ESBox LT Errata

Saturn South Pty Ltd
Firmware Versions: 8447

Issues

Standalone updater mode does not work properly.

- Issue:
    - In standalone updater mode the ESBox is unstable and does not properly retain or flash OTA updates.
- Workaround:
    - None. Standalone updater mode is not supported in this release.

Webapp permit joining toggle button text does not change.

- Issue:
    - When permit joining is active, the button text should read ‘Disable Permit Joining’. Instead it reads ‘Permit Joining’.
- Workaround:
    - Note the text to the left of the button that reads ‘Joining Permitted’ when joining is permitted. If this is the case, the ‘Permit Joining’ button will actually disable permit joining if pressed.

Updater crashes before downloading an update from a token.

- Issue:
    - If the updater cannot connect to the update server while downloading an update from an update token it records an error and the crashes, resulting in an exception and the update not being downloaded. This occurs for a number of reasons:
        - Update token was invalid or expired.
        - Update server is unavailable, cannot be reached or network failure.
        - Updater server is malfunctioning.
            - There is an intermittent bug in the current Saturn South update server that causes connections to be dropped before connecting from time to time. This can occasionally cause issues with the update process.
    - When this crash occurs, an exception log message will appear in the terminal output at startup. The address of the crash will be 9D0641AB and the cause will be 00000004. Further details on the issue can be found in the highest numbered file in the log/err directory.
- Workaround:

    - The crash itself is caused by a badly compiled ‘reset’ function, which along with resetting the ESBox causes an exception, which is captured and logged before the ESBox would normally restart. Since the ESBox was ready to restart when it crashed, there should be no data loss. The update will not have been applied however.
    - Since damage is likely to be caused by this issue, it is recommended to verify whether the update was applied successfully using the GetUpdateStatus_1_1 message for OTA updates, or simply by inspecting the ESBox’s version string sent with every message wrapper for userspace updates. If the update was not applied successfully it is recommended to:
        - Check whether the update token is valid and functions as expected in a test environment.
            - If the token works in the test environment, retry sending the update token to the ESBox.
            - If the token consistently does not work in the test environment, confirm that the token is valid and that the server is functioning correctly with Saturn South.
    - Note: this issue has been present with all versions of the ESBox that support updating from update tokens. If issues have not been experienced previously, it is unlikely that issues will be experienced with the current release.

Occasional zigbee module lockup.

- Issues:
    - The zigbee module stops correctly managing the device list, readings do not arrive at the ESBox and so on.
    - Notes:
        - This issue has only been observed twice and is not reliably reproducible so information presented here may not be complete or accurate.
        - There is little information available about the cause of the issue, but early testing indicates that it may be related to forced very high report intervals (i.e. 1 second maximum).
- Workaround:
    - The issue is easiest to detect by inspecting the device list. So far, if the issue is occurring the devices will show all devices as either offline or refreshing (or some combination of the above). The devices will remain in the state they are in (either offline or refreshing) for a long period - over 8 hours in the same state has been observed.
    - To correct the issue:
        - Restart the ESBox.
        - Rebuild the device list.
            - This may be a less reliable method to work around the issue.

Occasional crash related to low report Intervals.

- Issues:
    - Occasionally, when device reporting intervals are forced to be very low (1 second in testing) the ESBox may crash after some period.
    - The period of the crash varies (between 30 seconds and 9 hours observed) as does the crash signature.
    - The likelihood and signature of the crash may be influenced by having features that interact with data from the zigbee stack such as SDB enabled or how those features are configured. This has not been confirmed.
    - The only reliable method found for producing the crash is to use a forced report interval of 1 second.
- Workaround:
    - Use the default report interval for devices, or force a report interval higher than 1 second.
    - Given that the crash is relatively infrequent, it may be acceptable to have the ESBox crash occasionally if 1 second data is required.

SetESBoxOptions does not apply settings immediately.

- Issues:
    - After a SetESBoxOptions message is received and processed by the ESBox options are not saved to nonvolatile memory immediately.
- Workaround:
    - Wait at least 60 seconds after issuing a SetESBoxOptions message to wait for the options to be written to nonvolatile memory before restarting the ESBox to apply the settings.
    - Or, after setting ESBox Options using the SetESBoxOptions message, immediately send an version 1.1 ExecuteTerminalCommand_1_1 message with the terminal command “opts save”, which will immediately flush all ESBox Options in RAM to nonvolatile memory.

Notes

Excessive debug output in terminal.

- The following debug output is excessive, may appear often and is not terribly descriptive.
    - NEED TO ROLL OVER
        - Meaning: The stream database read or wrote across a physical file boundary.
        - Advice: Normal behaviour.
    - TODO: eReadAttributeError / 0 / 4 / 6

        - Meaning: a bad read attribute command was issued (either by the ESCo or the stack).
        - Advice: If the ESCo is attempting to read attributes manually, this is a warning that should be heeded, otherwise, ignore.
    - Extra (often cryptic) debug output in terminal when an update is occurring (various)
        - Meaning: varies.
        - Advice: Normal behaviour.
- The default default API version (usrconf) is 1.1 for this build. This is relevant only when the setting is not explicitly set.
    - A beta version of this build with the default value set to 1.0 may be made available on request if required.
    - If access to the ESBox is available, the setting can be changed using the terminal.
    - If the ESCo supports a subset of the 1.1 API, the setting can be changed by the ESCo remotely.
    - If the ESBoxes are not already deployed and are new units, they can be preconfigured to use the 1.0 API as the default.
- Not comprehensively tested for use with SS Load Control cluster devices and commands.