

SLI Compliance

Data and/or TDP De Minimis Evaluation & Review Form

Vendor:	Hart InterCivic	Date:	3/11/2021
Change ID:	ECO-01461	System(s):	Verity 2.5
Product:	Verity 2.5 Devices: Controller, Print, Scan, Scan w/Relay, Touch, Touch Writer, Touch Writer Duo, Touch Writer Duo Standalone	Relevant Application(s):	N/A

Put an X in the appropriate box(es):

X	TDP Change
X	Data Change

Change Summary Description

This ECO modifies the device Operating System procedure to create the pagefile.sys file on devices in Verity Voting 2.5 after the Unified Write Filter (UWF) is applied. Hart determined that the paging file settings were removed by the Windows 10 UWF during the device security hardening processes.

Updated device CFast cards are created to account for the updated procedure and the Device OS Creation and Configuration Process Document for Verity 2.5 (4005675) is updated to move the pagefile.sys creation until after UWF is enabled to account for Windows 10 behavior.

There is no change to Verity 2.5 software.

Manufacturer Reasoning for De Minimis determination

Verity Voting 2.5 paging file settings must be consistent with prior releases of Verity. Verity's software system limit controls are dependent on the paging file being present.

The Verity Voting 2.5 modification included the transition from a Windows 7 (Windows Embedded Standard 7) to a Windows 10 (Windows 10 Enterprise 2019 LTSC) based Operating System.

A notable difference between Windows 7 and Windows 10 is regarding the behavior when the Write Filter is enabled, a feature Verity utilizes in its defense model to enable immutability.

Hart followed its documented process, the Verity Device OS Creation and Configuration document, to perform OS configuration, product installs, and security hardening on devices for Verity 2.5. This document describes the creation of pagefile.sys file during the creation of the configured base OS, prior to Verity software installs and security hardening. Hart's quality audits found that the pagefile.sys file was missing on Verity 2.5 devices. Hart determined that UWF used on Windows 10 deletes all paging file settings upon activation, a behavior that differs from the analogous feature, Enhanced Write Filter (EWF), on Windows 7. The documented process must be updated due to this change in behavior, and the paging file must be enabled on all Verity 2.5 device images.



Put an X in the appropriate box:


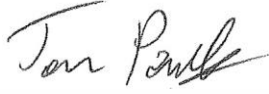

Change Evaluation		Comments
	The change affects the form, fit or function of the voting system component(s) and therefore requires further testing to be performed.	
X	De Minimis change: a change to a certified voting system's data and/or TDP, the nature of which will not materially alter the system's reliability, functionality, capability, or operation	The requested changes do not materially affect the system's reliability, functionality, capability or operation.
X	System documentation: The manufacturer has provided a description of how this change will impact any relevant system documentation and has provided the updated documentation, if applicable.	<p>The <i>Device OS Creation and Configuration Process Document for Verity 2.5</i> (Document Number: 4005563) has been updated to move the creation of the paging file from the <i>Configuring the WIN10 Image for Verity</i> section on page 39 to the <i>Creating Verity Device Images</i> section on page 49.</p> <p>The document has been revised from A00 to A01 for this change.</p> <p>An additional change has been made to the document to remove the section regarding removing Internet Explorer 11 executables as it was redundant within the document.</p>

SLI Compliance Evaluation and De Minimis Determination

SLI Compliance has reviewed the submitted documentation from Hart. This included a review of the change to Device OS Creation and Configuration Process Document Verity 2.5 4005675 A01, internal QA testing performed by Hart, and hash files generated during Hart QA testing.

SLI Compliance performed additional analysis. This included setting up the devices, verifying the hash files for each device CFast are equivalent to the currently certified versions as well as the files generated by Hart during their internal QA testing, verifying the addition of pagefile.sys to the CFasts, and exercising the functionality of the system with a General and Open Primary election for regression testing purposes. All testing passed with no issues or anomalies observed.

As required under section 3.4.3 of the EAC's Voting System Testing and Certification Program Manual Version 2.0, and in accordance with the instruction provided in *NOC 19-01: Software De Minimis Changes*, SLI Compliance considers the nature of ECO-01461 to be De Minimis and therefore not to affect the Federal certification status for the Verity 2.5 voting system.

	Approved by/Title	Signature:	Date:
	Jon Panek Manager		March 11, 2021
Traci Mapps Director		March 11, 2021	