Flash Sheet

Affects:	F4-CVM03050-0x, F4-CVE03050-0P, JC-VAV1717-0, JC-VAV1732-0, and JC-VAV1507-0 controllers running 9.0, 10.0.0, or 10.0.1 firmware.

Addresses: GIV-133073

UPDATED: A loss of power during the startup sequence of an F4-CVM03050-0x, F4-CVE03050-0P, JC-VAV1717-0, JC-VAV1732-0, or JC-VAV1507-0 controller running firmware version 9.0, 10.0.0, or 10.0.1 can result in the loss of configuration.

Released to: ☒ Facility Explorer Authorized Building Controls Specialists (ABCS)
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Summary of changes

- Added Solution section in place of the previous Workaround section.
- Added Step 12 to Recovery.

Problem

If an F4-CVM03050-0x, F4-CVE03050-0P, JC-VAV1717-0, JC-VAV1732-0, or JC-VAV1507-0 controller running firmware version 9.0.x, 10.0.0, or 10.0.1 loses power during its startup sequence, the file that stores the VAV box parameter configuration may become corrupted.

If any of the VAV parameters listed in Table 1 have been modified after initial application download, corruption of this configuration file results in the parameter being restored to its default value specified in the `.caf` file.

Table 1: Affected VAV Box Parameters

Parameter	Object Identifier
Box Area	AV:3111
K Factor	AV:3112
Cooling Occupied Min Flow	AV:3109
Cooling Occupied Max Flow	AV:3108
Heating Occupied Min Flow	AV:3110
Warmer/Cooler Adjust Min/Max	AV:1104
Zone Setpoint Min/Max	AV:1103
Number of Heat Stages Available	AV:290000
Heating Max Flow	AV:25051

Symptoms

- Loss of VAV box configuration settings made during commissioning.

- For F4-CV series or JC-VAV17 series controllers at firmware version 10.0.0 or 10.0.1, they switch to running the first selectable "Cooling Only" application with default parameters instead of the programmed custom application, or one of the other selected applications.

  Note: This symptom will not occur on devices running 9.0 firmware.

- For affected controllers at firmware version 10.0.0 or 10.0.1, controllers cannot be commissioned and the device may lose communication with the supervisory controller. Tools show the device with an invalid name and cannot transfer files. For controllers experiencing this symptom, see Recovery for a procedure to restore communication with the device.

  Note: This symptom will not occur on devices running 9.0 firmware.

Solution

New 10.0.2.11 firmware package files are now available for upgrading F4-CVM03050-0x, F4-CVE03050-0P, JC-VAV1717-0, JC-VAV1732-0 or JC-VAV1507-0 controllers to fix this issue. You can find these package files in the `FacilityExplorerFieldControllerPackages.jcpkg` collection starting from version 4.0.0.925.

The updated `FacilityExplorerFieldControllerPackages.jcpkg` collection is available to download from the License Portal. The licensing procedure and the procedures to import package files to tools remain the same.

For information regarding licensing, refer to the *Software Manager Help (LIT-12012389)*. For information regarding importing package files into SCT or CCT, refer to the *SCT Installation and Upgrade Instructions (LIT-12012067)* and the *Controller Configuration Tool (CCT) Installation Instructions (LIT-12011529)*.

Upgrade the affected controller to the 10.0.2.11 firmware. If the affected controller is an F4-CV series or JC-VAV17 series controller, reload the `.caf` file.

Recovery

For controllers that experience an inability to communicate and invalid device name due to this issue, follow this procedure to recover the devices:

1. Connect a BACnet router to the same IP network as a Windows computer and to the MS/TP trunk with the affected controller.

2. Download and install Yet Another BACnet Explorer (YABE) from SourceForge.

   Note: This process was tested with YABE version 1.3.0.0 in April 2023.

3. Start up YABE and click the green plus button in the upper left to start a BACnet communication channel and open the settings window. See Figure 1.

   Note: Ensure you do not use a VPN or proxy, such as Zscaler, that can prevent communication between YABE and the devices on the network that the BACnet router is on.

4. In the settings window, under **BACnet/IP V4 & V6 over Udp** click the **Local endpoint** dropdown, select the IP address of the IP network that the BACnet router is connected to and click **start**.

   Note: If your devices are not discovered initially with YABE, you can retry device discovery if you right

click the **Udp:47808** entry under the **Devices** pane and select **Send WhoIs** from the dropdown menu.

5. Click on the devices under the **Devices** pane to query them for their name and additional information. This will help you to identify the devices on the MS/TP trunk.

6. After you click each device, you should be able to identify the BACnet router with its controllers in the tree. If the controller's name is populated with a string of thin rectangles, this confirms the device is affected by this issue and is recoverable. See Figure 2.

7. Select the controller that you wish to recover and scroll down in the **Address Space** pane that contains the list of objects until you find **MULTI_STATE_VALUE:1000**. Click on this object to have YABE update its name to **8-1/Preloaded App Loader.App Selector (Multi_State_Value:1000)**.

8. Select **Present Value** under the **Properties** pane and click on the number in the second column. Replace the number in that column with a 1 and press enter. See Figure 3.

9. You will receive a "Communication Error, couldn't write property" popup window. This is expected behavior, the controller now restarts to apply this change. Click **Ok** and close the window.

10. After one minute, the controller should restart and the change is applied. The controller is now discoverable.

11. To confirm the fix with YABE, select the top entry under the **Address Space** pane, that should be named **Device:2000022** or similar. This device should no longer have its name populated with thin rectangles.

    Note: YABE sometimes caches the device name along with other values. If you do not see the correct device name after the recovery steps, reboot YABE and recreate the connection before you check if the device name has updated again.

12. Once communication to the controller has been restored, upgrade the firmware of the controller to version 10.0.2.11 as specified in Solution.
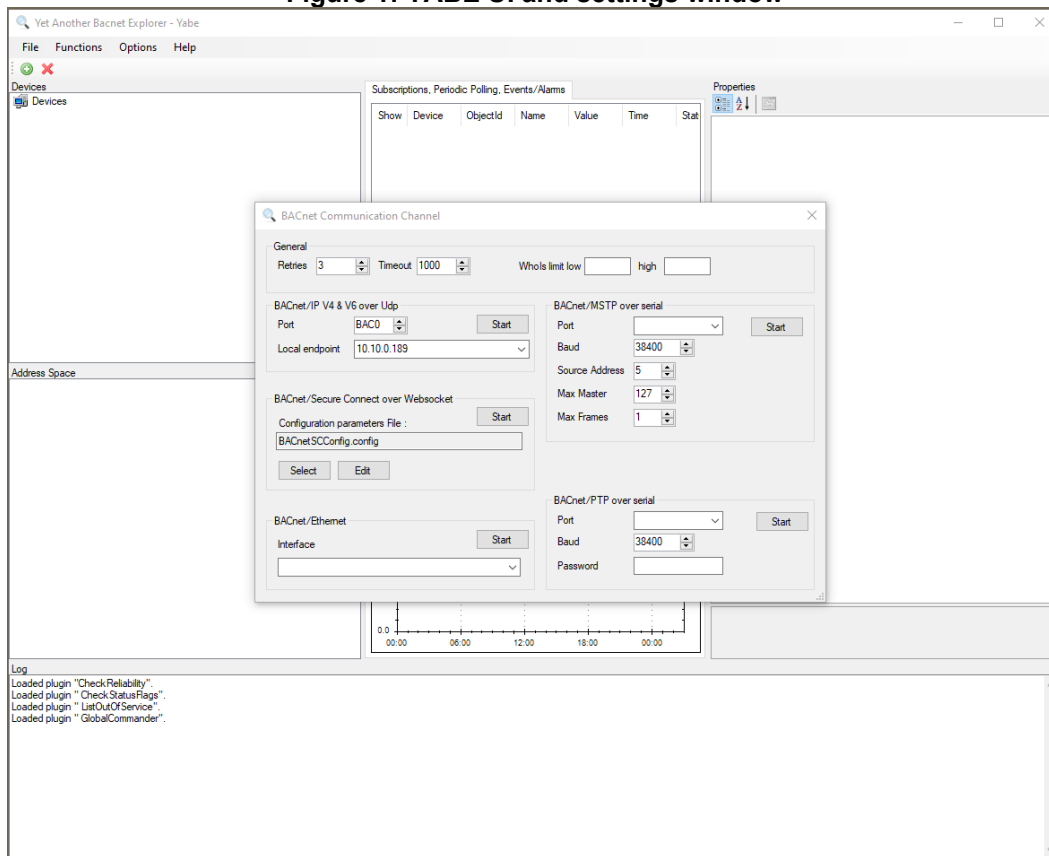
Figure 1: YABE UI and settings window

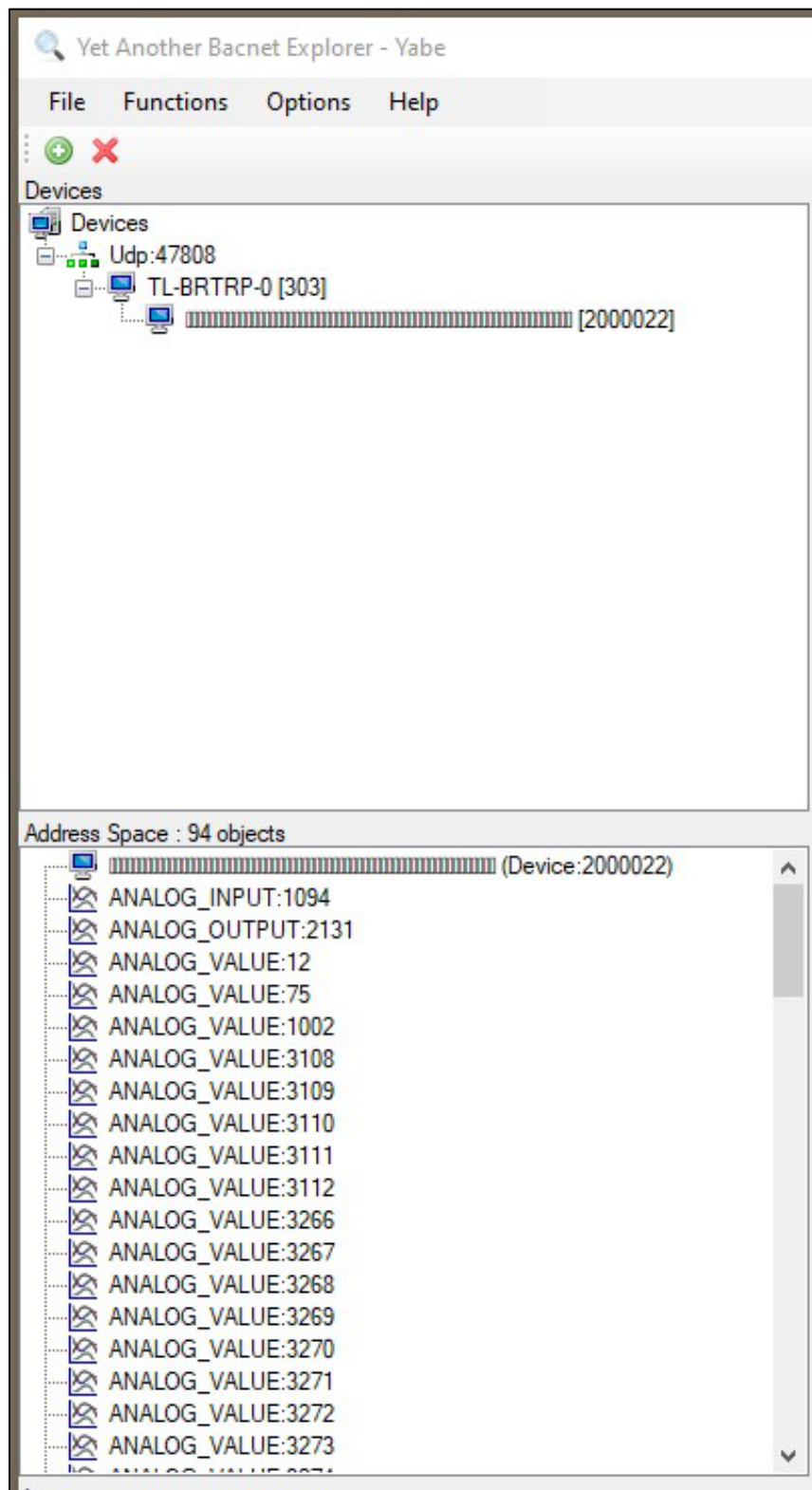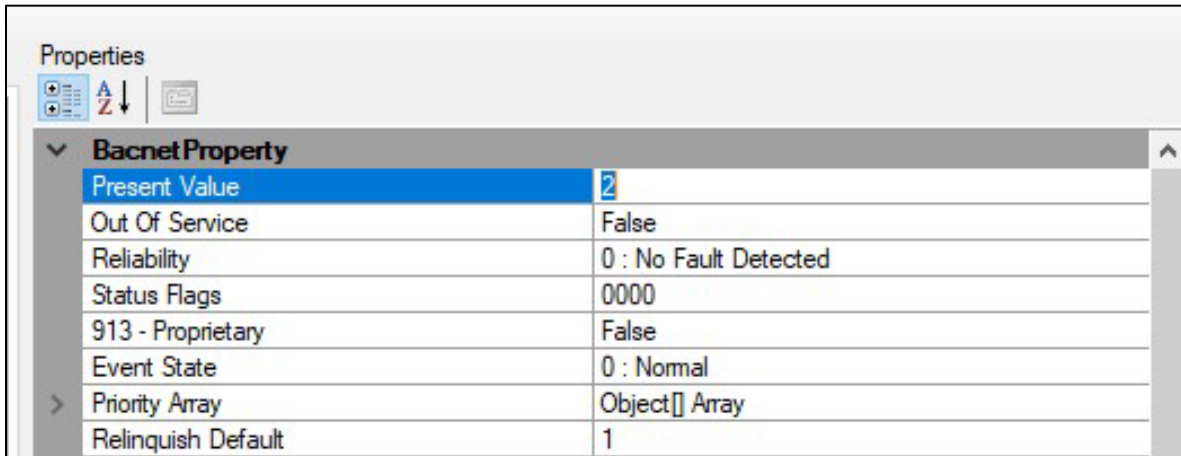**Figure 2: Devices and Address Space panes**

Figure 3: Properties pane with Present Value selected

Properties	
Bacnet Property	
Present Value	2
Out Of Service	False
Reliability	0 : No Fault Detected
Status Flags	0000
913 - Proprietary	False
Event State	0 : Normal
Priority Array	Object[] Array
Relinquish Default	1

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