WOODWARD

Urgent/11 Patch – Flex500 Control

Issue

As announced in August (see Security Bulletin 01661), a set of vulnerabilities known as "Urgent/11" were discovered in the network stack (IPnet) within the Wind River VxWorks Real-Time Operating Software versions 6.5 and later which are used on the Flex500 programmable turbine control.

Woodward has integrated patches provided by Wind River into the latest Flex500 Footprint software. This security bulletin addresses how to patch the Flex500 (the "Affected Unit").

Description

The patch described in this bulletin addresses the following vulnerabilities:

CVE-2019-12255, CVE-2019-12260, CVE-2019-12261, CVE-2019-12263 CVE-2019-12256, CVE-2019-12257, CVE-2019-12258, CVE-2019-12262, CVE-2019-12264, CVE-2019-12259, CVE-2019-12265

Affected Units

8200-1340, -1341, -1342, -1350, -1351, -1352

Corrective Action

A patch is not available for the version of VxWorks used on the Flex500. For this reason, it was necessary to change to a newer version of VxWorks which makes the new Footprint incompatible with existing Coders and applications software. This requires release of new part numbers as indicated below:

Existing Part No.	Replaced by
8200-1340	8200-1343
8200-1341	8200-1344
8200-1342	8200-1345
8200-1350	8200-1353
8200-1351	8200-1354
8200-1352	8200-1355

The new Footprint and new part numbers require GAP Coder version 1.04-0. In addition to patching the Urgent 11 vulnerabilities, this update adds new features and capabilities that can be designed into the applications if desired. For details see the published release notes for Flex500 GAP Programmer 1.04-0.

Customer Action

If you have an existing GAP application for the Flex500 and wish to update existing controls to patch the application to use or the existing application on new controls, you must have the application re-compiled with Coder 1.04-0.

Steps to patch existing Flex500 controls:

1. Have the application recompiled with Coder 1.04-0 and tested.
   This will normally be done the resource who programmed your original Flex500 application software (your Turbine or Compressor OEM, Woodward, a Woodward partner, etc.).

2. Use Woodward's AppManager tool to install Service Pack 5418-7795.

3. Use Woodward's AppManager tool to install the updated Application on the unit.

Note - unit repairs:

If you return one of the older units for repair (part numbers 8200-1340 to -1352) they will not automatically be updated to include the patch. If you want the unit upgraded, this will be done free of charge during the repair but you must specify it in the repair order. This is so that we do not inadvertently send back a repaired unit that is not compatible with your existing application.

Additional Information
ICS Advisory 19-211-01: https://www.us-cert.gov/ics/advisories/icsa-19-211-01

Wind River Security Advisory: https://www.windriver.com/security/announcements/tcp-ip-network-stack-ipnet-urgent11/security-advisory-ipnet/