000A\0003\99207412.nvs	0.00:06:28	Succeeded
1756-OF6CI/A YYYYYY	00016c2f	NAUSMAY60XTNX1!Backplane\15\Backplane\3	1.013	1.013	C:\Program Files (x86)\ControlFLASH\0001\000A\0004\99207412.nvs	0.00:07:50	Succeeded
1756-L74/A LOGIX5574	006c62a0	NAUSMAY60XTNX1!Backplane\15\Backplane\2	30.011	30.011	C:\Users\Public\Documents\Rockwell Automation\Firmware Kits\1756-L74_30.011.dmk	0.00:21:37	Failed. Flashing attempt Failed! For device 2 with revision 30.011. Exception:Manually Reset module
1756-EN2TR/A	00609a65	NAUSMAY60XTNX1!Backplane\15\Backplane\6	5.028	5.028	C:\Program Files (x86)\ControlFLASH\0001\000C\00C8\PN-148757.Nvs	0.00:17:33	Succeeded
1756-L73/A LOGIX5573	006ee00f	NAUSMAY60XTNX1!Backplane\15\Backplane\1	29.011	30.011	C:\Users\Public\Documents\Rockwell Automation\Firmware Kits\1756-L73_30.011.dmk	0.00:11:37	Succeeded
16 Axis SERCOS interface	7fffffff	NAUSMAY60XTNX1!Backplane\15\Backplane\5	30.001	31.001	C:\Users\Public\Documents\Rockwell Automation\Firmware Kits\1756-M16SE_31.001.dmk	0.00:06:59	Succeeded

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Capabilities comparison

Features	ControlFLASH V15	ControlFLASH Plus V4.00
Command line and scripting	☑	Future
Common install	☑	☑
Communications	RSLinx® Classic, FactoryTalk® Linx and Legacy (non-CIP) protocols	FactoryTalk® Linx V6.20
Controller mode pre-checking	☒	☑
FactoryTalk® AssetCentre Auditing	☑	☑
FactoryTalk® Security	☑	☑
FactoryTalk Updater V2.00.00	☑	☑
Favorites support	☒	☑
Firmware cross-compatibility checking	☒	☑
Firmware inventory report export	☑	☑
Firmware kit types supported	MSI and DMK	MSI and DMK
Firmware management	☒	☑
Flashing operation reports	☒	☑
Hardware and firmware revision lifecycle state	☒	☑
Multi-device update support	☒	☑
Product Compatibility Download Center (PCDC) connectivity	☒	☑
Supports devices	CIP and non-CIP	CIP only

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ControlFLASH Plus V4.00.00 functionality

Improved productivity and usability

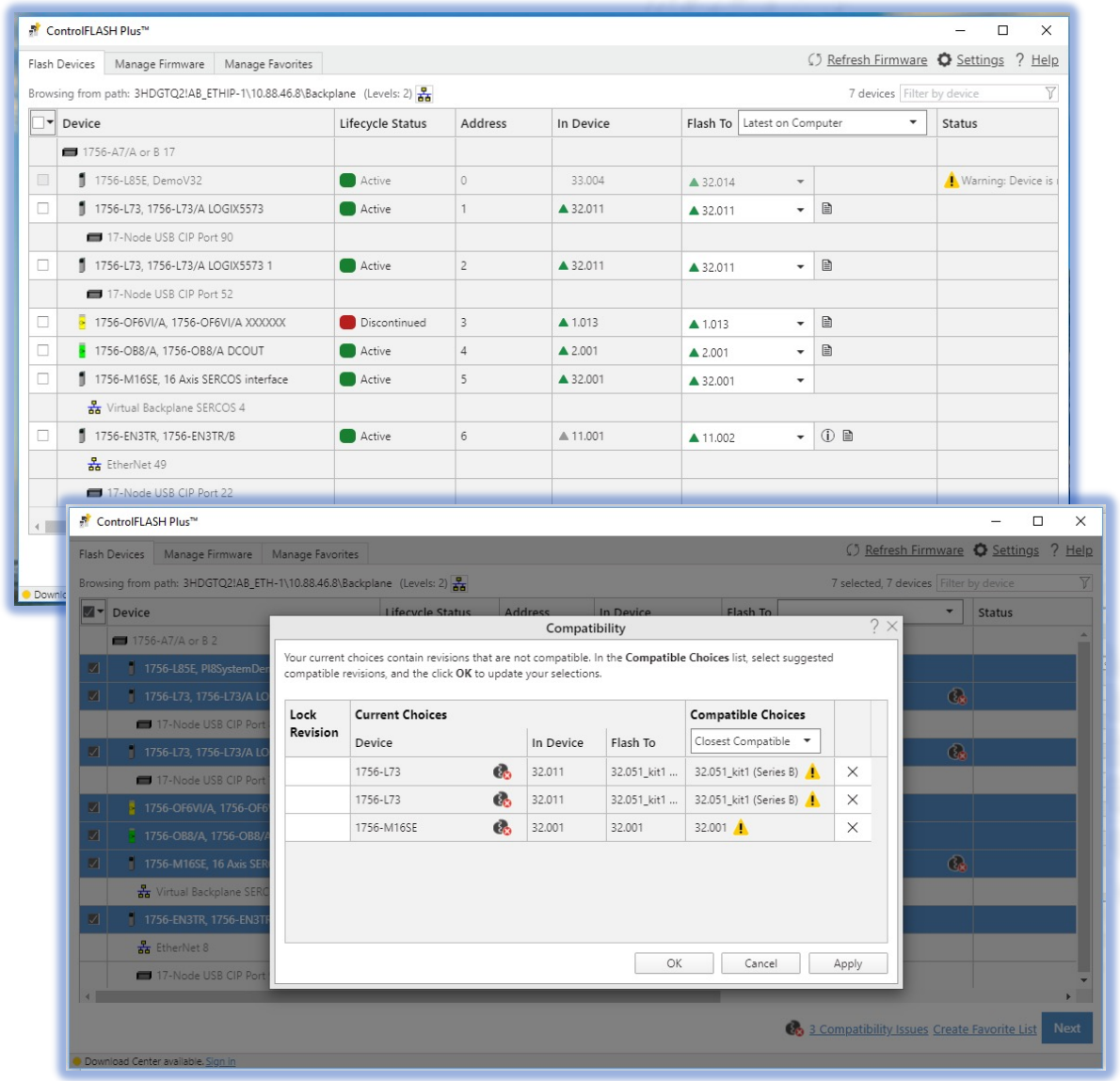
Improved productivity

- Firmware revision cross-compatibility checking – identifies issues and suggests compatible choices
- Added firmware revision lifecycle states on Flash Devices and Manage Firmware tabs
- Added hardware lifecycle state on Flash Devices tab
- Automatic detection and reporting of Logix 5000™ controllers in run mode and safety-locked before update operation starts – address devices in wrong states before starting flash operations
- Added permission control for firmware deletion and Product Compatibility Download Center (PCDC) connection via FactoryTalk® Security

Improved usability

- Firmware inventory building performance improvements
- Includes FactoryTalk Updater V2.00.00, FactoryTalk Services and FactoryTalk® Linx V6.20

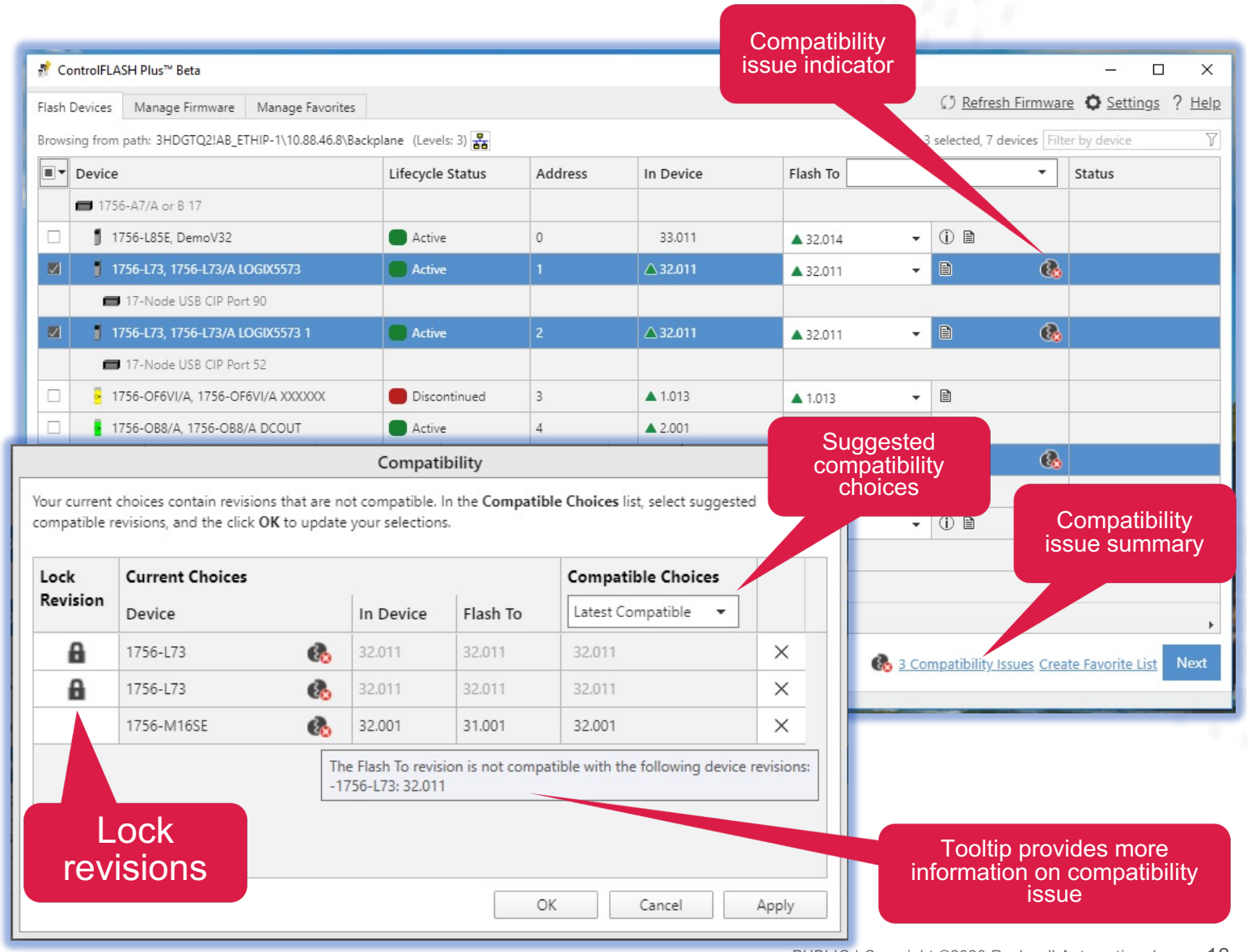
Available December 2020



Firmware revisions compatibility checking

Improved lifecycle management

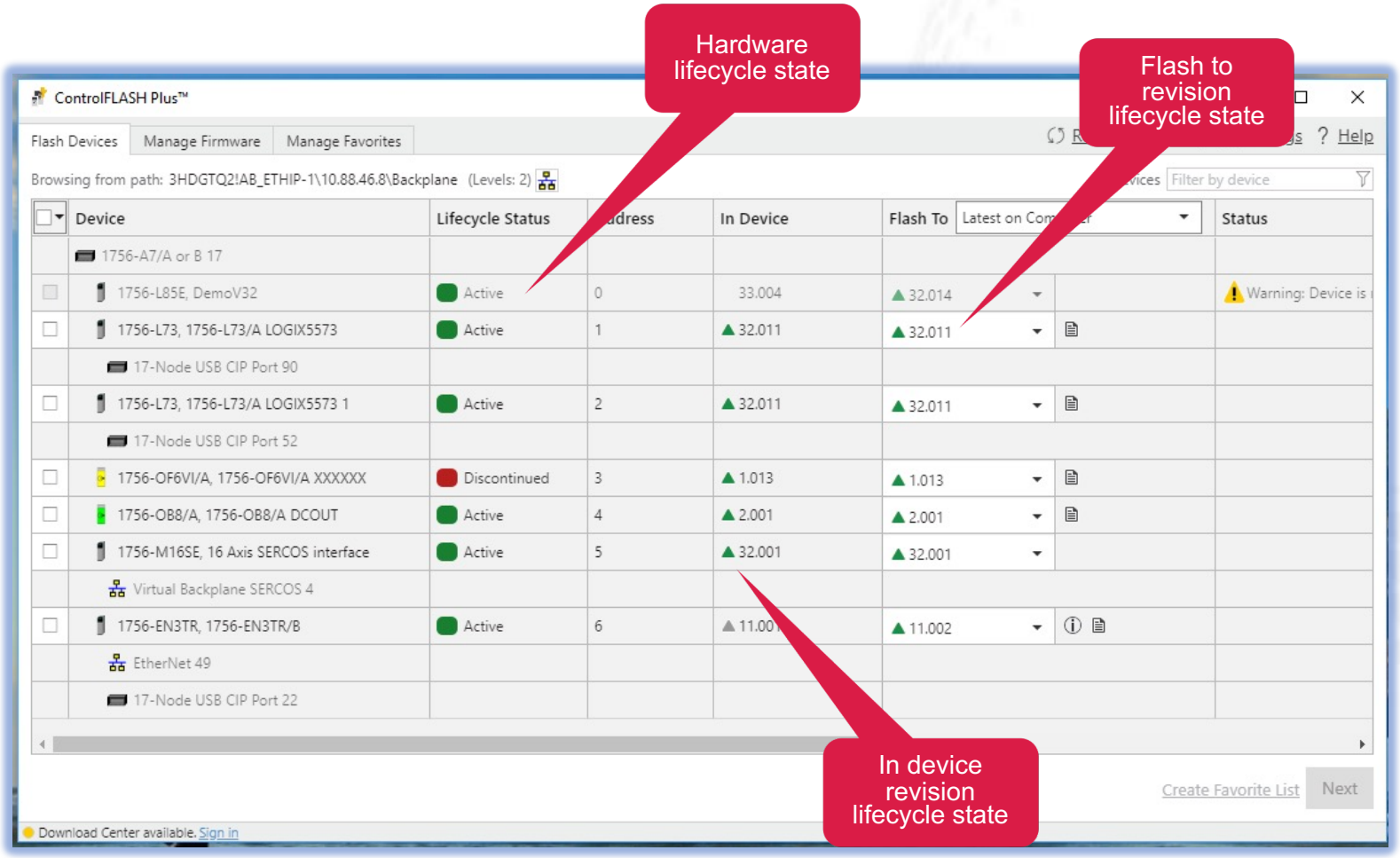
- Tool checks firmware selections for compatibility using information stored on PCDC
  - Checking is done for all modules whether selected or not
- Tool will make suggestions, closest and latest compatible
- User can lock one or more revision selections
- Tooltip will show details about compatibility issue
- User can override compatibility results and proceed with flash operation



Firmware revisions and hardware lifecycle status

Improved lifecycle management

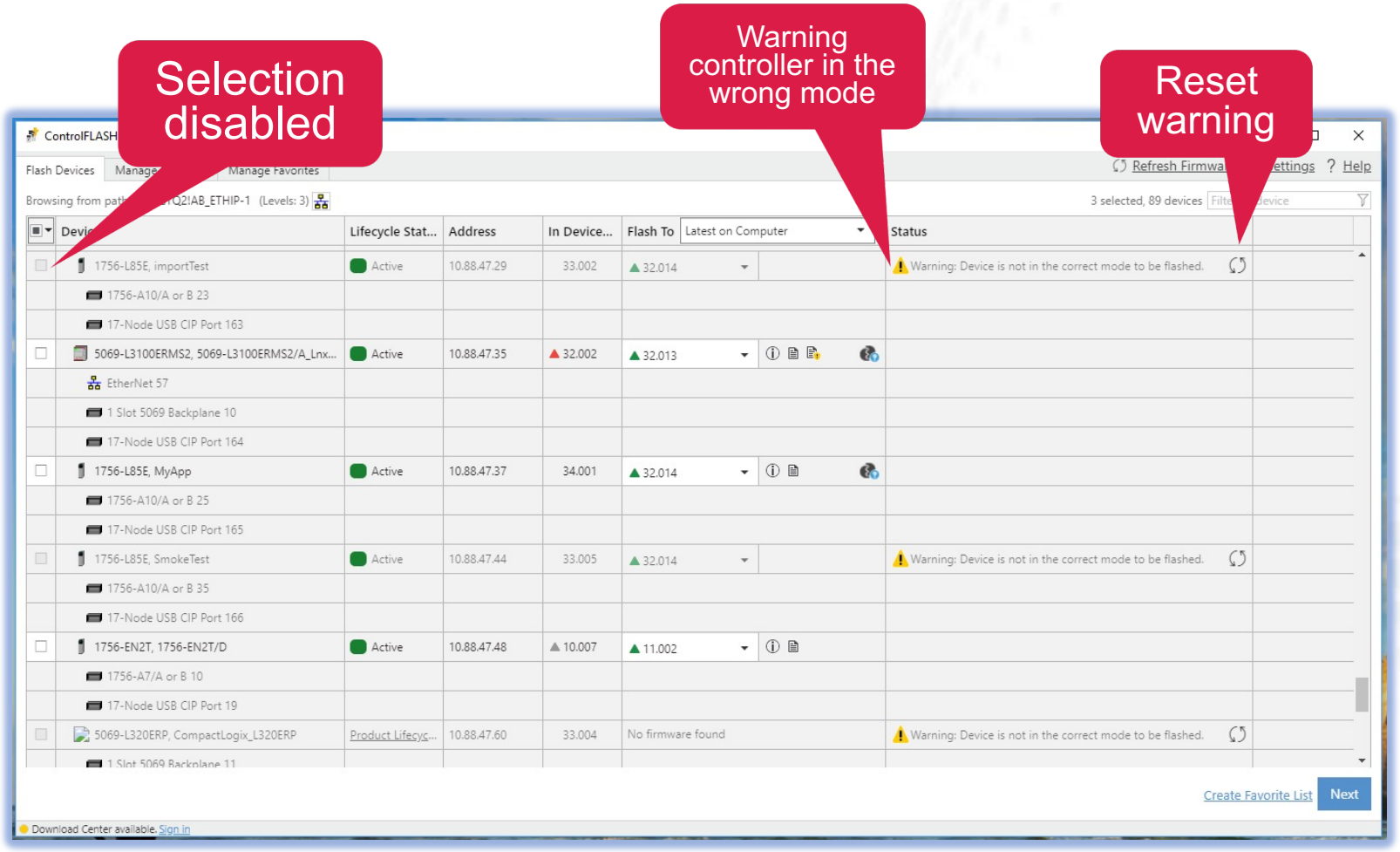
- Easily review lifecycle states for hardware and firmware on Flash Devices and Manage Firmware tabs
- Immediately identify devices that may require attention
- Refer to PCDC for legend describing states



Automatic controller mode detection

Improved ease of use

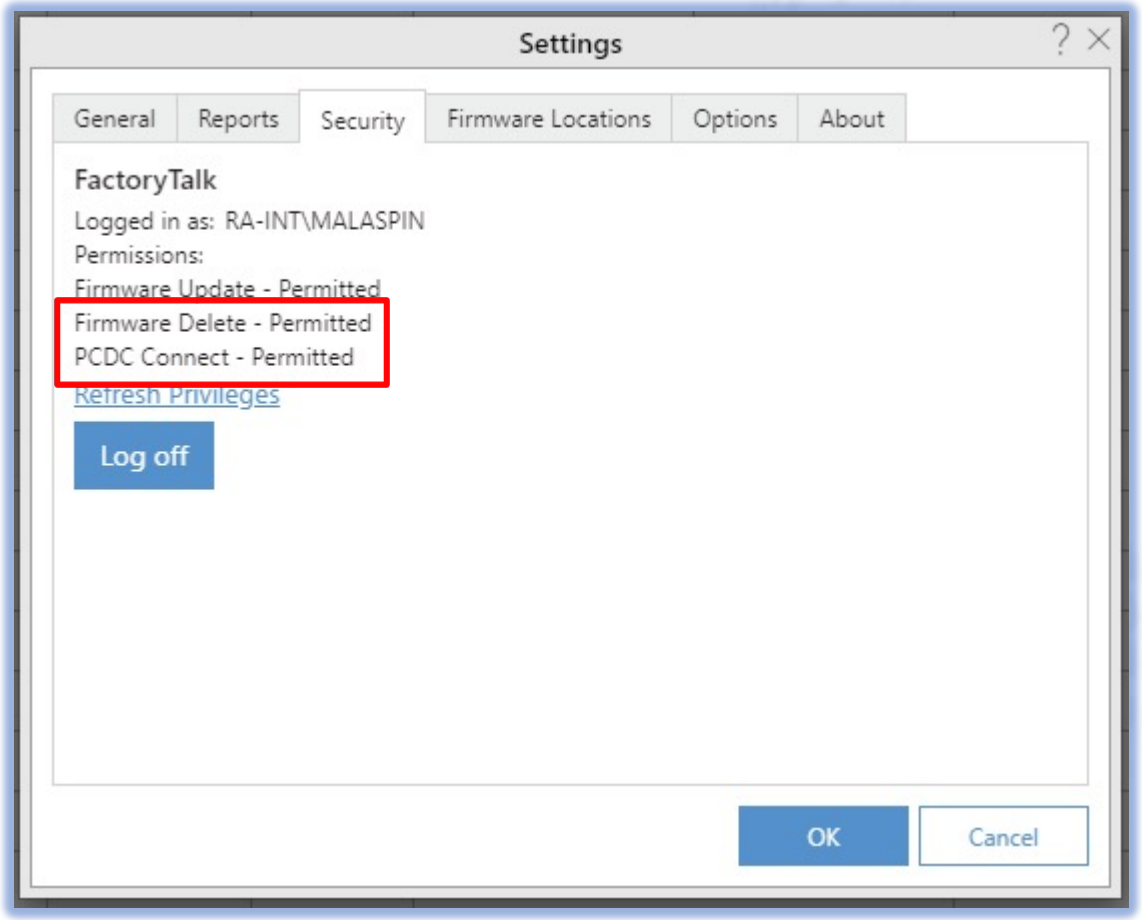
- Automatic identification and reporting of Logix 5000 controllers in the wrong mode
  - Run mode and/or safety-locked
- User can set controller to the right mode and reset warning
  - Use controller keyswitch or programming software (Studio 5000 Logix Designer® application)
- Allows for the flash operation to succeed the first time
  - Previously, flash operation would be carried out and then fail



Extended security permissions

Improved security control

- Added capability to control permissions to:
  - Connect to PCDC
  - Delete firmware from ControlFLASH Plus user interface
- Requires FactoryTalk® Services Platform V6.20



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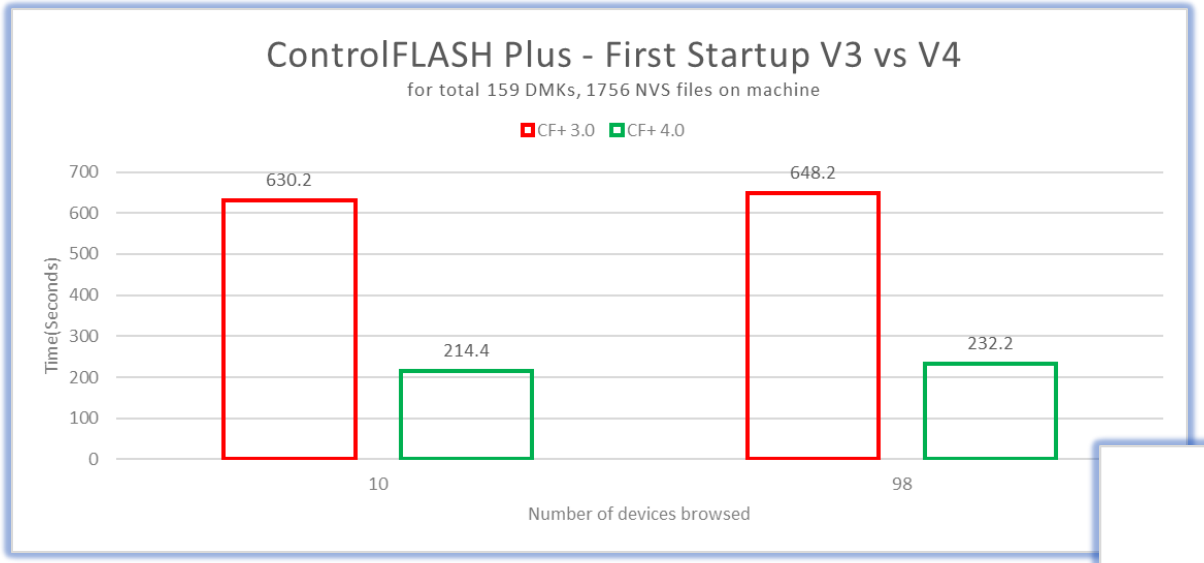
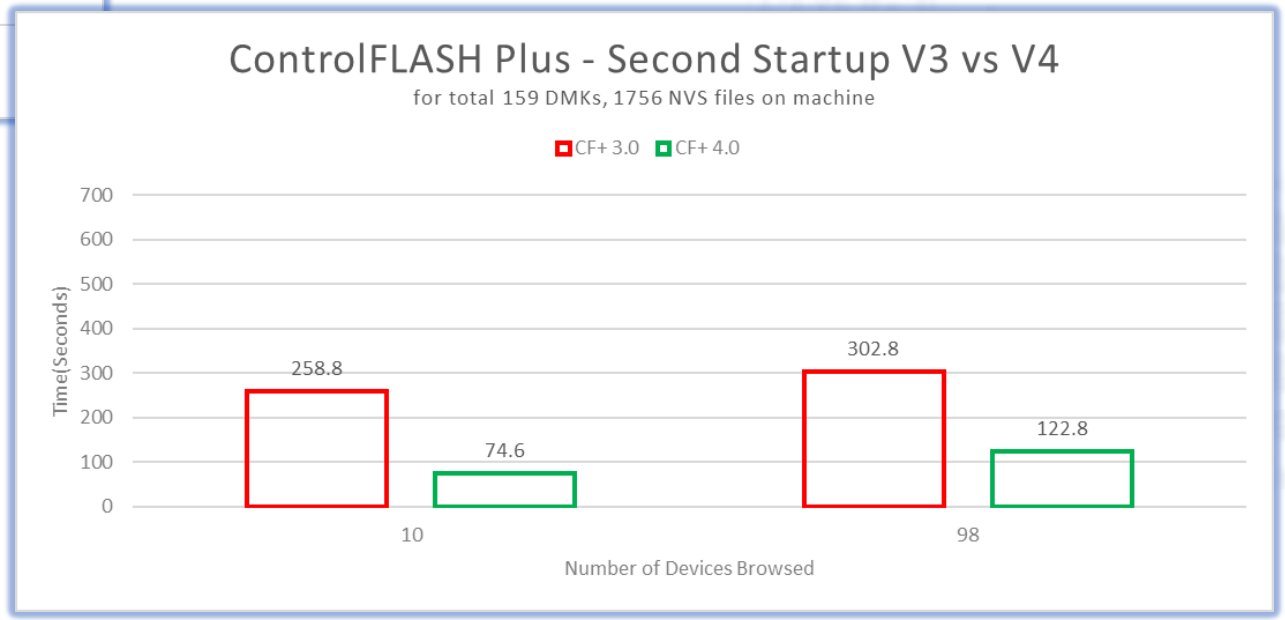
Application startup and firmware inventory speed up





Great performance improvements

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ControlFlash Plus Video

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Summary

- **The ControlFLASH Plus application provides for enhanced productivity, improved firmware lifecycle management and better usability**
  - Single and multi-device update operations support improved productivity
  - Concurrent updating dramatically reduces updating time - devices types and topology dictates number of devices updated concurrently
  - Product Compatibility Download Center (PCDC) connectivity allows for usability and productivity gains
  - Firmware revisions cross-compatibility checking reduces errors
  - Hardware and firmware revision lifecycle state integration provides for better application lifecycle management
  - User interface provides for better usability - do more with fewer clicks
  - Favorite lists and reports support provide enhanced product's firmware lifecycle management
  - ControlFLASH Plus V4.00 works with FactoryTalk Linx and FactoryTalk Services Platform V6.20 and higher
- **The ControlFLASH application will continue to be available, but is in maintenance mode**
  - Both tools can coexist on the same personal computer and share the same set of firmware kits

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