Intel® Integrators Toolkit (ITK)

Migration from version 4.0 to version 5.0

Version 1.0

This document details the most notable and impactful changes in migrating from ITK 4.0 to ITK 5.0. This list is not comprehensive and minor changes such as user interface layout are not covered.

BIOS File Consolidation

- ITK 4.0 used .ITK files, which could be read by the tool to create new .BIO and .EXE files for use by the BIOS or operating system, respectively, to change BIOS settings.
- ITK 4.0 allowed text-based .INI configuration files to be created. These files could be directly manipulated with a standard text editor such as Notepad* or Vi*.
- ITK 5.0 no longer uses ITK or .INI files. All the information ITK 5.0 needs is now included in the .BIO files.
- Only .BIO files are used with ITK 5.0.

Legacy ITK 4.0 Support

- ITK 5.0 supports legacy ITK 4.0 BIOS and configuration files. If a legacy .ITK file is chosen, a full instance of ITK 4.0 launches.
- Sustaining support of ITK 4.0 will stop with the release of 5.0, but ITK 4.0 will continue to function for legacy products.
- Legacy .BIO files will not have the necessary data to be loaded with either ITK 5.0 or ITK 4.0. You must use the associated .ITK file for legacy BIOS files.

Microsoft* OEM Activation 3.0

- ITK 4.0 does not include support for Microsoft's OEM Activation*.
- ITK 5.0 supports Microsoft OEM Activation 3.0 (OA3) for volume licensing of Microsoft Windows 8*.
    - The individual payload files which include activation information must be obtained from Microsoft.
    - ITK 5.0 applies this provided activation information to the board, enabling scriptable, command-line activation for Microsoft Windows 8.
- OA3 is supported through command line interactions only.

A simple OEM Activation can be accomplished by navigating to the "**Intel(R) Integrator Toolkit\Installation Tool – Windows**" file-path and entering the following command:

vcustw -oa3 -oemid=*Name* -tableid=*Name* -oadata=*file* (32 Bit)
vcustw64 -oa3 -oemid=*Name* -tableid=*Name* -oadata=*file* (64 Bit)

> OEMID and TableID are both OEM specific. OAData is the payload file received from Microsoft. Entering the full directory path to the payload file is necessary.

Full syntax options are available by entering "**vcustw help**" or "**vcustw64 help**" from the same file-path.

Note that the command line syntax changed from ITK 4.0, so any automated scripts will need to be adjusted accordingly.

BIOS Splash Intel Logo

- ITK 4.0 allows the Intel logo to be placed in one of the screen's corners, with a choice between a black or white background.
- ITK 5.0 allows the Intel logo to be placed in a white or blue banner in one of the screen's corners.

BIOS Splash Image Management

- ITK 4.0 requires that the resolution of an image for the splash logo be less than 1024x768 and for the image file to not exceed a set file size for ITK to take the image.
- ITK 5.0 will take any size and resolution image and crop the image to the selected resolution as well as lower the file size for flash space restrictions.

Direct System Viewing and Customization

- ITK 4.0 requires that an.INI file be created before editing can begin.
- ITK 5.0 allows the ability to directly view and customize the settings of the current BIOS on a system without the need of external files or processes.

Hardware Slot Based Boot Order Manipulation

- ITK 4.0 gives access to standard BIOS boot order settings, signifying which current devices take priority.
- ITK 5.0 allows BIOS boot order to be set by specific hardware slots, such as SATA 0, SATA 1, etc. Systems with multiple devices of the same type can be set up with greater precision.
- The boot order set by specific hardware slots takes precedence over the standard BIOS options.

Improved BIOS Security

- ITK 5.0 interacts with the BIOS in a way that closes some existing security loopholes. This is in combination with a more secure BIOS update process and new BIOS security options.

Unattended BIOS Configuration and Boot Counter

Unattended BIOS Configuration and associated Boot Counters are features of updated BIOS, which determine how ITK 5.0 can interact with a system. This is available as a BIOS setting. The options for Unattended BIOS Configuration are:

Always Prompt (Default): A user must physically accept any BIOS changes made through ITK in order for them to take effect.

Lock: The system can only be updated using a stock Intel BIOS version that has not been modified by ITK.

Temporarily Skip Prompt: A boot counter is started. The system can be rebooted 10 times, allowing any changes to be made by ITK. After the boot counter it will be reset to Always Prompt.

Never Prompt: All changes made via ITK are allowed.

Note: Although "Always Prompt" is the default, when a desktop board arrives for integration it will likely still be in its original "Temporarily Skip Prompt" state with approximately five reboots left on the counter. This allows an integrator to immediately push customizations through straight out of the box.