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New Development/Features

SNIB3 Credential Database Location

- This version of SNIB3 firmware supports a critical new feature called “SNIB3 Credential Database Location”. In this mode of operation the credential database is stored in SNIB3 flash memory instead of the CCM memory.
- The user has the opportunity to store up to 500,000 credentials in a controller without using any memory expansion board (CCM by default can store only 4000 credentials). Controller configurations are still stored in the CCM memory.
- Since we support a large credential database we have also changed the way credentials are downloaded to the controller, instead of sending each credential as a separate command the whole download batch is sent as a single file to the controller and SNIB3 updates (insert/update/delete) its credential database from the file. This improves the download time exponentially.

Requirements

- If you upgrade CCM firmware to v8.0.00.059 or later, you must upgrade the SNIB3 firmware to v03.00.1197 or later.
- In a multi-controller setup, if Global IO is enabled then all downstream controllers including SNIB2 controllers must be updated to CCM 8.0.00.059 Firmware version. If SNIB2 downstream controller has a CCM Firmware version less than 8.0.00.059 then Global IO will not work as expected.

Notes (When credential database location is in “SNIB3”)

- Credential database in SNIB3 is encrypted by default starting from v03.00.1197 or later, hence if you are downgrading the SNIB3 firmware from v03.00.1197 or later to any earlier version the database will be completely reset. Re-download all configurations and credentials.
- While downloading credentials to the downstream controllers the download can stay at “**Active state**” with **0%** progress in Velocity download monitor for a long time (if bulk downloads are done). This is due to the fact that the whole credential set is sent as a single file, but once the progress count starts the update is completed much faster compared to earlier download times.
- Sample download times are given below. This mode of download is **ONLY** applicable when the credential database is in SNIB3 mode:

Credential Count	“Active State” time in Velocity Download Monitor	Total Download Time
4,000 (Standalone/Master)	20 Seconds	3 minutes
250,000 (Standalone/Master)	50 Seconds for fresh download 6 minutes for re-download	30 minutes
500,000 (Standalone/Master)	1 minute 46 seconds for fresh download 6 minutes 46 seconds for re-download	45 minutes
Download 250,000 (Download to Downstream Controller at 9600 baud rate)	1 hour 25 minutes for fresh download 1 hour 32 minutes for re-download	2 hours
Download 500,000 (Download to Downstream Controller at 9600 baud rate)	2 hours 50 minutes for fresh download 3 hours 4 minutes for re-download	4 hours

- Credential access will not work during the time SNIB3 reboots after the user performs a SNIB3 firmware update. Typically there will be a downtime between 20 seconds to 40 seconds.
- The default user is removed when credential database location is in the “SNIB3”, hence the user count will always reflect the actual number of credentials and not the number of credentials + 1 as in CCM DB mode.

Bug Fixes and Known Limitations

Reference ID	Summary
PAC-3101	With SNIB3 v2.7.1047 and CCM v8.0.00.059, ScramblePad™ options do not work. If you upgrade CCM to v8.0.00.059 or later, you must upgrade the SNIB3 to v3.00.1197 or later.
PAC-3218	There could be a delay (2 to 10 seconds depending on the number of credentials in SNIB3 database) in credential access decisions by the controller if access is done during bulk credential updates, hence it is recommended to perform bulk credential updates (40K or more in a single batch) during off peak hours.
PAC-3438	Avoid performing downstream SNIB3 firmware update and credential download to another downstream controller in parallel (when credential database location is SNIB3)